


# High Street Station Mixed Use Development

## Initial Study – Mitigated Negative Declaration
## Project Nos. RPD2018-01, ZC2018-01, DDA2018-01 and DA2018-01

*prepared by*

**City of Moorpark**
799 Moorpark Avenue
Moorpark, California 93021

*prepared by*

**Rincon Consultants, Inc.**
180 North Ashwood Avenue
Ventura, California 93003

**February 2020**

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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# Initial Study

## 1. Project Title

High Street Station Mixed Use Development
Project Nos. RPD2018-01, ZC2018-01, DDA2018-01 and DA2018-01

## 2. Lead Agency Name and Address

City of Moorpark
799 Moorpark Avenue
Moorpark, California 93021

## 3. Contact Person and Phone Number

Karen Vaughn, Community Development Director
(805) 517-6281

## 4. Project Location

The project site is located along the south side of High Street, roughly in between Walnut Street and Magnolia Street, in the City of Moorpark in Ventura County, California. The project site's Assessor Parcel Number (APN) is 512-0-090-115.

Figure 1 shows the location of the site in the region and Figure 2 shows the project site in its neighborhood context.

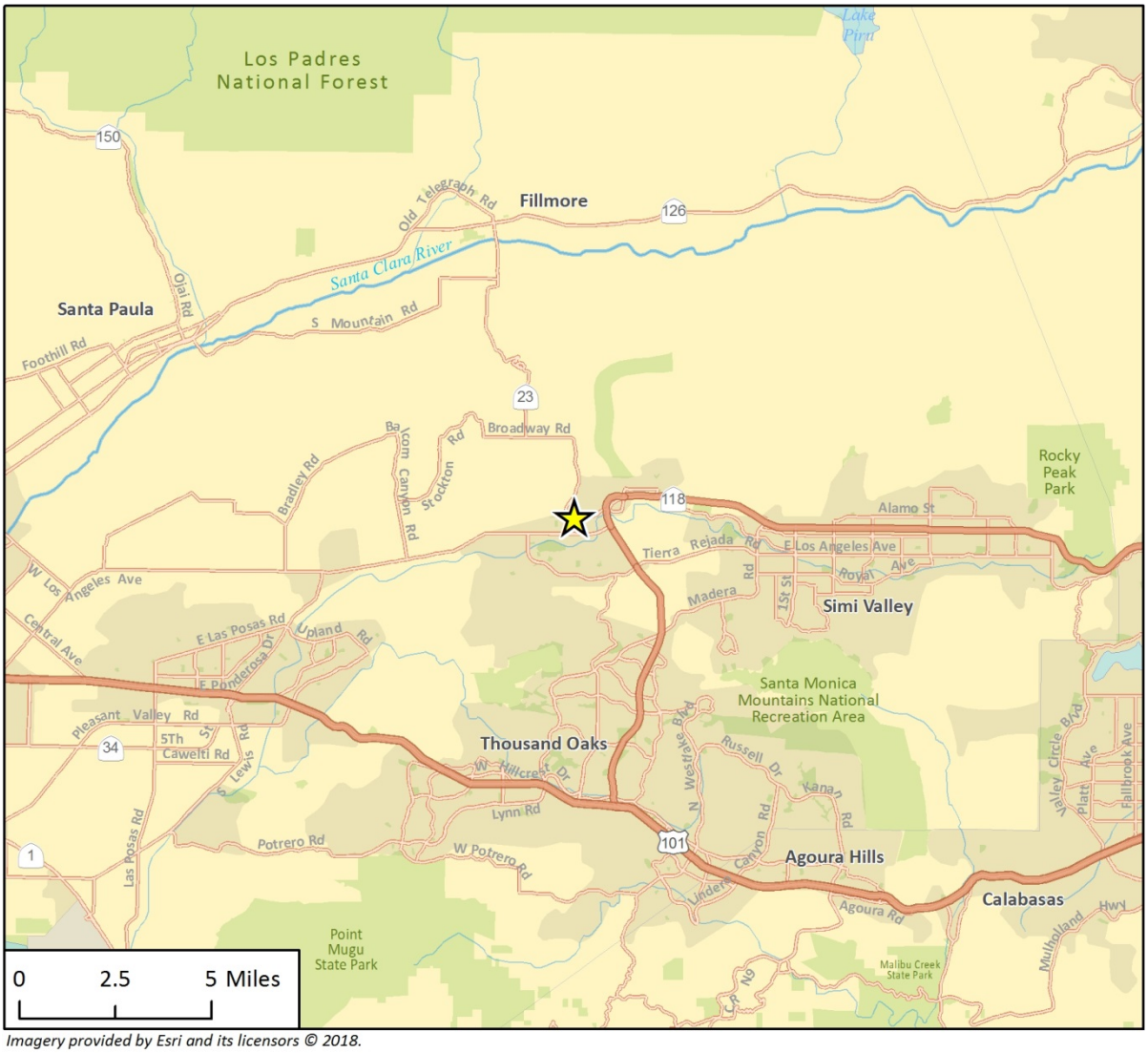
## 5. Existing Setting

The project site is located along the south side of High Street in an area largely characterized by commercial uses. The site is currently developed with a non-operational granary warehouse and other non-operational industrial and commercial buildings. The site is surrounded by the railroad immediately to the south, one- and two-story office and retail buildings and Ventura County Fire Station 42 to the north and northeast, Metrolink transit parking to the east and south, and the one-story Moorpark Chamber of Commerce building and surface parking lot to the west.

## 6. Project Applicant's Name and Address

Daly Group Inc.
31255 Cedar Valley Drive, Suite 323
Westlake Village, California 91362
Contact: Jasch Janowicz
(805) 309-6100

## Figure 1 Regional Location




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Project Location

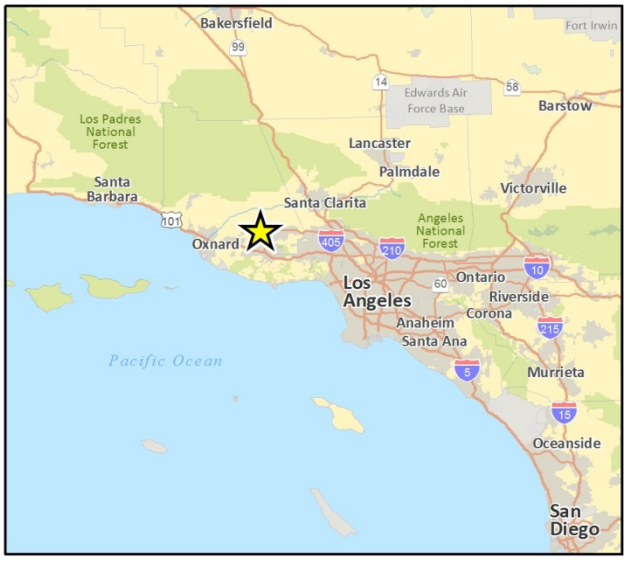


**Figure 2 Project Location**




*Imagery provided by Google and its licensors © 2018.*

# 7. General Plan Designation

Downtown Specific Plan – Old Town Commercial (C-OT)

# 8. Zoning

Commercial Old Town (C-OT) (Moorpark Downtown Specific Plan)

# 9. Description of Project

The High Street Station Mixed Use Development (proposed project) involves development of 91 multi-family residential units, 15,018 sf of commercial development, and associated surface parking spaces. The project site is approximately 2.15 acres and is within the Moorpark Downtown Specific Plan Area. Table 1 shows the project summary details. Figure 3 shows the proposed project's site plan, and Appendix A shows conceptual renderings of the proposed project.

## Residential Component

The 91 multi-family residential units would be for-rent and would be constructed within four individual buildings located across the project site, each with a maximum of three floors. The proposed project would include 18 ground-floor studios, 26 one-bedroom units, 39 two-bedroom units, and 8 three-bedroom units. The residential portion of the project would include approximately 69,834 gross sf. The Moorpark Downtown Specific Plan and Zoning Code do not permit residential uses as part of mixed use developments in the Old Town Commercial (C-OT) zone; therefore, project entitlements include a zoning ordinance amendment to allow mixed residential/commercial uses on the project site.

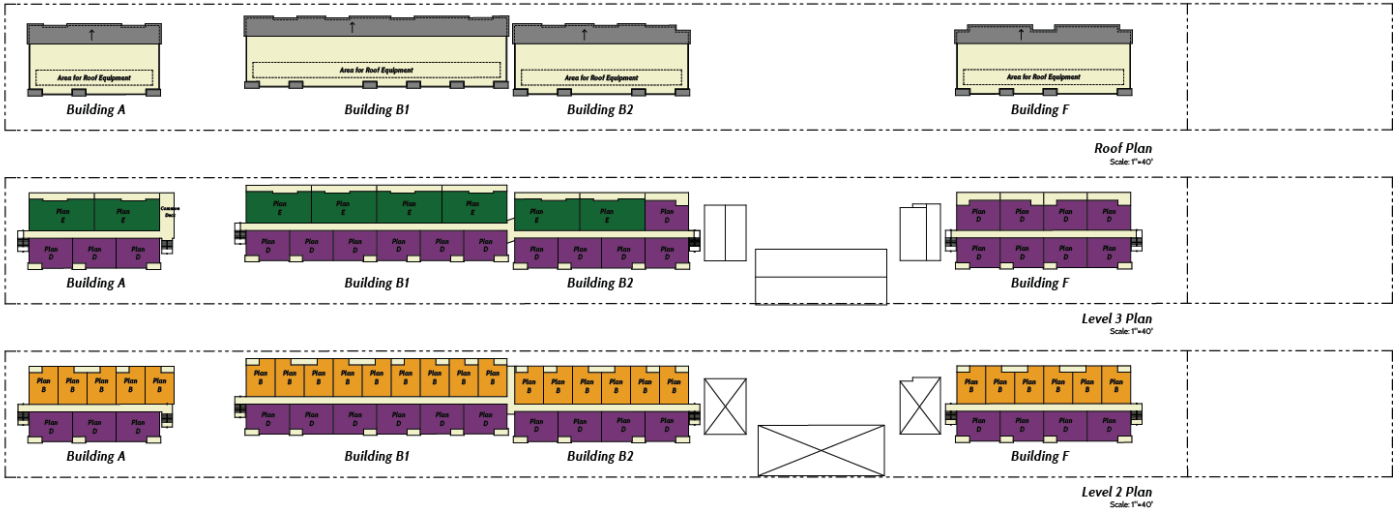
## Commercial Component

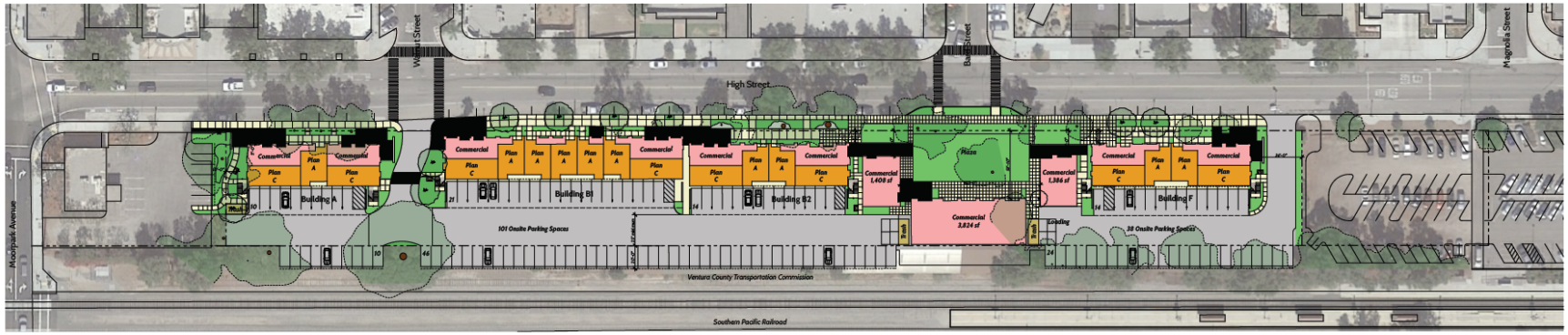
The proposed project includes approximately 15,018 sf of commercial retail space. Of that total, 6,618 sf would be standalone commercial space in three separate buildings surrounding the proposed village green. A brewery, winery or similar use is anticipated to occupy the 3,824-sf commercial building located immediately south of the village green; restaurants or similar uses are anticipated to occupy the 1,386-sf commercial building located immediately east of the village green the approximately 1,408-sf commercial building located west of the village green. In addition to the commercial space surrounding the village green, the proposed project includes approximately 8,400 sf of ground-floor commercial space (including retail and office uses) along High Street within the four residential buildings.

## Landscaping and Public Recreational Space

An outdoor village green is proposed in the central portion of the site, south of the High Street/Bard Street intersection. The village green would be open to the public and would be used as a recreational amenity by on-site residents and patrons of the commercial uses. Streetscape landscaping is proposed along the project frontage within both the project site and the public right-of-way and additional areas of landscaping are proposed in the western portion of the site near the intersection of High Street and Walnut Street, around each building, and along the southern boundary of the property.

**Figure 3 Project Site Plan**




Source: Dicecco Architecture Incorporated 2018

**Table 1 Project Summary**

| Component | Building Area (sf) | Height |
|---|---|---|
| Residential | 69,834 | 35’ (3 floors) |
| Commercial | 15,018 | |
| Circulation | 8,870 | |
| Private Open Space | 6,542 | |
| Total | 98,812 | |
| **Landscaping** | | |
| Village Green | 7,178 | |
| **Parking Spaces** | | |
| Residential | 139 spaces | |
| Commercial and Guest | Provided on High Street and in shared City-owned parking lots off-site | |
| Total | 139 spaces | |

The site currently contains 17 mature trees that include palm, cypress, ash, and pepper trees. Some of the mature trees on-site would be removed over the course of construction activities, but the project would preserve the existing pepper trees along High Street, which are designated Ventura County Landmark #72 (County of Ventura 2016), and the existing large ash trees along the southern portion of the property. The City of Moorpark Tree Preservation Guidelines (Moorpark Municipal Code 12.12.060) would be enforced to ensure the pepper trees are not impacted by nearby construction. During construction, conditions of approval would require the establishment of a physical barrier (flagging or see-through safety fencing) to be installed around any adjacent pepper trees that are situated near any mechanized equipment. Continued pepper tree maintenance would be completed in accordance with the City’s California Pepper Trees Maintenance Plan (2006b).

## Access and Parking

Two vehicle access driveways are proposed, one at the High Street/Walnut Street intersection and another approximately 230 feet east of the High Street/Bard Street intersection. Sidewalks and streetscape landscaping are proposed along High Street, providing pedestrian access to the project. Additional emergency access to the site could also be available from the existing Metrolink parking lot adjacent to the eastern project boundary or the existing Chamber of Commerce parking lot adjacent to the western project boundary.

The project includes 139 on-site parking spaces that will be assigned as reserved parking to serve the residential units, per Section 2.2.5.5.d of the Moorpark Downtown Specific Plan (DTSP). The site would also provide up to 26 on-street parking spaces along its High Street frontage that would be counted toward the required parking per Section 3.8 of the DTSP. Residential guest parking and parking to serve the commercial component would occur within public parking areas in the downtown area, including public parking lots and street parking.[1]

[1] According to the Downtown Moorpark Parking Study prepared by Walker Consultants in December 2019, maximum utilization of the 914 available parking spaces in downtown Moorpark only reached 40 percent during peak times.

In 2019, the City of Moorpark prepared a Downtown Parking Study to quantify and analyze public parking assets within Downtown Moorpark. The Study identified a total of 914 public parking spaces (on-street and surface lots) within a ½-mile radius of the Project site. During peak weekday times, only 40% of available downtown parking was utilized. As noted in the Study, downtown parking utilization is well below the industry target of 85% and the City has significant capacity to absorb the remaining guest and commercial visitor parking generated by the Project Vehicle loading and unloading and trash collection areas would be provided behind the proposed commercial buildings and along High Street.

## Interpretive Display

As part of the project design, the proposed project would incorporate an interpretive display into a portion of the proposed commercial storefront space. The display would include information about the history of downtown Moorpark.

## Stormwater Control Measures

Storm drain inlets will be integrated into parking areas and new Low Impact Development (LID) Best Management Practices (BMPs) would be integrated into the building, landscaping, streetscape, and parking lot areas. Storm drain inlets would be collected by a new on-site storm drain system, which would discharge into the existing storm drain within High Street and ultimately drain to Moorpark Storm Drain No. 1. As described in the Preliminary Hydrologic and Hydraulic/Stormwater Quality Report (Hydrology Report), site-specific LID BMPs would be integrated into the project in compliance with the 2011 Ventura County Technical Guidance Manual (2011 TGM) (Appendix B). The design of grading and drainage plans for the proposed project were based on the following hydrologic and water quality impact reduction strategies:

- **Site Planning**: The project has been designed in a manner that would effectively disconnect impervious surfaces such that five percent Effective Impervious Area is achieved;
- **Protect and Restore Natural Areas**: Natural areas were proposed to the maximum extent feasible by the inclusion of a pervious village green and pervious paving/landscaping within the streetscape;
- **Source Control Measures**: Storm drain signage would be added to all drain inlets along with the design of outdoor trash storage areas in compliance with MMC standards;
- **Treatment Control BMPs**: Stormwater treatment would be divided into three areas, including the treatment of roof areas, treatment of parking/drive-aisle areas, and treatment of street frontage areas. The treatment of building roof runoff would be accomplished through the inclusion of flow-through planter boxes adjacent to proposed buildings. The planter boxes will be sized to treat the full stormwater quality design volume specified in the 2011 TGM. The treatment of parking/drive-aisle runoff would be accomplished through the inclusion of bio-retention areas with underdrains and pervious paving within the southern portion of the site. The treatment of street frontage areas would be accomplished by integrating a biofiltration basin into the proposed pedestrian “bulb-out” near the intersection of High Street and Bard Street and by integrating “StormTreat” linear stormwater filtration devices into the proposed High Street streetscape landscaping plans.
- **Flood Control Detention**: The project would reduce the post-development flow rate by 0.92 cubic feet per second (cfs) by including 175 feet of oversized 48-inch drain pipe in the western drainage area and 65 feet of 36-inch pipe within the eastern drainage area.

## Demolition and Construction Activities

Project demolition and construction would occur over the course of approximately 13 months. A breakdown of the construction schedule is provided in Table 2.

### Table 2 Project Construction Schedule

| Phase | Number of Working Days |
|---|---|
| Site Demolition | 20 |
| Site Preparation | 3 |
| Building Construction and Grading | 226 |
| Architectural Coating[1] | 129 |
| Paving | 10 |

[1] The architectural coating phase would overlap with the building construction phase and extend one month past the end of the building construction phase. Architectural coating would occur as individual units and buildings are completed; therefore, architectural coating activities would not be continuous over the 129-day period. Rather, architectural coating activities would likely be completed in two- to three-week increments.

As part of project construction, the existing vacant granary, restaurant, and industrial buildings on-site would be demolished. To the extent feasible, building materials from select existing buildings would be salvaged, stored on-site, and re-used as part of new construction.

The project site is relatively flat; however, on-site grading in the form of removal and recompaction would occur across the entire site along with geologic hazard remediation (see Section 7, *Geology and Soils*). Wet and dry utilities would also be installed as part of site improvements. Other off-site improvements would include connections to existing wet and dry utilities on or adjacent to the project site, and streetscape improvements along the existing High Street right-of-way, including landscaping, addition of sidewalk bulb-outs, and enhancements to sidewalk and crosswalk paving, street furniture, and the existing Gazebo, Camino Real Bell, and Memorial Bricks.

Project construction would involve removal of several existing mature trees on-site; however, the existing pepper trees along High Street would be preserved in place. The project's grading plan would not disrupt or remove structural feeder roots and would not fill, cut, or compact soils within the dripline. If necessary, the project contractor would work with a consulting arborist during grading and construction to avoid impacts to existing pepper trees. It is likely that portions of the existing sidewalk would need to be temporarily closed during construction activities. However, access to the existing Metrolink train platform would remain open during construction by allowing pedestrian access along properties immediately to the east because these properties currently provide direct access and vehicle parking for the Metrolink train platform. In addition, during construction of the proposed project, activities would be restricted to the project site and would not interfere with roadway traffic or use of the railroad. The project would also be subject to standard conditions of approval, which require the use of flagmen, temporary signage, and traffic calming measures, if necessary, during temporary construction activities.

# 10. Surrounding Land Uses and Setting

The Moorpark Metrolink Station Platform is located adjacent to the southeastern portion of the project site. Office, restaurants, theatre, retail uses and Ventura County Fire Station No. 42 are located immediately north of the project along High Street. Single-family and multi-family residences and the Tafoya Terrace Senior Housing Complex are located further north and northwest of High Street. Additional residential uses are also located south of the railroad tracks.

# 11. Required Approvals

The City of Moorpark is the lead agency for this project. The proposed project requires consideration of the following entitlements by the City of Moorpark:

- Zoning Map Amendment to apply Mixed-Use Overlay Zone designation to the project site (Project No. ZC2018-01)
- Residential Planned Development Permit for conditions of approval for architecture and site development activities (Project No. RPD2018-01)
- Disposition and Development Agreement for the transaction of the land from the City to the Developer (Project No. DDA2018-01)
- Development Agreement for the terms of development (Project No. DA2018-01)

A Lot Line Adjustment may be required to ensure that proposed buildings do not cross property lines. Conditional Use Permits may be required for individual businesses proposed within the on-site commercial spaces. Furthermore, the project proposes to encroach into approximately 20 feet of the railroad right-of-way. This encroachment would require approval and recordation of a joint use agreement between the Ventura County Transportation Commission (VCTC), Southern California Regional Rail Authority (SCRRA) and the City of Moorpark.

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# Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

| | | | | | |
|---|---|---|---|---|---|
| ☐ | Aesthetics | ☐ | Agriculture and Forestry Resources | ☐ | Air Quality |
| ■ | Biological Resources | ■ | Cultural Resources | ☐ | Energy |
| ■ | Geology/Soils | ☐ | Greenhouse Gas Emissions | ■ | Hazards & Hazardous Materials |
| ☐ | Hydrology/Water Quality | ☐ | Land Use/Planning | ☐ | Mineral Resources |
| ■ | Noise | ☐ | Population/Housing | ☐ | Public Services |
| ☐ | Recreation | ■ | Transportation | ■ | Tribal Cultural Resources |
| ☐ | Utilities/Service Systems | ☐ | Wildfire | ■ | Mandatory Findings of Significance |

# Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Karen Vaughn — 2/4/2020

Signature — Date

Karen Vaughn — C.D. Director

Printed Name — Title

# Environmental Checklist

## 1 Aesthetics

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Except as provided in Public Resources Code Section 21099, would the project: | | | | |
| a. Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ■ | ☐ |
| b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☐ | ■ |
| c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | ☐ | ☐ | ■ | ☐ |
| d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area? | ☐ | ☐ | ■ | ☐ |

*a. Would the project have a substantial adverse effect on a scenic vista?*

A significant impact would occur if the project would introduce incompatible visual elements within a field of view containing a scenic vista or substantially block views of a scenic vista. Scenic vistas are generally described in two ways: panoramic views (visual access to a large geographic area, for which the field of view can be wide and extend into the distance) and focal views (visual access to a particular object, scene, or feature of interest). According to Figure 1 of the Open Space, Conservation, and Recreation Element of the City of Moorpark General Plan (1986), the project site is located in an urbanized area of the City and is not within a designated scenic viewshed.

The proposed project would involve demolition of existing one, two, and three-story commercial and industrial buildings and construction of two- and three-story buildings on-site. The proposed project would block a larger percentage of the sky as seen from adjacent commercial properties and residences south of the project site compared to the existing uses; however, the increased percentage of obstruction would be incremental compared to the existing uses within the overall

viewshed. In addition, the proposed project would be consistent with the 35-foot height limit contained in the DTSP and the Old Town Commercial zoning (City of Moorpark 2006a). The proposed project also involves the development of a landscaped village green and streetscape, landscaped gathering spaces, and pedestrian walkways, which would not adversely affect scenic vistas. Therefore, impacts associated with scenic vistas would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

The project site currently contains a vacant granary, vacant industrial buildings, vacant commercial buildings, associated paved and unpaved surfaces, and vacant land. The existing structures on the project site show signs of deterioration. Debris, trash, cracked pavement, and unpaved parking lots surfaced with dirt and gravel were also observed. The site also contains 17 mature trees that include palm, cypress, ash, and pepper trees. Some of the mature trees on-site would be removed over the course of construction activities, but the project would preserve the existing pepper trees along High Street, which are designated Ventura County Landmark #72 (County of Ventura 2016), and the existing large ash trees along the southern portion of the property. The City of Moorpark Tree Preservation Guidelines (Moorpark Municipal Code 12.12.060) would be enforced as a condition of project approval to ensure the pepper trees are not impacted by nearby construction. During construction, a physical barrier (flagging or see-through safety fencing) would be installed around any adjacent pepper trees that are situated near mechanized equipment. Additionally, the project's grading plan would not disrupt or remove structural feeder roots and would not fill, cut, or compact soils within the dripline. If necessary, the project contractor would work with a consulting arborist during grading and construction. This would avoid impacts to Ventura County Landmark # 72. Continued pepper tree maintenance would be completed in accordance with the City's California Pepper Trees Maintenance Plan (2006b). As discussed in Section 5, *Cultural Resources*, Rincon Consultants, Inc. concluded that the site is not considered a historical resource. Although the project would remove buildings and trees, none are designated as historic or scenic resources, and the project site is not located within the vicinity of a state scenic highway (California Department of Transportation 2011). Therefore, no impact related to scenic resources within a state scenic highway would occur.

**NO IMPACT**

*c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

The project site is within an urbanized area of the City of Moorpark, and a significant impact would occur if the project would conflict with zoning or other regulations applicable to the project site, or otherwise substantially degrade the existing visual character or quality of the project site and/or its surroundings. Significant impacts to the visual character of a site and its surroundings are generally based on the removal of features with aesthetic value, the introduction of contrasting urban features into a local area, and the degree to which the elements of the project detract from the visual character of an area.

The project site currently contains a former granary, industrial and commercial buildings, associated paved surfaces, and vacant land. The existing structures show signs of deterioration and the site contains debris, trash, cracked pavement, and unpaved parking lots surfaced with dirt and gravel. Commercial development is located to the north across High Street. A surface parking lot for the Moorpark Metrolink Station is located to the east. The Moorpark Chamber of Commerce and its associated surface parking lot are located to the west. The Southern California Regional Rail Authority and Union Pacific Railroad right-of-way and a railroad are located immediately to the south.

The project would not remove any of the existing ash trees or pepper trees along High Street. Pepper Tree maintenance would be completed in accordance with the City's California Pepper Trees Maintenance Plan (2006b). In addition, the mature trees located in the VCTC's right-of-way would be left in place.

The proposed buildings would be similar in height when compared to the existing buildings. The project would also be consistent with the 35-foot height limit contained in the DTSP (City of Moorpark 2006a). The DTSP identifies existing planning issues causing visual impacts along High Street. The DTSP also includes policies for enhanced visual elements on commercial development, including landscaping, height and lighting restrictions, and other design features. The project design and architectural features would be consistent with the design guidelines contained in the DTSP for the Old Town Commercial (C-OT) zone. The project would substantially improve the visual quality and character of the project site by adding high-quality architecture, a plaza, and landscaping improvements to the site. See Appendix A for conceptual renderings of the project design. Accordingly, the project would not degrade the existing visual character or quality of the site and its surroundings or conflict with applicable zoning or other regulations.

Shadow effects can also affect visual character and are dependent upon several factors, including the local topography, the height and bulk of a project's structural elements, sensitivity of adjacent land uses, the time of day, season, and duration of shadow projection. The project would incrementally increase shading and shadows in the project vicinity due to increased height and massing on-site. However, no shade-sensitive land uses, such as residential areas, are located in the immediate vicinity of the project site. Therefore, impacts to visual character and quality would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?*

The project site is in an urbanized area with moderate levels of existing lighting. Primary sources of light adjacent to the project site include interior and exterior lighting associated with the existing commercial buildings, parking lots, street lights along High Street, and headlights from vehicles on the streets. The primary source of glare adjacent to the project site is the sun's reflection from metallic and glass surfaces on existing buildings and vehicles parked on High Street.

Exterior windows on the proposed building could incrementally increase the reflected sunlight during certain times of the day. Project lighting could incrementally increase evening light levels on adjacent properties due to a greater number of windows in the residential and commercial buildings when compared to the existing setting (i.e., industrial buildings and vacant land).

The project would incorporate exterior lighting in the form of pedestrian walkway lighting, plaza lighting, building mounted lighting, and other safety-related lighting. The project would be required

to comply with MMC Chapter 17.30, which includes the following provisions for light and glare reduction:

- Shield or recess all lamps within the luminaire to prevent the visibility or the emission of light at or above the horizontal plane located at the bottom of the fixture
- Direct all luminaires away from all adjacent properties and streets/rights-of-way to avoid glare and spillover
- Utilize light poles that do not exceed 25 feet in height in all commercial zones
- Submit a plan for the outdoor lighting systems to the City's community development director for approval prior to the issuance of a building permit

Compliance with MMC Chapter 17.30 would ensure that the additional light sources would not substantially change existing nighttime lighting conditions and consequently, would not have a significant impact on the night sky. Furthermore, the project would be required to adhere to lighting design guidelines for the Old Town Commercial Zone contained in Section 2.2.5.B.11 of the DTSP (City of Moorpark 2006a). Compliance with applicable standards in the MMC and the DTSP would ensure that impacts related to light and glare would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

# 2 Agriculture and Forestry Resources

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ■ |
| b. Conflict with existing zoning for agricultural use or a Williamson Act contract? | ☐ | ☐ | ☐ | ■ |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? | ☐ | ☐ | ☐ | ■ |
| d. Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ■ |
| e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ■ |

*a. Would the project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

*b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?*

*e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

The project site is currently developed with a former granary, industrial buildings, and paved and unpaved surface parking lots. The project site is zoned Commercial – Old Town (City of Moorpark 2008).

The California Department of Conservation's Important Farmland Finder shows that the project site is within an area of urban and built-up land and not within an area of prime or unique farmland (California Department of Conservation [CDOC] 2016). In addition, the project site and surrounding area are not zoned for agricultural use, and the project site and surrounding areas are not under any Williamson Act contract (CDOC 2015). Accordingly, the project would not conflict with agricultural zoning or a Williamson Act contract and would not result in the loss or conversion of on- or off-site agricultural land to non-agricultural use. Therefore, no impact to farmland would occur.

**NO IMPACT**

c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

d. *Result in the loss of forest land or conversion of forest land to non-forest use?*

The project site and the surrounding area are not zoned for forest land or timberland. Accordingly, the project would not conflict with forest land or timberland zoning, and the project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact would occur.

**NO IMPACT**

# 3 Air Quality

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ■ | ☐ |
| b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | ☐ | ☐ | ■ | ☐ |
| c. Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ■ | ☐ |
| d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | ☐ | ☐ | ☐ | ■ |

## Air Quality Standards and Attainment

The project site lies within the South Central Coast Air Basin (the Basin), which is under the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD), the Santa Barbara County Air Pollution Control District (SBCAPCD), and the San Luis Obispo Air Pollution Control District (SLOAPCD). The project site falls within the portion of the Basin overseen by VCAPCD. As the local air quality management agency, the VCAPCD is required to monitor air pollutant levels to ensure that State and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the Basin is classified as being in "attainment" or "nonattainment."

The Basin is designated a nonattainment area for the federal and State eight-hour ozone standards and the State one-hour ozone and $PM_{10}$ standards (VCAPCD 2017, California Air Resources Board [CARB] 2015). The Basin is in attainment of all other federal and State standards. Because the Basin currently exceeds these State and federal ambient air quality standards, it is required to implement strategies to reduce pollutant levels to recognized acceptable standards. This nonattainment status is a result of several factors, the primary ones being naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate air pollutants, and the number, type, and density of emission sources within the Basin.

The VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003) also note San Joaquin Valley Fever (formally known as Coccidioidomycosis), as an air pollutant and disease of countywide concern. San Joaquin Valley Fever (Valley Fever) is an infectious disease caused by the fungus *Coccidioides immitis*. Infection is caused by inhalation of *Coccidioides immitis* spores that have become airborne when dry, dusty soil or dirt is disturbed by natural processes such as wind or earthquakes, or by human induced ground-disturbing activities such as construction, farming, or

other activities (VCAPCD 2003). From 2011 to 2015, the number of cases of Valley Fever reported in California averaged 3,611 with an average of 50 cases reported in Ventura County (California Department of Public Health 2016).

## Air Quality Management

Under State law, the VCAPCD is required to prepare a plan for air quality improvement for pollutants for which the VCAPCD is in non-compliance. The VCAPCD's 2016 Air Quality Management Plan (AQMP) is an update of the previous 2007 AQMP. The 2016 AQMP, adopted on February 14, 2017, incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2007 AQMP, including the approval of the new federal 8-hour ozone standard of 0.070 ppm that was finalized in 2015. This Plan builds upon the approaches taken in the 2007 AQMP for the attainment of federal ozone standards and includes attainment and reasonable further progress demonstrations of the new federal eight-hour ozone standard (VCAPCD 2017).

## Air Pollutant Emission Thresholds

The 2016 AQMP provides a strategy for the attainment of State and federal air quality standards. The VCAPCD has adopted guidelines for quantifying and determining the significance of air quality emissions (VCAPCD 2003). The VCAPCD considers operational air quality impacts to be significant if a project would generate more than 25 pounds per day of ozone precursors reactive organic compounds (ROC) or nitrogen oxides ($NO_X$). For all other criteria pollutants, the VCAPCD considers a significant adverse air quality impact to occur when a project measurably worsens an existing exceedance of a State or federal ambient air quality standard. Furthermore, construction-related air quality impacts are considered significant if fugitive dust emissions are generated in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public. The VCAPCD considers a project to have a significant cumulative adverse air quality impact if project emissions exceed two pounds per day of ROC or $NO_X$ and if the project is inconsistent with the population forecasts contained in the AQMP.

*a. Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Based on the VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003), a significant air quality impact may occur if the project would cause the existing population to exceed the growth forecasts contained in the AQMP or if the project would be inconsistent with the emission reduction strategies contained in the AQMP.

The 2016 AQMP was developed using the Southern California Association of Governments' (SCAG) population forecasts contained in the 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). Moorpark has a current population of 37,020 residents with an average household size of 3.32 persons (California Department of Finance [CDOF] 2019). SCAG forecasts that the population of Moorpark will grow to 43,000 residents by 2040, which is an increase of 5,980 persons (16 percent) relative to the 2019 population (SCAG 2016).

Based on the current average household size in the City, the 91-unit project would add an estimated 302 residents. The proposed project would also generate approximately 88 jobs in the City, as shown in Table 3. Assuming conservatively that all employees would become new residents of Moorpark, project employees would create an additional population growth of 88 residents for a total estimated population growth of 390 residents. Therefore, implementation of the proposed project would increase the City's existing population to 37,410 residents (an increase of

approximately one percent), which would be within SCAG's 2040 population forecast for Moorpark (SCAG 2016).

**Table 3 Proposed Project Employment Forecasts**

| Use | Area (sf) | Square Feet per Employee[1] | Total Employees |
|---|---|---|---|
| High Turnover (Sit Down) Restaurant | 5,210 | 100 | 53 |
| Coffee or Ice Cream Shop (Fast Food without Drive-Thru) | 1,408 | 70 | 21 |
| Ground Floor Commercial (Neighborhood Retail) | 8,400 | 588 | 14 |
| Total | – | – | 88 |

[1] Source: United States Green Building Council 2008.

SCAG estimates employment in the City to be 11,300 jobs in 2012 and forecasts employment to reach 16,600 jobs by 2040. Therefore, jobs are expected to increase in the City by approximately 5,300 between 2012 and 2040. Consequently, the employment increase generated by the proposed project would account for approximately 1.7 percent of projected job growth (88 out of 5,300 jobs) between 2012 and 2040 and would not exceed SCAG's employment forecasts.

The City currently contains approximately 11,410 housing units, and SCAG forecasts that the housing stock of Moorpark will reach 13,100 housing units by 2040 (CDOF 2019a, SCAG 2016). The 91-unit project would increase the City's existing housing stock to 11,501 units, which is well within SCAG's forecasts for the City.

Based on the above, the project would not conflict with the growth forecasts contained in the 2016 AQMP, and the impact would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

Based on the VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003), a project may have a significant impact if:

- A project would generate more than 25 pounds per day of ozone precursors reactive organic compounds (ROC) or nitrogen oxides ($NO_X$).
- A project measurably worsens an existing exceedance of a state or federal ambient air quality standard.
- Fugitive dust emissions are generated in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public.

The VCAPCD also considers a project to have a significant cumulative adverse air quality impact if project emissions exceed two pounds per day of ROC or $NO_X$ and if the project is inconsistent with the population forecasts contained in the AQMP.

The monitoring stations located closest to the project are the Thousand Oaks-Moorpark Road Station, which is located approximately 5.1 miles south of the project site, and the Simi Valley-Cochran Street Station, which is located approximately 11.0 miles east of the project site. The data collected at the stations indicates that the federal and State 8-hour ozone standards were exceeded in 2016 and 2017. The federal $PM_{10}$ standard was exceeded in 2016, and the State $PM_{10}$ standard was exceeded each year from 2015 to 2017. No other federal or State standards were exceeded at these monitoring stations between 2015 and 2017 (CARB n.d.).

## Construction Emissions

Construction activities associated with development would generate diesel emissions and dust. Construction emissions modeled include emissions generated by construction equipment used on-site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. It is assumed that all of the construction equipment used would be diesel-powered. The construction emissions associated with development of the project were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. CalEEMod was developed for use throughout the State in estimating construction and operational emissions from land use development. Emissions were based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment use during construction.

Emissions were modeled assuming construction of a 91-unit mid-rise apartment building with a 0.92-acre building footprint and an associated surface parking lot. In addition, the project would construct approximately 15,018 sf of indoor commercial space with restaurants, a coffee or ice cream shop, and neighborhood-serving retail as the anticipated uses. The project would include a landscaped village green as well as other open space areas throughout the project site.

The construction schedule and equipment were based on CalEEMod defaults, excluding the architectural coating phase, which was extended to reflect a more accurate construction schedule. The architectural coating phase was adjusted to last approximately half of the building construction phase because individual components of the building would be painted as they are completed. Based on applicant provided information and Google Earth approximations, 23,522 sf of existing buildings would be demolished. Based on the default CalEEMod assumption that haul trucks have an estimated 16-cubic-yard capacity, demolition would require 107 one-way haul trips. In addition, it was assumed the project would comply with all applicable regulatory standards, including VCAPCD Rule 55 (Fugitive Dust), Rule 74.2 (Asbestos – Demolition and Renovation), and Rule 74.2 (Architectural Coatings).

Estimated maximum daily ROC, $NO_X$, CO, $PM_{10}$, and $PM_{2.5}$ construction emissions are shown in Table 4. The VCAPCD considers construction-related air quality impacts to be significant if project construction would jeopardize attainment of the federal one-hour standard by generating more than 25 pounds per day of ROC or $NO_X$ (VCAPCD 2003). In addition, the City of Moorpark requires construction equipment operations to cease when an air pollution health advisory has been issued (Moorpark Municipal Code Section 17.76.050(11)). As shown in Table 4, project construction activities would not generate air pollutant emissions in exceedance of VCAPCD thresholds for ROC and $NO_X$. Therefore, project construction would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and construction-related emissions would be less than significant.

**Table 4 Project Construction Emissions**

| Emission Source | Maximum Daily Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | ROC | $NO_x$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Construction Year 2020 | 2.7 | 22.4 | 18.0 | < 0.1 | 7.6 | 4.3 |
| Construction Year 2021 | 9.4 | 19.7 | 19.7 | < 0.1 | 2.0 | 1.2 |
| Maximum Daily Emissions | 9.4 | 22.4 | 19.7 | < 0.1 | 7.6 | 4.3 |
| VCAPCD Thresholds | 25 | 25 | N/A | N/A | N/A | N/A |
| Threshold Exceeded? | No | No | N/A | N/A | N/A | N/A |

N/A = Not available. The VCAPCD has not established recommended quantitative thresholds for CO, $SO_2$, $PM_{10}$, and $PM_{2.5}$.

Notes: All emission modeling was done using CalEEMod. See Appendix C for modeling worksheets. Some numbers may not add up due to rounding. Emission data is pulled from "mitigated" results, which account for compliance with regulations and project design features. Emissions presented are the highest of the winter and summer modeled emissions.

Construction activities, including site preparation and grading, would have the potential to release *Coccidioides immitis* spores. Nonetheless, the population of Moorpark has been and will continue to be exposed to Valley Fever from agricultural and construction activities occurring throughout the region. In addition, substantial increases in the number of reported cases of Valley Fever tend to occur only after major ground-disturbing events such as the 1994 Northridge earthquake. Construction of the proposed project would not result in a comparable ground disturbance and would not release a large number of spores. Therefore, construction of the proposed project would not significantly increase the risk to public health above existing background levels.

Although construction-related impacts would be less than significant because of their temporary nature, the VCAPCD recommends the following measures to minimize construction-related emissions. Implementation of the recommended measures below would also ensure that *Coccidioides immitis* spores are controlled to the maximum extent feasible.

1. In order to reduce impacts associated with $NO_X$ emissions (a precursor to ozone), the following measures shall be implemented:
   - All commercial on-road and off-road diesel vehicles are subject to the idling limits of California Code of Regulations Title 13, Sections 2485 and 2449(d)(3), respectively. Construction equipment shall not idle for more than five consecutive minutes. The idling limit does not apply to: 1) idling when queuing; 2) idling to verify that the vehicle is in safe operating condition; (3), idling for testing, servicing, repairing, or diagnostic purposes; 4) idling necessary to accomplish work for which the vehicle was designed (such as operating a crane); 5) idling required to bring the machine system to operating temperature, and 6) idling necessary to ensure safe operation of the vehicle.
   - Equipment engines should be maintained in good condition and in proper tune, as per manufacturer's specifications.
   - During the smog season (May through October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time.

- Alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, should be used if feasible.

2. During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering, paving construction roads, or other dust-preventive measures using the following procedures:
   - All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day, so that water penetrates sufficiently to minimize fugitive dust during grading activities. Reclaimed water should be used if available.
   - All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved roadways on-site, should be treated to prevent fugitive dust. Measures may include watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate.
   - Graded and/or excavated inactive areas of the construction site should be monitored at least weekly for dust stabilization. If a portion of the site is inactive for over four days, soil on-site should be stabilized.
   - Signs should be posted limiting on-site traffic to 15 miles per hour.
   - All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 20 miles per hour averaged over one hour) so as to prevent excessive amounts of dust.
   - All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust pursuant to California Vehicle Code §23114.
   - Respiratory protection shall be used by all employees in accordance with California Division of Occupational Safety and Health regulations.
   - Measures to reduce the fungus that causes Valley Fever should include the following:
     - Facemasks should be worn on employees involved in grading or excavation operations during dry periods to reduce inhalation of dust.
     - Employment should be restricted to persons with positive coccidioidin skin tests.
     - Crews should be hired from local populations where possible, since it is more likely that they have previously been exposed to the fungus and are therefore immune.
     - Cabs of grading and construction equipment should be air-conditioned.
     - Crews should work upwind from excavation sites.
     - Construction roads should be paved.
     - Weed growth should be controlled by mowing instead of discing.
     - The access way into the project site should be paved or treated with environmentally-safe dust control agents during rough grading and construction.
   - The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust.

3. After clearing, grading, earth moving, or excavation operations, and during construction activities, fugitive dust emissions shall be controlled using the following procedures:
   - All inactive portions of the construction site shall be seeded and watered until grass cover is grown.

- All active portions of the construction site shall be sufficiently watered to prevent excessive amounts of dust.

4. At all times, fugitive dust emissions shall be controlled by assuring that streets adjacent to the project site shall be swept as needed to remove silt, which may be accumulated from construction activities so as to prevent excessive amounts of dust.
5. Construction activities should utilize new technologies to control ozone precursor emissions as they become available and feasible. Streets must be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

## Operational Emissions

Operational emissions associated with on-site development were also estimated using CalEEMod. Operational emissions would be comprised of area source emissions, energy emissions, and mobile source emissions. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating. Emissions attributed to energy use include electricity and natural gas consumption for space and water heating. Mobile source emissions are generated by the increase in motor vehicle trips to and from the project site associated with operation of on-site development. Trip generation rates from the Traffic and Parking Study prepared by Associated Transportation Engineers (Appendix D) were used to estimate mobile source emissions.

Table 5 summarizes estimated emissions associated with operation of the project. Because the existing buildings on-site are not operational, the modeling assumed that no air pollutant emissions are currently generated on-site.

**Table 5 Project Operational Emissions**

| | Maximum Daily Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| **Emission Source** | **ROC** | **$NO_x$** | **CO** | **$SO_2$** | **$PM_{10}$** | **$PM_{2.5}$** |
| Area | 2.3 | 0.1 | 7.5 | < 0.1 | < 0.1 | < 0.1 |
| Energy | 0.1 | 0.7 | 0.5 | < 0.1 | 0.1 | 0.1 |
| Mobile | 2.4 | 8.0 | 21.2 | 0.1 | 5.4 | 1.5 |
| Total Project Emissions | 4.7 | 8.8 | 28.7 | 0.1 | 5.5 | 1.6 |
| VCAPCD Thresholds | 25 | 25 | N/A | N/A | N/A | N/A |
| Threshold Exceeded? | No | No | N/A | N/A | N/A | N/A |

N/A = not applicable

Notes: All emission modeling was done using CalEEMod. See Appendix C for modeling worksheets. Some numbers may not add up due to rounding. Emission data is pulled from "mitigated" results that include compliance with regulations and project design features that would be included in the project. Emissions presented are the highest of the winter and summer modeled emissions.

Project operational emissions would not exceed VCAPCD thresholds for ROC or $NO_X$; therefore, the project would not contribute substantially to an existing or projected air quality violation.

Although project emissions would exceed the cumulative significance threshold of two pounds per day of ROC or $NO_X$, the project is consistent with the population forecasts contained in the AQMP, as discussed in the response to question 3.a. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant.

In addition, the project would be required to comply with the design measures of Chapter 3.0, *Circulation, Overall Site Development and Beautification*, of the Moorpark DTSP, which would maximize the reduction of the project's long-term operational emissions (City of Moorpark 1998a). Chapter 3.0 sets forth goals and policies to enhance bicycle circulation, improve pedestrian walkways, and augment bicycle and pedestrian facilities in the DTSP area, which would decrease the use of automobiles and thereby reduce mobile emissions from the project.

**LESS THAN SIGNIFICANT IMPACT**

*c. Would the project expose sensitive receptors to substantial pollutant concentrations?*

Sensitive receptors are members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. The sensitive receptors closest to the project site are residences located approximately 180 feet north of the project site along Charles Street and approximately 180 feet south across the rail line.

According to the VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003), a CO hotspot screening analysis should be performed for any project with indirect emissions greater than the ozone project significance threshold of 25 pounds per day that may significantly impact roadway intersections that are currently operating at Levels of Service (LOS) E or F. A CO hotspot is a localized concentration of CO that exceeds the federal one-hour standard of 35.0 parts per million (ppm) or the federal and State eight-hour standard of 9.0 ppm (CARB 2016). The proposed project would generate maximum daily indirect mobile CO emissions of 24.2 pounds per day, which would not exceed the ozone significance threshold. Therefore, a CO hotspot screening analysis is not required. Furthermore, the Basin is in conformance with federal and State CO standards, and most air quality monitoring stations no longer report CO levels. No stations in the vicinity of the project site have monitored CO since 2004. In 2004, the Simi Valley-Cochran Street Station detected an 8-hour maximum CO concentration of 2.62 ppm, which is below the federal and State standard of 9.0 ppm (CARB n.d.). As shown in Table 5, the project would generate maximum daily CO emissions of approximately 35.4 pounds per day. Based on the low background level of CO in the project area, ever-improving vehicle emissions standards for new cars in accordance with federal and State regulations, and the project's low level of operational CO emissions, the project would not result in the creation of new CO hotspots or contribute substantially to existing CO hotspots. Therefore, localized air quality effects related to CO hotspots would not occur, and impacts to sensitive receptors would be less than significant.

The project would also introduce sensitive receptors to the project site because it would involve the development of residential units. However, no operational characteristics of the project or of surrounding development would expose future sensitive receptors to substantial pollutant concentrations during operation of the project. Residential units would be located approximately 70 feet north of the rail line and 625 feet west of the Moorpark Metrolink Station. Although the CARB *Air Quality and Land Use Handbook* (2005) considers rail yards[2] to be a major source of diesel particulate emissions, this guidance does not identify individual rail stations and rail lines as sources of concern. Therefore, the proximity of the project site to the rail line would not expose residents to unhealthy levels of toxic air contaminants.

**LESS THAN SIGNIFICANT IMPACT**

[2] Rail yards are usually located near inter-modal facilities, which attract heavy truck traffic, and are often sited in mixed industrial and residential areas.

*d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Based on the VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003), a project may have a significant impact if a project would generate an objectionable odor to a degree that would cause injury, detriment, nuisance, or annoyance to a considerable number of persons or to the public, or which would endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Land uses and industrial operations known to emit objectionable odors include wastewater treatment facilities, food processing facilities, coffee roasters, fiberglass operations, refineries, feed lots/dairies, and composting facilities. Residential and commercial uses are not included on this list. Therefore, no impact related to objectionable odors or other emissions would occur.

**NO IMPACT**

*This page intentionally left blank.*

# 4 Biological Resources

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | ☐ | ■ | ☐ | ☐ |
| b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☐ | ■ |
| c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ■ |
| d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ■ | ☐ |
| e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☐ | ■ |
| f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ■ |

*a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

The project site is located in an urbanized area of the City and has been previously disturbed in conjunction with on-site development. The project site contains a former granary, commercial and industrial buildings, associated paved surfaces, and vacant land. The surrounding properties have been developed with commercial and residential urban land uses as well as a railroad. Therefore, no wetland, riparian, or other sensitive natural communities or federal- or state-listed endangered, threatened, rare, or otherwise sensitive flora or fauna are located on or adjacent to the project site. There are mature trees on-site that could potentially serve as nesting habitat for raptors and other bird species, several of which would be removed over the course of construction activities. Nesting birds are protected under the federal Migratory Bird Treaty Act (Title 33 U.S. Code Section 703 et seq.; see also Title 50 Code of Federal Regulations Part 10) and Section 3503 of the California Fish and Game Code. Accordingly, the project applicant would be required to comply with mitigation measure BIO-1 to ensure that no significant impacts to nesting birds would occur. With mitigation, impacts would be less than significant.

## Mitigation Measure

*BIO-1 Habitat Modification (Nesting Birds, Non-Hillside or Urban Areas)*

Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).

Because construction may occur during the bird breeding season (February 1 to August 31), the project is subject to bird survey requirements. Pre-construction nesting bird surveys shall be conducted to determine the locations of nesting birds. Bird surveys shall include a minimum of three nesting bird surveys to be conducted by a qualified biologist, over a two-week period with the third survey occurring no more than three days prior to the start of vegetation clearing. The nesting bird survey area shall include a buffer around the grading limits and land clearing limits of 500 feet to accommodate potential raptors that could be affected. If an active bird nest is found prior to land clearing activities, a maximum 300-foot buffer (depending on the species and noise and site conditions) shall be established surrounding the nest(s) and shall be flagged for avoidance. If any active raptor nests are found, a buffer area of 250 to 500 feet from the nest shall be established until after the young have fledged (i.e., the birds are no longer reliant on the nest). The avoidance buffer area for nesting birds may be reduced upon the approval of the monitoring biologist as determined by the species nesting and the activity being conducted. If an active nest of a special-status bird species is found, a suitable buffer area of 200 to 500 feet from the nest (depending on the status of the species) shall be established until the nest becomes inactive.

If no active nests are identified during pre-construction nesting bird surveys, land clearing activities may commence with no limitation. If active bird nests are found and avoidance buffers are established prior to or during construction, a biologist shall monitor the active nest(s) during land clearing activities and/or construction activities to determine whether the recommended avoidance buffers are adequate to ensure that nesting activities are not being stressed or jeopardized. Land

disturbance may occur within the avoidance buffer area(s) only after the young have fledged (i.e., the birds are no longer reliant on the nest) as determined by the monitoring biologist.

The methods and results of the nesting bird survey(s), any nesting bird avoidance efforts as a result of those surveys, and the success of the avoidance buffers shall be documented in a letter report (Nesting Bird Survey and Active Nest Monitoring Report) and shall be submitted to the City no later than three weeks following the completion of active nest monitoring activities.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

The site is currently developed in an urban area lacking native biological habitat. No riparian habitats or other sensitive natural communities are on or adjacent to the project site. Consequently, no impact to sensitive natural communities would occur.

**NO IMPACT**

*c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

The project site is located in an urbanized area that is developed with commercial and residential uses. The project site does not contain any federally protected wetlands, wetland resources, or other waters of the United States as defined by Section 404 of the Clean Water Act. The nearest jurisdictional feature is a freshwater emergent wetland along Arroyo Simi located approximately 0.6 mile east of the project site (U.S. Fish and Wildlife Service 2018). Project construction, including demolition, site preparation, and grading activities, would be confined to the project site and would not impact off-site features. Therefore, the project would not affect state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means, and no impact would occur.

**NO IMPACT**

*d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

The project site and surrounding area are urbanized and lack water features. However, the 17 mature trees on-site may serve as habitat for native migratory birds. The proposed project would leave in place the existing California pepper trees as well as several mature trees located in the VCTC's right-of-way. In addition, the project would be required to comply with mitigation measure BIO-1 listed above under question 4.a. Therefore, the project would not interfere with wildlife movement or migratory corridors or impede the use of native wildlife nursery sites, and no impact would occur.

**LESS THAN SIGNIFICANT IMPACT**

*e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Approximately 14 California pepper trees are present along the northern boundary of the project site. These trees, four of which are historic, are protected by the City of Moorpark's California Pepper Trees Maintenance Plan (2006b). The project would leave these trees in place and would comply with the requirements of the California Pepper Trees Maintenance Plan, as discussed further under Section 1, *Aesthetics*; therefore, no impact would occur.

**NO IMPACT**

*f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The project site is not located an area subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plans (California Department of Fish and Wildlife 2017). Therefore, no impact would occur.

**NO IMPACT**

# 5 Cultural Resources

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | ☐ | ☐ | ■ | ☐ |
| b. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5? | ☐ | ■ | ☐ | ☐ |
| c. Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ■ | ☐ | ☐ |

*a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

CEQA Guidelines Section 15064.5 defines a historical resource as: (1) a resource listed in, or determined to be eligible for listing in the California Register of Historical Resources, (2) a resource included in a local register of historical resources, (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Rincon Consultants, Inc. prepared a Cultural Resources Assessment Report for the High Street Station Mixed Use Development (see Appendix E). Included as part of the report, Rincon Consultants, Inc. completed a cultural resources records search, Native American consultation, and an intensive-level pedestrian survey and historic evaluation of the subject parcel. The results of the report are summarized below.

The proposed project boundary encompasses a 2.15 acre parcel (Assessor Parcel Number: 512-0-090-115). Five built environment resources were identified within the boundary of the proposed project and would be demolished. These include two large grain storage buildings constructed in 1956, an additional grain storage building (the facades of which were designed to mimic those of a historic railroad depot) constructed in 1979, and two industrial buildings constructed in 1954 and 1964.

Based on the results of the cultural resources records search, Native American scoping, review of historical maps and aerials, and field survey, no known cultural resources were identified on the project site. See Appendix E for the full Cultural Resources Assessment Report. The site, inclusive of three granary structures and two commercial buildings, was evaluated for listing in the National Register of Historic Places (NHRP) and the California Register of Historical Resources (CRHR), and as a City of Moorpark Landmark. The project site is not eligible for listing in the NRHP or the CRHR and does not satisfy the criteria for designation as a City of Moorpark Landmark due to a lack of historic

significance and numerous alterations, which have reduced the integrity of the structures. Therefore, the subject property is not considered a historical resource for the purposes of CEQA.

Although the project site is not considered a historical resource in accordance with CEQA, the proposed project site is bound to the north by a segment of Ventura County Landmark # 72, which consists of a row of pepper trees planted by early Moorpark settlers John Nubee and John Barrett in 1904. Although the proposed project would not impact these trees, due to their proximity to the project area, City of Moorpark's Tree Preservation Guidelines (MMC 12.12.060) would be enforced to ensure they are not impacted by nearby construction. During construction, a physical barrier (flagging or see-through safety fencing) and other measures described above in Section 1, *Aesthetics* would be installed around any adjacent pepper trees that are situated near mechanized equipment. Additionally, the project's grading plan would not disrupt or remove of structural feeder roots and would not fill, cut, or compact soils within the dripline. If necessary, the project contractor would work with a consulting arborist during grading and construction. Therefore, impacts to Ventura County Landmark # 72 would be avoided and impacts to historical resources would be less than significant.

As discussed under *Project Description*, although the project would have less than significant impacts on historic resources and no mitigation is required, the project applicant has agreed to the inclusion of a project design feature as a condition of approval that incorporates an interpretive display discussing the history of the project site, its significance, and its important details and features into a portion of the proposed commercial storefront space.

**LESS THAN SIGNIFICANT IMPACT**

*b. Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?*

Section 15064.5 of the *CEQA Guidelines* defines significant archaeological resources as resources that meet the criteria for historical resources or resources that constitute unique archaeological resources. A project-related significant impact could occur if a project would significantly affect archaeological resources that fall under either of these categories.

The project site is in an urbanized area and has been previously disturbed in conjunction with construction of the granary, industrial and commercial buildings, and paved surfaces. No known archeological resources or sites are located on the project site (City of Moorpark 1998a). However, archaeological resources, including rock shelters, pictographs, and basketry fragments, have been identified within a two-mile radius of the project site (Archaeological Research, Inc. 1977). The applicant proposes to implement ground improvement measures via the construction of sub-grade stone columns and overexcavation and recompaction, which will result in ground disturbance. Therefore, there is potential for archaeological resources to be discovered during project construction. Should resources be discovered, compliance with the following mitigation measures would reduce impacts to a less than significant level.

## Mitigation Measures

### *CUL-1 Cultural Resources*

During ground-disturbing activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall monitor excavation and ground-disturbing activities within native soils that have not been previously

disturbed. If cultural resources are encountered during excavation and/or ground-disturbing activities, work in the immediate area must halt, and a Native American representative who is ancestrally related to the project area must be contacted immediately to evaluate the find and consult with the City of Moorpark and the archaeologist. If the discovery proves to be significant under the National Historic Preservation Act, additional work such as data recovery excavation may be warranted.

### *CUL-2 Archaeological Resources*

The discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the state of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. In the event of an unanticipated discovery of human remains, the County coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the NAHC, which will determine and notify an MLD. The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*c. Would the project disturb any human remains, including those interred outside of formal cemeteries?*

A significant impact would occur if previously interred human remains would be disturbed during grading of the project site. While no formal cemeteries, other places of human interment, or burial grounds or sites are known to occur within the project area, there is always a possibility that human remains could be encountered during project construction. Should human remains be discovered during project construction, compliance with the mitigation measure prescribed below would reduce impacts to a less than significant level.

## Mitigation Measure

### *CUL-3 Human Remains*

If human remains are encountered unexpectedly during construction demolition and/or grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code (PRC) Section 5097.98. In the event that human remains are discovered during excavation activities, the following procedure shall be observed:

- Stop immediately and contact the Ventura County Coroner/Medical Examiner.
- If the remains are determined to be of Native American descent, the Coroner has 24 hours to notify the Native American Heritage Commission (NAHC).
- The NAHC will immediately notify the person it believes to be the Most Likely Descendent (MLD) of the deceased Native American.
- The MLD has 48 hours to make recommendations to the project applicant, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.

If the project applicant does not accept the descendant's recommendations, the project applicant or the descendent may request mediation by the NAHC.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

# 6 Energy

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | ☐ | ☐ | ■ | ☐ |
| b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | ☐ | ☐ | ■ | ☐ |

Energy consumption accounts for energy consumed during construction and operation of the proposed project, such as fuel consumed by vehicles, natural gas consumed for heating and/or power, and electricity consumed for power. The analysis of energy consumption herein involves the quantification of anticipated vehicle and equipment fuel, natural gas, and electricity consumption during construction and operation of the proposed project, to the extent feasible, as well as a qualitative discussion of the efficiency, necessity, and wastefulness of that energy consumption.

*a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

## Construction

Project construction and demolition activities would require energy resources primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators. Temporary power may also be provided for construction trailers and electric construction equipment.

Table 6 summarizes the anticipated energy consumption from construction equipment and vehicles, including construction worker trips to and from the project site. As shown in Table 6, construction of the project would require approximately 10,177 gallons of gasoline and 35,723 gallons of diesel fuel. Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, the project would utilize construction contractors who demonstrate compliance with applicable CARB regulations that restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Electrical power would be consumed to construct the project, and the demand, to the extent required, would be supplied from existing electrical infrastructure in the area. Overall, demolition and construction activities would require minimal electricity consumption and would not be expected to have any adverse impact on available electricity supplies or infrastructure. Construction activities would

utilize fuel-efficient equipment consistent with state and federal regulations and would comply with state measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. In addition, per applicable regulatory requirements, the project would comply with construction waste management practices to divert construction and demolition debris. These practices would result in efficient use of energy necessary to construct the project. Furthermore, in the interest of cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, project construction would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

**Table 6 Proposed Project Construction Energy Usage**

| | Fuel Consumption (Gallons) | |
|---|---|---|
| **Source** | **Gasoline** | **Diesel** |
| Construction Equipment & Hauling Trips | – | 35,723 |
| Construction Worker Vehicle Trips | 10,177 | – |

See Appendix C for CalEEMod default values for fleet mix and average distance of travel, and Appendix F for energy calculation sheets.

## Operation

Energy demand from project operation would include fuel consumed by passenger vehicles; natural gas consumed for heating residences and commercial buildings; and electricity consumed by residences and commercial buildings including, but not limited to lighting, water conveyance, and air conditioning. In accordance with Section 150.1(c)14 of the 2019 California Building Energy Efficiency Standards, the project would install solar panels on all residential buildings.

### *Transportation*

Vehicle trips associated with the residential portion of the project would require approximately 97,456 gallons of gasoline and 19,995 gallons of diesel fuel annually (Appendix F). The proposed mixed-use development would integrate residential, commercial/retail, and recreational uses on-site in such a manner that would reduce the need for residents to travel off-site. The proposed live/work units would also reduce the need for residents to commute to employment opportunities elsewhere in the region. In addition, the proposed project would be located in close proximity to existing commercial/retail, recreational, and institutional land uses, which would reduce trip distances and encourage the use of alternative modes of transportation such as biking and walking. The project site is also located within 200 feet of the Moorpark Metrolink rail station and the Moorpark bus stop for the Moorpark City Transit Routes 1 and 2 and VCTC's East County and East-West Connector bus lines and would therefore provide opportunities for residents to use public transit rather than personal automobiles. These factors would minimize the potential of the project to result in the wasteful or unnecessary consumption of vehicle fuels.

The proposed project would introduce new restaurant and retail uses to an existing commercial corridor, and new retail development in an existing commercial corridor typically redistributes existing shopping trips rather than creates new trips. Therefore, local-serving retail development generally shortens trip distances and reduces overall vehicle miles travelled, thereby resulting in lower regional fuel consumption due to more efficient transportation and land use planning (Governor's Office of Planning and Research 2018). Furthermore, fuel consumed by future residents,

employees, and patrons of the proposed project would be reduced over time as a result of California's increasingly stringent vehicle efficiency standards. Given the mixed-use and local-serving nature of the proposed project and its location within an existing commercial corridor in close proximity to transit, vehicle fuel consumption resulting from the proposed project would not be wasteful, inefficient, or unnecessary, and impacts would be less than significant.

### *Built Environment*

In addition to transportation energy use, the proposed project would require permanent grid connections for electricity and natural gas. Approximately 685,421 kWh of electricity would be used for lighting and large appliances within the commercial and residential components of the project. Approximately 2,773 MMBtu per year of natural gas would be used primarily for heating the proposed buildings (Appendix C). Construction of the proposed residences and commercial buildings would comply with the 2019 California Building Energy Efficiency Standards for Residential and Non-residential Buildings and CalGreen (California Code of Regulations Title 24, Parts 6 and 11). These standards require the provision of electric vehicle supply equipment, water-efficient plumbing fixtures and fittings, recycling services, and other energy-efficient measures. This code was developed to (1) reduce greenhouse gas emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the environmental directives of the State administration. Moreover, California's 2019 Building Energy Efficiency Standards, with which the project must document compliance, were specifically adopted to reduce wasteful, uneconomic, inefficient or unnecessary consumption of energy and to enhance outdoor and indoor environmental quality. It is estimated that commercial buildings built to the 2019 standards will use about 30 percent less energy due to compliance (California Energy Commission 2018). In addition, as discussed in Section 8, *Greenhouse Gas Emissions*, the 2019 Building Energy Efficiency Standards require installation of solar photovoltaic systems for multi-family residential buildings of three stories and less, which would supply much of the on-site electricity demand. Therefore, energy consumed by the built environment would not be inefficient, wasteful, or unnecessary, and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Table 7 provides energy efficiency goals and policies provided in the Ventura County General Plan and summarizes the project's compliance with these policies.

## Table 7 Project Compliance with Energy Efficiency Goals and Policies

| Energy Efficiency Goal or Policy | Does the Project Comply? |
|---|---|
| **Goal 1.9.1(2):** Encourage the use of renewable sources of energy and energy conservation techniques in new development. | **Yes.** The project will utilize electricity from Southern California Edison (SCE). SCE provided 32 percent renewable energy in 2017, which is higher than the California average of 29 percent (SCE 2018a). |
| **Policy 1.9.2(2):** Land use policies in area plans should be developed to promote energy conservation and should include the following:<br>1) The pattern of residential, commercial and industrial land use should be compact, relate to transit routes and centers and minimize vehicular travel.<br>2) The infill of vacant lots should be encouraged over step-out developments. | **Yes.** The project would construct a compact mixed-use development with commercial and residential uses. The project site is less than 0.5 miles from transit stations (train and bus). Additionally, the project site is currently a partially vacant lot with unused industrial buildings surrounded by commercial and residential developments. By design, this project complies with this policy. |
| **Policy 1.9.2(4):** The Building and Safety Division shall continue to implement Title 24 energy efficiency standards for buildings. | **Yes.** The project will be constructed in compliance with applicable building codes, including energy efficiency standards for new residential and commercial buildings. |
| **Policy 1.9.2(5):** Tentative subdivision maps shall provide, to the extent feasible, for passive or natural heating or cooling opportunities in the subdivision. | **Yes.** The project site will maintain a number of trees surrounding proposed on-site buildings, which would reduce some of the electricity and natural gas requirements, as they provide shading in the summer (reducing air conditioning needs) and insulation in the winter (reducing heating needs). |

As shown in Table 7, the project would be compliant with applicable energy efficiency goals and policies. Therefore, potential impacts associated with renewable energy and energy efficiency would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

# 7 Geology and Soils

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving: | | | | |
| 1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? | ☐ | ☐ | ☐ | ■ |
| 2. Strong seismic ground shaking? | ☐ | ☐ | ■ | ☐ |
| 3. Seismic-related ground failure, including liquefaction? | ☐ | ■ | ☐ | ☐ |
| 4. Landslides? | ☐ | ☐ | ☐ | ■ |
| b. Result in substantial soil erosion or the loss of topsoil? | ☐ | ■ | ☐ | ☐ |
| c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse? | ☐ | ■ | ☐ | ☐ |
| d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | ☐ | ☐ | ■ | ☐ |
| e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | ☐ | ☐ | ☐ | ■ |
| f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ■ | ☐ |

A Preliminary Geohazard Report for various City-owned properties in Moorpark was prepared by Oakridge Geoscience, Inc. in January 2018 (Appendix G). This report contains an evaluation of the project site as two separate parcels identified as "Apricot Farms" and "Remainder High Street." The report evaluates seismic-related geohazards and discusses potential methods to mitigate potential geohazards. The following analysis is based in part on this geohazard report.

The applicant proposes to implement ground improvement via construction of sub-grade stone columns under the building footprints and overexcavation and recompaction of soils to a depth deemed sufficient by the project applicant's geotechnical engineer. These measures would remediate on-site geological hazards related to liquefaction, collapse potential, and expansive soil conditions.

*a.1. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*

Similar to all of southern California, the project site is subject to strong ground shaking associated with active and/or potentially active faults in the region. The project site is not within an Alquist-Priolo Special Study Zone. No active or potentially active faults cross or trend toward the downtown Moorpark Area (Appendix G). Furthermore, the project would include new development built to current seismic safety standards. Therefore, no impact would occur.

**NO IMPACT**

*a.2. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

The entire southern California region is susceptible to strong ground shaking from severe earthquakes. Consequently, development of the project could expose people and structures to strong seismic ground shaking. However, the project would be designed and constructed in accordance with state and local building codes to reduce the potential for exposure of people or structures to seismic risks to the maximum extent possible. The project would be required to comply with the seismic safety requirements in the International Building Code (IBC), the California Building Code (CBC), and the Moorpark Municipal Code (MMC). Compliance with such requirements would reduce seismic ground shaking impacts to the maximum extent practicable with current engineering practices. Further, the project would not increase ground shaking hazards at adjacent properties. Therefore, impacts related to strong seismic ground shaking would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*a.3. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

For the purpose of this specific issue, a significant impact may occur if the project site is located in an area identified as having a high risk of liquefaction. The geohazard report determined that on-site soils are composed of very loose to medium dense granular soils. Groundwater was encountered at depths of 20 to 38 feet, and historic high groundwater levels were determined to be about 15 to 20 feet. The report concludes that the site is susceptible to liquefaction below the groundwater level to

depths of 60 to 70 feet with a combined estimated liquefaction and dry seismic settlement of between 7.5 and 14.5 inches.

The CBC requires projects to have a seismic settlement of no more than two inches total and one inch of differential settlement. Therefore, impacts related to liquefaction and seismic-induced settlement would be potentially significant. However, as the geohazard report recommended, the project would implement ground improvement via construction of sub-grade stone columns under the building footprints and overexcavation and recompaction of soils to a depth deemed sufficient by the project applicant's geotechnical engineer. The project would be required to implement mitigation measure GEO-1 to reduce the potential for on-site liquefaction. In addition, the project would be required to implement mitigation measure GEO-2 to reduce the potential for foundation damage due to on-site storm water infiltration. These measures, which were recommended by the geohazard report, would mitigate impacts related to liquefaction to a less than significant level. The project would be required to comply with current engineering practices as reflected in the MMC, the UBC, and the CBC. The CBC and UBC regulate the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of adverse soil conditions. The MMC requires that a liquefaction remediation plan containing effective measures to avoid and control damage be submitted to the city engineer and public works director prior to the issuance of a grading permit in accordance with MMC Section 17.76.050.41. In addition, a final approved soils and geology report must be submitted to the city engineer, public works director, and the California Department of Conservation, Division of Mines and Geology within 30 days of report approval. Compliance with City and state building codes and mitigation measure GEO-1 would reduce impacts to the maximum extent practicable through current engineering practices. Impacts related to liquefaction would be less than significant with mitigation incorporated.

## Mitigation Measure

### *GEO-1 Ground Improvement*

In accordance with recommendations made by the geohazard report, the applicant shall complete ground improvement activities to reduce the potential for liquefaction and dry seismic settlement on-site to near two inches of total settlement and one inch of differential settlement. The ground improvement options are as follows:

- Vibro Replacement (VR, also referred to as "stone columns") consists of advancing a vibroflot to the selected depth (approximately 50 feet for the project site) using a combination of the weight of the vibroflot assembly and vibration; or
- Deep Soil Mixing (DSM) utilizes a large diameter auger mounted to a large drill rig or crane to advance the auger to the target depth. Cement is mixed into the soil at a regulated rate of around 10 percent and mixed by the auger using several up and down passes of the auger. The amount of cement added to the soil is determined by laboratory testing and/or previous experience to optimize the soil strength versus amount of cement utilized.

A specialty ground improvement contractor shall prepare a site-specific ground improvement plan (GIP) that indicates the method and depth of treatment, size and spacing of the ground improvement columns, quality control procedures, and post-treatment CPT testing program (assuming VR method) to document ground improvement has densified the soils to reduce

settlement during a seismic event to acceptable levels. The GIP shall be reviewed and approved by the City of Moorpark's geotechnical reviewer prior to issuance of grading permits.

### *GEO-2 Stormwater Infiltration*

In accordance with recommendations made by the geohazard report, the applicant shall locate any on-site concentrated stormwater infiltration basins at least 100 feet away from project structural elements and off-site improvements (i.e., buried utilities) that could be impacted by settlement. Alternatively, the applicant may instead use a diffuse infiltration system that does not concentrate infiltration in a specific location.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*a.4. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

A significant impact would occur if the project would be implemented on a site located in a hillside area with unstable geological conditions or soil types that would be susceptible to failure when saturated. According to the geohazard report, the project site is relatively flat with a slope of about one percent to the southwest (Appendix G). The project site is located near the base of a gently-sloping hillside area that has not been identified as a landslide area (City of Moorpark 2001, Figure 4-3). Therefore, the project would not expose people or structures to potential effects resulting from landslides and no impact would occur.

**NO IMPACT**

*b. Would the project result in substantial soil erosion or the loss of topsoil?*

A significant impact would occur if construction activities or proposed uses would result in substantial soil erosion or loss of topsoil. Construction of the project would result in ground surface disturbance during site clearance and grading, which could create the potential for soil erosion. Accordingly, short-term erosion impacts may result from construction of the project. As discussed in the response to question 7.a.4 above, the project site is located in a relatively flat area, which would limit potential erosion impacts. Implementation of mitigation measure GEO-3 would reduce project construction-related impacts to a less than significant level.

## Mitigation Measure

### *GEO-3 Erosion/Grading/Short-Term Construction Impacts*

- The applicant shall provide staked signage at the site with a minimum of three-inch lettering containing contact information for the City Engineer (Department of Public Works) and the hauling or general contractor.
- Excavation and grading activities shall be scheduled during dry weather periods, if possible. If grading occurs during the rainy season (October 15 through April 1), diversion dikes shall be constructed to channel runoff around the site. Channels shall be lined with grass or roughened pavement to reduce runoff velocity.
- Stockpiles, excavated, and exposed soil shall be covered with secured tarps, plastic sheeting, erosion control fabrics, or treated with a bio-degradable soil stabilizer.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*c. Would the project be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?*

See the responses to questions 7.a.3 and 7.a.4 for discussions related to liquefaction and landslide potential, respectively.

Subsurface borings were advanced to a depth of 51.5-feet on-site. Site soils, as depicted in the boring logs contained in the geohazard report (Appendix G), consist of very loose to medium dense granular soils. Groundwater was encountered at depths of 20 to 38 feet, and historic high groundwater levels were determined to be about 15 to 20 feet.

The geohazard report determined that soils on the western portion of the project site have a moderate collapse potential of 3.5 to 6.7 percent to a depth of 15 feet, while the eastern portion of the site has a low collapse potential of 0.1 to 0.3 percent. Therefore, impacts related to collapse would be potentially significant. However, as the geohazard report recommended, the project would implement ground improvement via construction of sub-grade stone columns under the building footprints and overexcavation and recompaction of soils to a depth deemed sufficient by the project applicant's geotechnical engineer. In addition, the project would be required to implement mitigation measure GEO-1 (see the response to question 7.a.3) to reduce the potential for foundation damage due to on-site stormwater infiltration. Project design features in combination with mitigation measure GEO-1 would reduce impacts related to collapse to a less than significant level.

Subsidence and ground collapse generally occur in areas with active groundwater withdrawal or petroleum production. The extraction of groundwater or petroleum from sedimentary source rocks can cause the permanent collapse of the pore space previously occupied by the removed fluid. The project site is not located within or near a petroleum field; therefore, subsidence related to petroleum extraction would not occur (County of Ventura 2011, Figure 1.4.7).

Although the project proposes to excavation and recompact on-site soils, the applicant does not anticipate excavating to a depth greater than 15 feet below grade, which is at or above historic high groundwater levels. Therefore, it is unlikely that groundwater would be encountered over the course of construction. In the event that groundwater is encountered, minor dewatering of groundwater seepage may be necessary. However, temporary dewatering activities would not be substantial enough to induce subsidence due to groundwater withdrawal.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

A significant impact would occur if the project would include development on expansive soils without proper site preparation or design features to provide adequate foundations for project buildings, thus posing a hazard to life and property. Expansive soils have relatively high clay mineral and expand with the addition of water and shrink when dried, which can cause damage to overlying structures. The geohazard report determined that the soils on-site consist of very loose to medium dense granular soils with potentially expansive soil on the eastern portion of the project site at a depth of 19 feet (Appendix G). However, as the geohazard report recommends, the project would implement ground improvement via construction of sub-grade stone columns under the building footprints and overexcavation and recompaction of soils to a depth deemed sufficient by the project

applicant's geotechnical engineer. These project design features would reduce impacts related to expansive soils to a less than significant level.

**LESS THAN SIGNIFICANT IMPACT**

*e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The project would connect to existing sewer lines that serve the project site and would not use septic tanks or alternative wastewater disposal systems. Therefore, no impact related to the use of septic tanks or alternative wastewater disposal systems would occur.

**NO IMPACT**

*f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

The paleontological sensitivity of the geologic units that underlie the project area was evaluated using the results of the paleontological locality search and review of existing information in the scientific literature concerning known fossils within those geologic units. Rincon reviewed fossil collections records from the University of California Museum of Paleontology (UCMP) online database, which contains known fossil localities in Ventura County.

Following the literature review and museum record search, a paleontological sensitivity classification was assigned to the geologic units within the project area. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units. The Society of Vertebrate Paleontology (SVP) (2010) has developed a system for assessing paleontological sensitivity and describes sedimentary rock units as having high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present.

The project site is located in the Little Simi Valley, between Oak Ridge to the north and the Las Posas Hills to the south, in the Transverse Ranges geomorphic province of California (California Geological Survey 2012). The Transverse Ranges extend approximately 275 miles west-east from Point Arguello in Santa Barbara County, east to the San Bernardino Mountains, and south to the Anacapa-Santa Monica Hollywood-Raymond-Cucamonga fault zone (Yerkes and Campbell 2005). The Transverse Ranges are composed of Proterozoic to Mesozoic intrusive crystalline igneous and metamorphic rocks overlain by Cenozoic marine and terrestrial deposits and volcanic rock. Active uplift and erosion in the Transverse Ranges has produced steep canyons and rugged topography (Morton and Miller 2006). The Moorpark area is in a seismically-active region of the Transverse Ranges where the underlying strata has been strongly faulted and folded. Nearby faults include the west- to north-west-trending Simi-Santa Rosa, Oak Ridge, and San Cayetano faults.

The project site vicinity is mapped at a scale of 1:24,000 by Dibblee and Ehrenspeck (1992) and includes one (1) geologic unit mapped at ground surface: Quaternary alluvium of Holocene age composed of silt, sand, and gravel deposited along the floodplain of the east-draining Arroyo Simi/Arroyo Las Posas. A search of the paleontological locality records on the UCMP online database resulted in no previously recorded vertebrate fossil localities within Holocene sedimentary deposits within the project vicinity. Furthermore, according to the Final Mitigated Negative Declaration for

the City of Moorpark Downtown Specific Plan (1998), there are no known paleontological resources in the project area or vicinity. The geohazard report (Appendix G) prepared for the project indicates the Quaternary alluvium is at least 66 feet thick above the underlying Plio-Pleistocene Saugus Formation. The Saugus Formation has previously yielded paleontological resources in Ventura County, but project ground disturbance will be restricted to the shallow subsurface and the potentially fossiliferous Saugus Formation will not be impacted.

Holocene sedimentary deposits, particularly those younger than 5,000 years old, are generally too young to contain fossilized material. As such, the Quaternary alluvium mapped at the surface of the project area has been assigned a low paleontological sensitivity, in accordance with SVP (2010) guidelines. Therefore, impacts to paleontological resources would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

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# 8 Greenhouse Gas Emissions

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ■ | ☐ |
| b. Conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases? | ☐ | ☐ | ■ | ☐ |

## Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during past ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC), the understanding of anthropogenic (human-induced) warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC 2014).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxides ($N_2O$), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, $CO_2$ and $CH_4$ are emitted in the greatest quantities from human activities. Emissions of $CO_2$ are largely by-products of fossil fuel combustion, and $CH_4$ results from off-gassing associated with agricultural practices and landfills.

Human-made GHGs, many of which have greater heat-absorption potential than $CO_2$, include fluorinated gases and $SF_6$ (California Environmental Protection Agency [CalEPA] 2006). Different

types of GHGs have varying global warming potentials (GWPs), which are the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHGs absorb different amounts of heat, a common reference gas ($CO_2$) is used to relate the amount of heat absorbed to the amount of the GHG emissions, referred to as carbon dioxide equivalent ($CO_2e$), and is the amount of a GHG emitted multiplied by its GWP. $CO_2$ has a 100-year GWP of one. By contrast, $CH_4$ has a GWP of 25, meaning its global warming effect is 25 times greater than $CO_2$ on a molecule per molecule basis (IPCC 2007).

The accumulation of GHGs in the atmosphere regulates Earth's temperature. Without the natural heat-trapping effect of GHGs, Earth's surface would be about 34 degrees Celsius (°C) cooler (CalEPA 2006). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of GHGs in the atmosphere beyond the level of naturally occurring concentrations.

Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Some of the potential impacts in California of global warming may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA 2010). While these potential impacts identify the possible effects of climate change at a global and potentially statewide level, in general, scientific modeling tools are currently unable to predict what impacts would occur locally.

## Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT) of $CO_2e$ in 2010. $CO_2$ emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010 (IPCC 2014).

Total U.S. GHG emissions were 6,511 MMT of $CO_2e$ in 2016 (U.S. EPA 2018). In 2016, the industrial and transportation end-use sectors accounted for 22 percent and 28.5 percent of GHG emissions, respectively. Electric power accounted for 28.4 percent of GHG emissions. Meanwhile, the residential and commercial end-use sectors accounted for 11 percent of GHG emissions (U.S. EPA 2018).

Based on CARB's California Greenhouse Gas Inventory for 2000-2016, California produced 429.4 MMT of $CO_2e$ in 2016 (CARB 2018a). The largest single source of GHG in California is transportation, contributing 41 percent of the state's total GHG emissions. Industrial sources are the second largest source of the state's GHG emissions, contributing 23 percent of the state's GHG emissions (CARB 2018a). California emissions are due in part to its large size and large population compared to other states. However, the mild climate reduces California's per capita fuel use and GHG emissions as compared to other states. CARB has projected statewide unregulated GHG emissions for the year 2020 will be 509 MMT of $CO_2e$ (CARB 2018b). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

## Regulatory Setting

### *California Regulations*

The State of California considers GHG emissions and the impacts of climate change to be a serious threat to the public health, environment, economic well-being, and natural resources of California, and has taken an aggressive stance to mitigate its impact on climate change through the adoption of

policies and legislation. CARB is responsible for the coordination and oversight of state and local air pollution control programs in the state. California has numerous regulations aimed at reducing the state's GHG emissions; some of the major initiatives are summarized below.

### ASSEMBLY BILL 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires CARB to prepare a Scoping Plan that outlines the main strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of California's largest industrial emitters (CARB 2017).

CARB approved the initial AB 32 Scoping Plan on December 11, 2008 and a 2020 statewide GHG emission limit of 427 MMT of $CO_2e$ was established. The Scoping Plan also included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

### SENATE BILL 375

Senate Bill (SB) 375, signed in August 2008, enhances California's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of California's 18 major metropolitan planning organizations to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

### SENATE BILL 32

On September 8, 2016, the governor signed SB 32 into law, extending AB 32 by requiring California to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of 6 metric tons (MT) of $CO_2e$ by 2030 and 2 MT of $CO_2e$ by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in California.

*Regional Regulations*

### SCAG RTP/SCS

As discussed above, SB 375 requires metropolitan planning organizations to prepare an RTP/SCS that will achieve regional emission reductions through sustainable transportation and growth strategies. On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an eight percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. Most recently, SCAG adopted the 2016-2040 RTP/SCS on April 7, 2016, which includes strategies and objectives to encourage transit-oriented and infill development and use of alternative transportation to minimize vehicle use.

## Significance Thresholds

The adopted CEQA Guidelines provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

CEQA Guidelines Section 15064.4(b) states that a lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions.

*Locally-Appropriate, Project-Specific Efficiency Threshold*

The VCAPCD has not adopted GHG emissions thresholds. Therefore, this analysis uses a locally-appropriate, project-specific threshold consistent with the SB 32 target to evaluate the significance of the project's GHG emissions. Efficiency thresholds are quantitative thresholds based on a measurement of GHG efficiency for a given project, regardless of the amount of mass emissions. These thresholds identify the emission level below which new development would not interfere with attainment of statewide GHG reduction targets. A project that attains such an efficiency target, with or without mitigation, would result in less than significant GHG emissions. A locally-appropriate 2030 project-specific threshold is derived from CARB's recommendations in the 2017 Climate Change Scoping Plan Update, as discussed below.

With the release of the 2017 Climate Change Scoping Plan Update, CARB recognized the need to balance population growth with emissions reductions and in doing so, provided a new local plan-level methodology for target setting that provides consistency with state GHG reduction goals using per capita efficiency thresholds. A project-specific efficiency threshold can be calculated by dividing statewide GHG emissions by the sum of statewide jobs and residents. However, not all statewide emission sources would be impacted by the proposed project (e.g., agriculture and industrial). Accordingly, consistent with the concerns raised in the Golden Door (2018) and Newhall Ranch (2015) decisions regarding the correlation between state and local conditions, the 2030 statewide

inventory target was modified with substantial evidence provided to establish a locally-appropriate, evidence-based, mixed-use project-specific threshold consistent with the SB 32 target.

To develop this threshold, the local planning area was first evaluated to determine emissions sectors that are present and would be directly affected by potential land-use changes. A description of major sources of emissions that are included in the 2017 Scoping Plan emissions sectors and representative sources in Moorpark can be found in Table 8. Agricultural and Industrial Sector source emissions would not be directly impacted by the proposed project; therefore the Agricultural and Industrial Emissions Sectors were removed from the State 2030 emissions forecast to retain a more conservative project-specific target. Additionally, Cap and Trade emissions reductions occur independent of any local jurisdictional land use decisions and were also excluded from the locally-appropriate target.

After removing Agricultural, Industrial, and Cap and Trade emissions, the remaining emissions sectors with sources within the Moorpark planning area were then summed to create a locally-appropriate emissions total for a mixed-use project in Moorpark. This locally-appropriate emissions total is divided by the statewide 2030 service person population to determine a locally-appropriate, project-level threshold of 3.2 MT of $CO_2e$ per service person that is consistent with SB 32 targets, as shown in Table 8 and Table 9.

## Table 8 SB 32 Scoping Plan Emissions Sector Targets

| GHG Emissions Sector[1] | 2030 State Emissions Target (MMT)[1] | Locally Appropriate[2] | Project Specific | Major Sources[3] |
|---|---|---|---|---|
| Residential and Commercial | 38 | Yes | Yes | Natural gas end uses, including space and water heating of buildings |
| Electric Power | 53 | Yes | Yes | Electricity uses, including lighting, appliances, machinery and heating |
| High GWP | 11 | Yes | Yes | $SF_6$ from power stations, HFCs from refrigerants and air conditioning[4] |
| Recycling and Waste | 8 | Yes | Yes | Waste generated by residential, commercial, and other facilities |
| Transportation | 103 | Yes | Yes | Passenger, heavy duty, and other vehicle emissions |
| Industrial | 83 | No | No | Oil, gas, and hydrogen production, refineries, general fuel use, and mining operations and would not be impacted by the proposed project |
| Agriculture | 24 | Yes | No | Enteric fermentation, crop residue burning, and manure management would not be impacted by the proposed project |
| Cap and Trade Reductions | -60 | No | No | Reductions from facilities emitting more than 10,000 MT $CO_2e$ per year[5] |
| **Scoping Plan Target (All Sectors)** | **260** | **No** | **No** | **All emissions sectors** |
| Project-Specific Inapplicable Sector (Industrial) | -83 | No | No | Oil, gas, and hydrogen production, refineries, general fuel use, and mining operations |
| Project-Specific Inapplicable Sector (Agriculture) | -24 | Yes | No | Enteric fermentation, crop residue burning, and manure management |
| Locally Inapplicable Sector (Cap and Trade) | 60 | No | No | Reductions from facilities emitting more than 10,000 MT $CO_2e$ per year[5] |
| **2030 Locally Applicable Emissions Sectors** | **213** | **Yes** | **Yes** | **Emissions applicable to the local planning area** |

**MMT = million metric tons**

[1] All State targets in MMT of $CO_2e$. See the 2017 Climate Change Scoping Plan, page 31 for sector details (CARB 2017).

[2] Locally-appropriate is defined as having significant emissions in Scoping Plan Categorization categories within the planning area.

[3] See CARB GHG Emissions Inventory Scoping Plan Categorization for details, available at: https://www.arb.ca.gov/cc/inventory/data/data.htm

[4] $SF_6$ is used primarily as an insulator in electrical substations while HFCs can be found in many residential and commercial refrigeration and air conditioning units. HFCs are in the process of being phased out through 2036 in most developed countries.

[5] Cap and Trade is excluded as reductions will occur independent of local project land use decisions and are therefore not locally appropriate.

**Table 9 SB 32 Locally-Appropriate Project-Specific Threshold**

| | | |
|---|---|---|
| California 2017 Climate Change Scoping Plan | California 2030 Population (persons)[1] | 43,631,295 |
| | California 2030 Employment Projection (persons)[2] | 23,459,500 |
| | Service Population (persons) | 67,090,795 |
| Locally-Appropriate 2030 Project Threshold | 2030 Locally-Appropriate Emissions Sectors (MT of $CO_2e$) | 213,000,000 |
| | 2030 Service Population (persons) | 67,090,795 |
| | 2030 Service Person Target (MT of $CO_2e$ per Service Person) | 3.2[2] |

[1] CDOF 2019b

[2] Average of employment range projections under implementation scenario. See CARB 2017 Climate Change Scoping Plan Update, page 55 (CARB 2017).

[3] Total of 3.17 has been rounded up per Scoping Plan general methodology. Lead agencies may determine this threshold as they deem appropriate.

At this time, the State has codified a target of reducing emissions to 40 percent below 1990 emissions levels by 2030 (SB 32) and has developed the 2017 Scoping Plan to demonstrate how the State will achieve the 2030 target and make substantial progress toward the 2050 goal of an 80 percent reduction in 1990 GHG emission levels set by EO S-3-05. In the recently signed EO B-55-18, which identifies a new goal of carbon neutrality by 2045 and supersedes the goal established by EO S-3-05, CARB has been tasked with including a pathway toward the EO B-55-18 carbon neutrality goal in the next Scoping Plan update.

While State and regional regulators of energy and transportation systems, along with the State's Cap and Trade program, are designed to be set at limits to achieve most of the reductions needed to hit the State's long-term targets, local governments can do their fair share toward meeting the State's targets by siting and approving projects that accommodate planned population growth and projects that are GHG-efficient. The AEP Climate Change Committee recommends that CEQA GHG analyses evaluate project emissions in light of the trajectory of state climate change legislation and assess their "substantial progress" toward achieving long-term reduction targets identified in available plans, legislation, or EOs. Consistent with AEP Climate Change Committee recommendations, GHG impacts are analyzed in terms of whether the proposed project would impede "substantial progress" toward meeting the reduction goal identified in SB 32 and EO B-55-18. As SB 32 is considered an interim target toward meeting the 2045 State goal, consistency with SB 32 would be considered contributing substantial progress toward meeting the State's long-term 2045 goals. Avoiding interference with, and making substantial progress toward, these long-term State targets is important because these targets have been set at levels that achieve California's fair share of international emissions reduction targets that will stabilize global climate change effects and avoid the adverse environmental consequences described under *Climate Change and Greenhouse Gases* (EO B-55-18).

## Methodology

The project's construction and operational GHG emissions were estimated using CalEEMod, version 2016.3.2. CalEEMod calculates emissions of $CO_2$, $CH_4$, and $N_2O$ associated with construction activities, energy use, area sources, waste generation, and water use and conveyance as well as emissions of $CO_2$ and $CH_4$ associated with project-generated vehicle trips (i.e. mobile sources). Because CalEEMod does not calculate $N_2O$ emissions from mobile sources, $N_2O$ emissions were quantified using guidance from CARB and the EMFAC2017 Emissions Inventory for the Ventura County region for year 2030 (the next GHG emission reduction target milestone year) using the

EMFAC2011 categories (Appendix C). Operational emissions were modeled for the year 2030 to be consistent with the State's next GHG emission reduction milestone target of achieving 40 percent reduction in 1990 GHG emission levels by 2030. Emissions of all GHGs are converted into their equivalent global warming potential in terms of $CO_2$ (i.e., $CO_2e$).

The construction schedule and list of construction equipment were based on CalEEMod defaults, with the exception of the architectural coating phase, which was extended to overlap with the building construction phase to reflect real-world construction practices. Over the course of construction, approximately 23,522 square feet of existing buildings would be demolished. Soil material would be balanced on-site; therefore, there would be no import or export of soil. To assess the construction emissions, the total emissions generated during construction were amortized based on the life of the project (30 years in accordance with SCAQMD guidance, which is preferred by the VCAPCD) and added to the operational emissions estimate (VCAPCD 2011; SCAQMD 2008).

The project would be served by SCE. Therefore, SCE's specific energy intensity factors (i.e., the amount of $CO_2e$ per megawatt-hour [MWh]) were used in the calculations of GHG emissions. The default energy intensity factors included in CalEEMod are based on 2012 data at which time SCE had only achieved a 20.6 percent procurement of renewable energy. Per SB 100, the statewide Renewable Portfolio Standard (RPS) Program requires electricity providers to increase procurement from eligible renewable energy sources to 60 percent by 2030. To account for the continuing effects of the RPS, the energy intensity factors included in CalEEMod were reduced based on the percentage of renewables mandated by SB 100. SCE energy intensity factors that include this reduction are shown in Table 1.

**Table 10 SCE Energy Intensity Factors**

| | 2012 (lbs/MWh) | 2030 (lbs/MWh)[2] |
|---|---|---|
| Percent procurement | 20.6%[1] | 60% |
| Carbon dioxide ($CO_2$) | 702 | 353.65 |
| Methane ($CH_4$) | 0.029 | 0.015 |
| Nitrous oxide ($N_2O$) | 0.00617 | 0.003 |

[1] Source: SCE 2012

[2] RPS goal established by SB 100

Because project construction would begin in 2020, the project would be constructed in accordance with the 2019 Building Energy Efficiency Standards. Nonresidential buildings built in accordance with the 2019 Building Energy Efficiency Standards will use approximately 30 percent less energy than those constructed under the 2016 standards (California Energy Commission 2018). In accordance with Section 150.1(b)14 of the 2019 Building Energy Efficiency Standards, all new residential uses under three stories must install photovoltaic (PV) solar panels that generate an amount of electricity equal to expected electricity usage. Therefore, based on the calculation method contained in Section 150.1(b)14, the project would be required to include 126 kW of PV solar panels, which would generate approximately 239,980 kWh per year (see Appendix C). Accordingly, the energy reductions achieved by compliance with the 2019 Building Energy Efficiency Standards and by installation of the rooftop solar PV system and energy-efficient appliances were included in CalEEMod.

Modeling of GHG emissions from water consumption and wastewater generation includes a 20 percent reduction in indoor water use to account for compliance with CALGreen. Modeling of transportation-related GHG emissions utilized the "Increase Density" feature in CalEEMod to account for the project's density of 42 dwelling units per acre.

*a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

Project construction activities are assumed to occur over a period of approximately 12 months based on CalEEMod default assumptions. Based on CalEEMod modeling results, construction activities for the project would generate an estimated 419 MT of $CO_2e$ between 2019 and 2020 (Table 11). Amortized over a 30-year period (the assumed life of the project per SCAQMD guidance), construction of the project would generate about 14 MT of $CO_2e$ per year.

**Table 11 Estimated Construction Emissions of Greenhouse Gases**

| Construction Year | Annual Emissions (MT of $CO_2e$) |
|---|---|
| 2020 | 129.8 |
| 2021 | 289.1 |
| **Total** | **418.9** |
| Amortized over 30 years | 14.0 |

Notes: See Appendix C for CalEEMod results. Numbers may not add up due to rounding.

Table 12 summarizes the project's operational GHG emissions. Because the existing buildings on-site are vacant, the modeling assumed that GHG emissions are not currently generated on-site. As shown below, annual emissions would total approximately 1,036 MT of $CO_2e$, or approximately 2.7 MT of $CO_2e$ per service person, which would not exceed the locally-appropriate, project-specific threshold of 3.2 MT of $CO_2e$ per year.[3] Therefore, project impacts would be less than significant.

[3] 1,036 MT of $CO_2e$ / (302 residents + 88 employees) = 2.6 MT of $CO_2e$ per service population

**Table 12 Combined Annual Emissions of Greenhouse Gases**

| Emission Source | Proposed Project Emissions (MT of $CO_2e$) |
|---|---|
| **Construction** | 14.0 |
| **Operational** | |
| Area | 1.1 |
| Energy | 220.6 |
| Solid Waste | 65.1 |
| Water | 31.6 |
| **Mobile** | |
| $CO_2$ and $CH_4$ | 686.6 |
| $N_2O$ | 16.5 |
| Total Project Emissions | 1,035.5 |
| Service Population (Residents + Employees) | 390 |
| Emissions per SP | 2.7 |
| Locally-Applicable, Project-Specific Threshold | 3.2 |
| Threshold Exceeded? | No |

N/A = not applicable

Notes: See Appendix C for CalEEMod results. Some numbers may not add up due to rounding.

SP = service population (302 residents + 88 employees)

* Shown for informational purposes only since the 2017 Scoping Plan threshold is not intended to be a project-level threshold.

**LESS THAN SIGNIFICANT IMPACT**

*b. Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

As discussed under "Regulatory Setting," a number of plans and policies have been adopted to reduce GHG emissions in the Southern California region, including Ventura County. SCAG's 2016 RTP/SCS provides land use and transportation strategies to reduce regional GHG emissions. The VCAPCD, Ventura County, and the City of Moorpark have not adopted plans or policies related to GHG emission reductions.

Specific land use objectives identified in SCAG's 2016 RTP/SCS include:

- **Reflect the Changing Population and Demands**. The SCAG region, home to about 18.8 million people in 2015, currently contains 5.9 million households and 8 million jobs. By 2040, the Plan projects that these figures will increase by 3.4 million people, with nearly 1.5 million more households and 1.8 million more jobs (SCAG 2016). High Quality Transit Areas (HQTAs) will account for three percent of regional total land, but will accommodate 46 percent and 55 percent of future household and employment growth, respectively, between 2012 and 2040. The 2016 RTP/SCS land use pattern contains sufficient residential capacity to accommodate the region's future growth, including the eight-year regional housing need. The land use pattern

accommodates about 530,000 additional households in the SCAG region by 2020 and 1.5 million more households by 2040. The land use pattern also encourages improvement in the jobs-housing balance by accommodating 1.1 million more jobs by 2020 and about 2.4 million more jobs by 2040.

- **Focus New Growth Around Transit.** The 2016 RTP/SCS land use pattern reinforces the trend of focusing growth in the region's HQTAs. Concentrating housing and transit in conjunction concentrates roadway repair investments, leverages transit and active transportation investments, reduces regional life cycle infrastructure costs, improves accessibility, avoids greenfield development, and has the potential to improve public health and housing affordability. HQTAs provide households with alternative modes of transport that can reduce VMT and GHG emissions.
- **Plan for Growth Around Livable Corridors.** The Livable Corridors strategy seeks to revitalize commercial strips through integrated transportation and land use planning that results in increased economic activity and improved mobility options. From a land use perspective, Livable Corridors strategies include a special emphasis on fostering collaboration between neighboring jurisdictions to encourage better planning for various land uses, corridor branding, roadway improvements and focusing retail into attractive nodes along a corridor.
- **Provide More Options for Short Trips**. Thirty-eight percent of all trips in the SCAG region are less than three miles. The 2016 RTP/SCS provides two strategies to promote the use of active transport for short trips. Neighborhood Mobility Areas are meant to reduce short trips in a suburban setting, while "complete communities" support the creation of mixed use districts in strategic growth areas and are applicable to an urban setting.
- **Preserve our Existing System.** Southern California's transportation system is becoming increasingly compromised by decades of underinvestment in maintaining and preserving our infrastructure. These investments have not kept pace with the demands placed on the system and the quality of many roads, highways, bridges, transit, and bicycle and pedestrian facilities are continuing to deteriorate. Unfortunately, the longer they deteriorate, the more expensive they will be to fix in the future. Even worse, deficient conditions compromise the safety of users throughout the network. For all of these reasons, system preservation and achieving a state of good repair are top priorities of the 2016 RTP/SCS.
- **Transit.** Looking toward 2040, the 2016 RTP/SCS maintains a significant investment in public transportation across all transit modes and also calls for new household and employment growth to be targeted in areas that are well-served by public transportation to maximize the improvements called for in the Plan.
- **Active Transportation.** The 2016 RTP/SCS includes $12.9 billion for active transportation improvements, including $8.1 billion in capital projects and $4.8 billion as part of the operations and maintenance expenditures on regionally significant local streets and roads. The Active Transportation portion of the 2016 Plan updates the Active Transportation portion of the 2012 Plan, which has goals for improving safety, increasing active transportation usage and friendliness, and encouraging local active transportation plans. It proposes strategies to further develop the regional bikeway network, assuming that all local active transportation plans will be implemented, and dedicates resources to maintain and repair thousands of miles of dilapidated sidewalks. To accommodate the growth in walking, biking and other forms of active transportation regionally, the 2016 Active Transportation Plan also considers new strategies and approaches beyond those proposed in 2012.

The proposed project would provide mixed use, transit-oriented infill development in downtown Moorpark along High Street, which is a local collector road with designated bike lanes and sidewalks. The project site is located in close proximity to a variety of commercial, civic, and institutional development and is within one mile of the Moorpark Town Center. The project site is located within 200 feet of the Moorpark Metrolink rail station and the Moorpark bus stop for the Moorpark City Transit Routes 1 and 2 and VCTC's East County and East-West Connector bus lines. In addition, the project would include 15,018 sf of commercial space that would provide restaurants, a coffee or ice-cream shop, and neighborhood retail services for residents. In these ways, the project fulfills several land use objectives of SCAG's RTP/SCS, including focusing new growth around transit, providing more options for short trips, revitalizing commercial strips into livable corridors, and encouraging active transportation.

Furthermore, State policies to reduce GHG emissions associated with energy use, including the Renewable Portfolio Standard and Title 24 of the California Building Code, would reduce anticipated emissions associated with the proposed project. Overall, the project would be consistent with applicable land use and zoning designations and would not conflict with any State regulations intended to reduce GHG emissions statewide. As discussed in the response to question 8.a, annual GHG emissions for the proposed project would be less than the threshold of 3,000 MT of $CO_2e$ per year established by the SCAQMD. Additionally, as discussed in detail in Section 11, *Land Use and Planning*, the proposed project would also be consistent with other policies of the Moorpark General Plan, including a range of policies aimed indirectly at reducing GHG emissions through reductions in vehicle miles traveled, energy use, and water consumption. Consequently, the project would not conflict with plans and policies aimed at reducing GHG emissions and such impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

# 9 Hazards and Hazardous Materials

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ■ | ☐ |
| b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | ■ | ☐ |
| c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school? | ☐ | ☐ | ☐ | ■ |
| d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ■ | ☐ | ☐ |
| e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | ☐ | ☐ | ☐ | ■ |
| f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ■ |
| g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? | ☐ | ☐ | ☐ | ■ |

*a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

*b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

The proposed project would involve the construction of residential dwellings and commercial space that typically do not use or store large quantities of hazardous materials. Potentially hazardous materials such as fuels, lubricants, and solvents would be used during construction of the project. However, the transport, use, and storage of hazardous materials during the construction of the project would be conducted in accordance with all applicable state and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22.

**LESS THAN SIGNIFICANT IMPACT**

*c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

The project site is not located within 0.25 mile of an existing or proposed school. The nearest school is Chaparral Middle School, located approximately 0.50 mile southwest of the project site. The proposed project would involve construction of a mixed use project including residential units and commercial uses. Operational activities associated with these uses would not involve use or storage of hazardous materials. Though potentially hazardous materials such as fuels, lubricants, solvents, and oils could be used during demolition, construction and operation of the proposed project, the transport, use, and storage of any and all hazardous materials would be conducted in accordance with all applicable State and federal lows, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. Regardless, due to the distance to the nearest school, impacts to schools associated with hazardous emissions would not occur.

**NO IMPACT**

*d. Would the project be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

The following databases and listings compiled pursuant to Government Code Section 65962.5 were checked for known hazardous materials contamination at the project site:

- **United States Environmental Protection Agency (USEPA)**
  - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)/Superfund Enterprise Management System (SEMS)/Envirofacts database search
- **State Water Resources Control Board (SWRCB)**
  - GeoTracker search for leaking underground storage tanks (LUST) and other cleanup sites
- **Department of Toxic Substances Control (DTSC)**
  - Envirostor database for hazardous waste facilities or known contamination sites
  - Cortese List of Hazardous Waste and Substances Sites

The project site is not listed in any of the above environmental databases. The UNOCAL #1696 property (A&P ARCO site) located just west and adjacent to the project site and the J.E. Clark property located approximately 900 feet east of the project site are the closest properties listed in the GeoTracker database. Both sites are LUST cleanup sites. The UNOCAL #1696 site is listed as having potential soil contamination with waste oil, motor, hydraulic, and lubricating fluids and the J.E. Clark property is listed as having potential soil contamination with diesel. Both sites however, are listed as cleanup completed. The UNOCAL #1696 case was closed in May 1994 and the J.E. Clark case was closed in April 1995. There is no evidence to suggest that any contamination from these sites have caused contamination at the project site.

A Phase I Environmental Site Assessment (ESA) was completed for the project site by Rincon Consultants, Inc. in June 2018 (Appendix H). This study included a review of databases, city and county records, and a site reconnaissance on June 5, 2018. During the site reconnaissance, the following hazardous materials were observed in small quantities:

- The storage area at the former Maria's Restaurant contains small quantities of oil based protective enamel, contact cement, polyurethane, and paint & primer.
- One unmarked 55-gallon drum with unknown contents located adjacent to the former "One More Time" thrift shop (220 E High St.) on the site.

However, there were no indications of releases from these containers.

The Phase I ESA concludes that there are no Recognized Environmental Conditions (RECs) in connection with the project site. A Phase I Environmental Site Assessment was also completed for the project site and the adjacent "Chamber of Commercial Site" in January 2017 by EFI Global. This study is on file with the City of Moorpark. This Phase I ESA also concluded that (1) the project site is not listed on any of the researched regulatory databases; (2) there are no known properties within 100 feet of the project site where a release is considered likely or a known release has occurred; and (3) none of the other sites listed on the regulatory database report pose a significant threat to the subject property.

However, the Rincon Phase I ESA identified two potential RECs in connection with the adjacent properties, including (1) existing railroad tracks adjacent to south of the site, and (2) the presence of a former gasoline service station located adjacent to the western property boundary. Concerns associated with the railroad tracks include the potential of hydrocarbons, metals, herbicides, and semi volatile organic compounds (creosote, naphthalene) from railroad activities present in the soils surrounding the railroad tracks. Concerns associated with the former gas station include the potential for contaminated soil gas migration and vapor intrusion of contaminants originating from the former gas station onto the project site. Based on the findings from the Phase I ESA, the project site has potential for containing contaminated soil from the two potential RECs adjacent to the project site. Therefore, mitigation is required to reduce impacts to a less than significant level.

## Mitigation Measure

### *HAZ-1 Soil Sampling and Soil Vapor Assessment*

Within 30 days of the project applicant acquiring the project site from the City of Moorpark and prior to issuance of a grading permit, a shallow soil sampling assessment shall be conducted on the southern portion of the site as close to the railroad tracks as possible, but not within the railroad right-of-way (i.e., within 30 feet of the railroad tracks), to evaluate the adjacent railroad tracks and determine if hydrocarbons, metals, herbicides, and semi volatile organic compounds from the

railroad activities are present in the shallow soil near the railroad tracks. Contaminated soil identified during sampling activities shall be removed and stored in appropriate waste containers, which shall be stored in a secure location such that no person will come into contact with contaminated materials. Any contaminated soil shall be stored in a roll-off bin or similarly-covered container. The handling and transport of waste shall be conducted in accordance with applicable local, state and federal regulations, including the USEPA Resource Conversation and Recovery Act (40 CFR Part 262), Federal and State Occupational Safety and Health Administrations, Federal and State Departments of Transportation, and DTSC (CFR Title 22). Any contaminated soils determined to be hazardous or non-hazardous waste must adequately profiled (sampled) prior to acceptable re-use or disposal at an appropriate off-site facility. Complete sampling and handling and transport procedures for reuse or disposal shall be completed in accordance with applicable local, state, and federal laws and policies.

In addition, a shallow vapor sampling assessment shall be conducted on the western portion of the site adjacent to the former gasoline station (now the Chamber of Commerce building) to determine if there is VOC-impacted soil vapor migrating beneath the site from the adjacent property. The soil vapor survey shall be performed according to the applicable standards of the DTSC and CalEPA. If the investigations indicate that any soil exceeds federal, state, or local regulatory action levels, then the soil shall be remediated to applicable agency standards through soil removal and disposal efforts.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

The project site is not located within an airport land use plan area, or within two miles of a public or private airport. The closest airports are the Camarillo Airport, which is approximately 15 miles southwest of the project site, and the Santa Paula Airport, which is approximately 18 miles northwest of the project site.

**NO IMPACT**

*f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The project would be required to comply with applicable City codes and regulations pertaining to emergency response and evacuation plans maintained by the County police department and fire departments. No roads would be permanently closed as a result of the construction or operation of the proposed project, and no structures would be developed that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The City also has a grid pattern of streets within the downtown area so at no point would any parcel or building be rendered inaccessible. The proposed project would be accessed via existing driveways along High Street. These driveways would provide sufficient ingress/egress for the standard vehicles, trucks, and heavy duty trucks that would frequent the project site. As such, implementation of the proposed project would not interfere with existing emergency evacuation plans or emergency response plans in the area. Therefore, no impact would occur.

**NO IMPACT**

*g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

The project site is located in an urbanized, downtown area in the City of Moorpark, and is therefore, located in an area that is more resistant to wildfire. In addition, the Downtown Specific Plan states that all buildout of the area will apply normal fire protection measures. The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impacts would occur.

**NO IMPACT**

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# 10 Hydrology and Water Quality

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | ☐ | ☐ | ■ | ☐ |
| b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | ☐ | ☐ | ■ | ☐ |
| c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: | | | | |
| (i) Result in substantial erosion or siltation on- or off-site; | ☐ | ☐ | ■ | ☐ |
| (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; | ☐ | ☐ | ■ | ☐ |
| (iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | ☐ | ☐ | ■ | ☐ |
| (iv) Impede or redirect flood flows? | ☐ | ☐ | ☐ | ■ |
| d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | ☐ | ☐ | ☐ | ■ |
| e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | ☐ | ☐ | ■ | ☐ |

*a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Project-related grading and construction, including on-site operation of heavy equipment during grading and construction, would require temporary disturbance of surface soils and removal of vegetative cover which could potentially result in erosion and sedimentation on-site. This would alter the existing drainage pattern on-site. The project site is flat, so the potential for soil erosion is low, but peak stormwater runoff could result in short-term sheet erosion in areas of exposed soils.

The project would be required to obtain coverage under a Construction General Permit (CGP) to comply with Clean Water Act National Pollutant Discharge Elimination System (NPDES) requirements. Compliance with the permit would require the development and implementation of a Stormwater Pollution Prevent Plan (SWPPP) and associated Best Management Practices (BMPs). The BMPs would include measures that would be implemented to prevent discharge of eroded soils from the construction site and sedimentation of surface waters off-site. The BMPs would also include measures to quickly contain and clean up any minor spills or leaks of fluids from construction equipment. Given the relatively flat topography of the site, distance from surface waters, and implementation of the required SWPPP, construction of the project would not violate any water quality standards or waste discharge requirements.

A Hydrology Report was completed for the project site by CCE Design Associates, Inc. in June 2019 and is included in full as Appendix B. The purpose of the report was to validate the grading and drainage design for the proposed project. Overall, drainage patterns on the project site will remain largely unchanged. However, as described under *Project Description*, storm drain inlets will be integrated into parking areas, and new LID BMPs would be integrated into the building, landscaping, streetscape, and parking lot areas. Storm drain inlets would be collected by a new on-site storm drain system, which would discharge into the existing storm drain within High Street and ultimately drain to Moorpark Storm Drain No. 1.

The project would be subject to the requirements of a Ventura County Municipal Separate Storm Sewer Systems (MS4) permit, which requires the use of site specific BMPs. As described under *Project Description*, site-specific LID BMPs would be integrated into the project in compliance with the 2011 TGM. These measures include site planning to achieve five percent Effective Impervious Area, use of pervious paving/landscaping, and installation of storm drain signage. Furthermore, treatment control BMPs such as planter boxes, bio-retention areas, biofiltration basins, and "StormTreat" linear stormwater filtration devices would be installed to treat runoff from roof areas, parking/drive-aisle areas, and street frontage areas would be installed.

Per the findings within the Gabbert & Walnut Canyon Channels Flood Control Deficiency Study (County of Ventura 2005), the Ventura County Watershed Protection District has established an allowable peak discharge flow rate of 90 percent or less of the pre-development flow rate. The "pre-development" flow rate for the project site is 4.62 cfs using the 100-year peak event runoff flow rate. Therefore, an acceptable peak discharge flow rate for the project is 4.16 cfs (0.90 * 4.62 cfs). The maximum "post-development" flow rate for the developed project site would be 5.08 cfs. However, the project would reduce the post-development flow rate by 0.92 cfs by including 175 feet of oversized 48-inch drain pipe in the western drainage area and 65 feet of 36-inch pipe within the eastern drainage area (Appendix B). These drain pipes would detain and accumulate stormwater runoff, then release runoff at various metered rates that meet City and County criteria for detained flow release depending on the size of the storm event.

Therefore, operation of the project would not be expected to violate any water quality standards or waste discharge requirements. The project would have less than significant impacts with respect to water quality standards and discharge requirements.

**LESS THAN SIGNIFICANT IMPACT**

*b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

*e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

The project site is within the boundaries of the draft Groundwater Sustainability Plan (GSP) for the Las Posas Valley Basin (Fox Canyon Groundwater Management Agency 2017). The draft GSP projects future water demands based on historic water availability and demand, and buildout of the General Plan. While the project would require rezoning of the project site, the proposed project would be consistent to the DTSP vision of revitalizing the downtown area. Therefore, projected groundwater demands in the draft GSP generally take into account water demand from the project.

According to the Preliminary Geohazard Report (Appendix G), groundwater was encountered at sites along High Street at depths of 33 to 38 feet in the drill holes. Historic high groundwater levels in downtown Moorpark have been within 15 to 20 feet of the ground surface. As discussed in Section 7, *Geology and Soils*, although the project proposes to excavate and recompact on-site soils, the applicant does not anticipate excavating to a depth greater than 15 feet below grade, which is at or above historic high groundwater levels. Therefore, it is unlikely that groundwater would be encountered over the course of construction. In the event that groundwater is encountered, minor dewatering of groundwater seepage may be necessary. However, temporary dewatering activities would not be substantial enough to induce subsidence due to groundwater withdrawal. Therefore, the proposed project would have a less than significant impact related to the depletion of groundwater supplies and groundwater recharge.

**LESS THAN SIGNIFICANT IMPACT**

*c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?*

*c.(ii) Would the project substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

*c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

Project construction would be required to obtain coverage under a CGP to comply with Clean Water Act NPDES requirements. Compliance with the permit would require the development and implementation of a SWPPP and associated BMPs. The BMPs would include measures that would be implemented to prevent discharge of eroded soils from the construction site, sedimentation of

surface waters off-site, and any increase of surface runoff that could result in flooding off-site. Given the relatively flat topography of the site, distance from surface waters, the minimal grading and excavation required for construction, and implementation of the required SWPPP, construction of the project would not result in substantial erosion or siltation on- or off-site.

The proposed project would not alter the course of any stream or river but would change existing drainage patterns on the project site. Development of the proposed project would introduce more impervious surfaces; however, as discussed above in question 7.a above, the proposed on-site BMPs would filter stormwater, reduce off-site flows to acceptable levels via detention, and thus minimize potential erosion. In addition, per the Downtown Specific Plan's IS-MND Mitigation Monitoring Program, the project's grading drainage plan has been reviewed by the City's Public Works Department, with comments provided to the applicant, and is required to be approved by the City Council.

Construction of the proposed project would be required to comply with the CGP, the SWPPP, Ventura County's MS4 Permit, the DTSP, and the MMC. The MMC outlines stormwater and drainage requirements for new development including the required approvals prior to construction. Compliance with these requirements would reduce potential adverse impacts associated with drainage pattern alterations. Alterations to the existing drainage pattern would be less than significant and would not result in substantial erosion, siltation, or flooding on- or off-site.

The project would be designed and engineered with drainage features appropriate to accommodate needs of the proposed project. The project would not exceed the capacity of existing or planned stormwater drainage systems. As discussed under the responses to questions 7.a, 7.c, .7.d, and 7.f, the project would comply with all NPDES requirements, Ventura County's MS4 Permit, and the City's runoff requirements. Development of the project would not create or contribute runoff water in exceedance of the City's existing stormwater drainage systems and would not provide a substantial additional source of polluted runoff. According to the DTSP, the downtown area has undergone a number of storm drainage infrastructure upgrades, and the storm drainage system servicing the majority of the residential and commercial areas within the DTSP area is fully in place. In accordance with DTSP stormwater requirements, the proposed project would discharge to an existing approved storm drain system, and the project has been designed to comply with NPDES Standards for discharge and pollutant runoff. The proposed project's on-site stormwater and drainage improvements would also require inspection and approval by the City prior to receiving building occupancy permits. Through compliance with the Downtown Specific Plan and the MMC, impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would impede or redirect flood flows?*

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the project site is located in Zone X, which is characterized as an area of minimal flood hazard and having a less than 0.2 percent annual chance to be inundated by flood waters as a result of a storm event (Map # 06111C0817E) (FEMA 2018). In addition, according to the California Governor's Office of Emergency Services (Cal OES) MyHazards online database, the project site is not located in a 100-year floodplain (Cal OES 2015). The project would not expose people or structures to a significant loss, injury, or death involving flooding. No impact would occur.

**NO IMPACT**

*d. Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

Seiches are seismically induced waves that occur in large bodies of water, such as lakes and reservoirs. The project site is not in proximity to a large body of water, and therefore, seiches are a not a risk to the project site. No impacts would occur.

A tsunami is a tidal wave produced by off-shore seismic activity. The project site is not located in a tsunami inundation area as shown on the Ventura County Multi-Jurisdictional Hazard Mitigation Plan and would not be subject to inundation by tsunami (County of Ventura 2010). No impacts would occur.

The project site is not located in an earthquake-induced landslide zone (County of Ventura 2010). Landslides and mud flows are most likely to occur on or near a slope or hillside area, rather than in generally level areas, such as the project site. Mud flows would not be a risk to the project. The project would have no impact.

**NO IMPACT**

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# 11 Land Use and Planning

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Physically divide an established community? | ☐ | ☐ | ☐ | ■ |
| b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ■ |

*a. Would the project physically divide an established community?*

The project site is located within the Downtown Specific Plan (DTSP) area. The vision of the DTSP is to revitalize downtown and implement design standards, guidelines, and a strategy for business attraction and development of the City owned parcels in downtown. Specifically, the High Street area is important because it retains the country charm that includes a pedestrian-oriented area where people walk and shop.

The site is currently occupied by an abandoned granary and non-operational industrial buildings. No residential dwellings are located on-site. The project would demolish the existing abandoned buildings and construct 91 residential units, 15,018 sf of commercial space, and a village green within the DTSP area. The project would create an interconnected and pedestrian-friendly environment on the project site and immediately adjacent to areas parallel to High Street Therefore, the project would not physically divide an established community.

**NO IMPACT**

*b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

The proposed mix of residential and commercial uses is consistent with the applicable Moorpark General Plan Land Use Element's Commercial Development, Economic Development and Employment, Community Appearance, and Residential Development Goals and Policies referenced in the DTSP. The project is also consistent with the City's General Plan Circulation Element and Housing Element. The proposed project would further the DTSP vision of revitalizing the downtown area by bringing business attraction and pedestrian-oriented areas to downtown. The construction of a mixed use development would help further along the goals of both the Moorpark General Plan and the DTSP, which both call for residential development in close proximity to employment opportunities, shopping areas, public parks, and transit lines. Construction of a mixed use development downtown would allow people to walk or bike to activities and work within the DTSP area.

On May 15, 2019, the Moorpark City Council directed staff to prepare a Mixed-Use Overlay Zone ordinance that would allow for the development of mixed commercial and residential uses within downtown and provide for flexible parking standards within the downtown area proximate to the train station. Adoption of a Mixed-Use Overlay Zone ordinance would be required prior to consideration of project entitlements. The project would require a Zoning Map Amendment to apply the Mixed-Use Overlay Zone to the project parcels. Application of the Mixed-Use Overlay Zone would achieve the following:

- **Zoning Ordinance, Zoning Map Amendment, and Mixed-Use Overlay Zone.** The current C-OT zoning designation does not allow residential uses as part of mixed-use developments. Therefore, the Mixed-Use Overlay Zone would allow residential uses as part of the proposed mixed-use development within the underlying C-OT zoning district. This overlay zone would be added on top of the existing commercial zone and would preserve the underlying intent and set of allowable uses of the C-OT zone while adding allowable residential uses as part of a mixed-use project. The Mixed-Use Overlay Zone would also establish flexible parking standards for mixed-use development projects located near transit. The Mixed-Use Overlay Zone would be added to the City's Zoning Ordinance and would contain applicable mixed-use development standards that would supersede the development standards of the underlying commercial zone but would only be applicable to mixed-use projects. The proposed zoning district overlay would only be applied to the project parcel (APN 512-0-090-115) via a Zoning Map Amendment; therefore, no additional impacts from development beyond those already analyzed in the IS-MND would occur. For the Mixed-Use Overlay Zone to be extended or applied to other parcels in the future, an additional environmental analysis subject to the California Environmental Quality Act (CEQA) would need to occur.

The proposed project has been reviewed by City Staff and is designed in conformance with the development standards outlined in the amended DTSP, the Mixed-Use Overlay Zone, and the Zoning Code. A Residential Planned Development Permit is also required and, pursuant to Zoning Code Section 17.44.040, may be utilized to set project-specific development standards. Because the project is consistent with the General Plan and the adoption of a Mixed-Use Overlay Zone would allow for ground-floor residential uses and flexible parking requirements as envisioned in DTSP Section 3.8, the project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

**NO IMPACT**

# 12 Mineral Resources

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☐ | ■ |
| b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | ☐ | ☐ | ☐ | ■ |

*a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

*b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

The project site is developed with a former granary and industrial buildings and is not currently being used for extraction of mineral resources. According to Figure 2 of the Open Space, Conservation, and Recreation Element of the City's General Plan (1986), the entire city is located within a mineral resource area of interest. However, the project site is within MRZ-1, an area where adequate information indicates that no significant mineral deposits are present, according to Figure 1.4.1 of the County of Ventura's General Plan Resources Appendix (2011). Moreover, the project would not involve the use or mining of mineral resources. Therefore, no impact related to the loss of availability of a known, important statewide, regional, or local mineral resource would occur.

**NO IMPACT**

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# 13 Noise

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project result in: | | | | |
| a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ■ | ☐ | ☐ |
| b. Generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ■ | ☐ |
| c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ■ |

## Noise Background

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). Because of the logarithmic scale of the decibel unit, sound levels cannot be added or subtracted arithmetically. If a sound's noise energy is doubled, the sound level increases by 3 dBA, regardless of the initial sound level. Noise level increases of less than 3 dBA typically are not noticeable.

Noise levels from point sources, such as those from individual pieces of machinery or railroad crossing signals, typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from the noise source. Noise levels from lightly traveled roads typically attenuate at a rate of about 4.5 dBA per doubling of distance. Noise levels from heavily traveled roads and railroads typically attenuate at about 3 dBA per doubling of distance (Federal Transit Administration [FTA] 2018). Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receiver and the noise source reduces noise levels by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA (FTA 2018). The manner in which homes in California are constructed generally provides a reduction of exterior-to-interior noise levels of approximately 20 to 25 dBA with closed windows (FTA 2018).

In addition to the instantaneous measurement of sound levels, the duration of sound is important because sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level ($L_{eq}$). The $L_{eq}$ is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, $L_{eq}$ is summed over a one-hour period. $L_{max}$ is the highest RMS (root mean squared) sound pressure level within the measurement period, and Lmin is the lowest RMS sound pressure level within the measurement period.

The time period in which noise occurs is also important since nighttime noise tends to disturb people more than daytime noise. Community noise is usually measured using Day-Night Average Level ($L_{dn}$), which is the 24-hour average noise level with a 10-dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.), or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a 5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a 10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. Noise levels described by $L_{dn}$ and CNEL typically do not differ by more than 1 dBA. In practice, CNEL and $L_{dn}$ are often used interchangeably.

The relationship between peak hourly $L_{eq}$ values and associated $L_{dn}$/CNEL values depends on the distribution of traffic over the entire day. There is no precise way to convert a peak hour $L_{eq}$ to $L_{dn}$ or CNEL. However, in urban areas near heavy traffic, the peak hour $L_{eq}$ is typically 2 to 4 dBA lower than the daily $L_{dn}$/CNEL. In less heavily developed areas, such as suburban areas, the peak hour $L_{eq}$ is often roughly equal to the daily $L_{dn}$/CNEL. For rural areas with little nighttime traffic, the peak hour $L_{eq}$ will often be 3 to 4 dBA greater than the daily $L_{dn}$/CNEL value (California State Water Resources Control Board [SWRCB] 1999). The project site is located in a suburban area; therefore, the $L_{dn}$/CNEL in the area would be roughly equal to the peak hour $L_{eq}$.

## Regulatory Setting

### *City of Moorpark General Plan Noise Element*

The Noise Element of the Moorpark General Plan Identifies existing sources of noise in Moorpark, as well as noise-related goals, policies, and implementation. The goals and policies in the Noise Element aim to maintain acceptable environmental noise levels to protect Moorpark residents from excessive noise.

The Noise Element establishes noise standards for single-family and multiple-family residential land uses as 65 CNEL for the exterior environment, 55 CNEL for the interior environment with windows open, and 45 CNEL for the interior environment with windows closed (City of Moorpark 1998).

### *Municipal Code*

#### CONSTRUCTION NOISE

Section 17.53.070.F prohibits the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work so as to violate the noise standards set forth in Table 13 between weekday (Saturdays and legal holidays observed by the city included) hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays.

Table 13 shows noise standards at residential and business properties for the nonscheduled, intermittent, short-term operation (less than ten days) of mobile construction equipment and for

the repetitively scheduled and relatively long-term operation (periods of ten days or more) of stationary construction equipment.

**Table 13 Construction Equipment Noise Standards**

| | dBA $L_{eq}$ | | | | | |
|---|---|---|---|---|---|---|
| | Single-Family Residential | | Multi-Family Residential | | Business Properties | |
| | Mobile[1] | Stationary | Mobile[1] | Stationary | Mobile | Stationary |
| Daily, except Sundays and legal holidays, 7:00 a.m. to 7:00 p.m. | 75 | 75 | 80 | 80 | 75 | 65 |
| Daily, 7:00 p.m. to 7:00 a.m. | 60 | n/a | 65 | n/a | 75 | 65 |

n/a = not applicable

[1] Mobile construction equipment noise is also permitted on Sundays and legal holidays up to 60 dBA in single-family residential areas and up to 65 dBA in multifamily residential areas.

Source: Moorpark Municipal Code Section 17.53.070, Tables 1, 2, and 2A

Section 17.53.100.E of the Moorpark Municipal Code (MMC) exempts repair, remodeling or grading of real property from the operational exterior noise limits detailed in MMC Section 17.53.080 and the interior noise limits detailed in MMC Section 17.53.090 provided that construction occurs during the hours of 7:00 a.m. to 7:00 p.m. on Monday through Saturday. No construction is permitted on Sundays and national holidays.

### OPERATIONAL NOISE

MMC Section 17.53.070.E of the MMC prohibits the loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10:00 p.m. and 7:00 a.m. any day of the week in such a manner as to cause a noise disturbance across a residential property line or at any time to violate the provisions of Section 17.53.050.

Section 17.53.070.N of the MMC also includes noise standards for residential HVAC equipment. HVAC equipment operating within a residential area may not exceed the noise levels shown in Table 14.

### Table 14 Residential HVAC Equipment Noise Standards

| Measurement Location | Units Installed Before 1-1-80 (dBA) | Units Installed on or After 1-1-80 (dBA) |
|---|---|---|
| Any point on neighboring property line, 5 feet above grade level, no closer than 3 feet from any wall | 60 | 55 |
| Center of neighboring patio, 5 feet above grade level, no closer than 3 feet from any wall | 55 | 50 |
| Outside the neighboring living area window nearest the equipment location, not more than 3 feet from the window opening, but at least 3 feet from any other surface | 55 | 50 |

Source: Moorpark Municipal Code Section 17.50.070

MMC Section 17.53.080 sets exterior noise limits for existing receiving land uses, which are summarized in Table 15. As shown therein, the allowable exterior noise levels for single-family and multifamily residential uses are 55 dBA from 10:00 p.m. to 7:00 a.m. and 60 dBA from 7:00 a.m. to 10:00 p.m. The allowable exterior noise levels for general commercial and planned development land uses are 60 dBA from 10:00 p.m. to 7:00 a.m. and 65 dBA from 7:00 a.m. to 10:00 p.m. No person may cause the noise level on another property to exceed these noise limits by:

- Any level for a cumulative period of more than 30 minutes in any hour
- 5 dBA for a cumulative period of more than 15 minutes in any hour
- 10 dBA for a cumulative period of more than 5 minutes in any hour
- 15 dBA for a cumulative period of more than 1 minute in any hour
- 20 dBA for any period of time

### Table 15 Exterior Noise Limits

| Type of Land Use | Time Interval | Allowable Exterior Noise Level (dBA) |
|---|---|---|
| Single-family and multi-family residential/rural and agricultural zones | 10:00 p.m. – 7:00 a.m. | 55 |
| | 7:00 a.m. – 10:00 p.m. | 60 |
| Commercial office/neighborhood | 10:00 p.m. – 7:00 a.m. | 55 |
| | 7:00 a.m. – 10:00 p.m. | 60 |
| General commercial/planned development | 10:00 p.m. – 7:00 a.m. | 60 |
| | 7:00 a.m. – 10:00 p.m. | 65 |
| Industrial park | Anytime | 65 |
| Limited industrial | Anytime | 70 |
| Public space | All day | 70 |

Source: Moorpark Municipal Code Section 17.50.080

MMC Section 17.53.090 sets interior noise limits for receiving single-family and multifamily residential land uses, which are shown in Table 16. No person may cause the noise level on another property to exceed:

- The noise standard for a cumulative period of more than 5 minutes in any hour
- The noise standard plus 5 dbA for a cumulative period of more than 1 minute in any hour
- The noise standard plus 10 dbA or the maximum measured ambient noise level for any period of time

### Table 16 Interior Noise Limits

| Type of Land Use | Time Interval | Allowable Interior Noise Level (dBA) |
|---|---|---|
| Single-family and multi-family residential | 7:00 a.m. – 10:00 p.m. | 45/55 (windows open) |

Source: Moorpark Municipal Code Section 17.50.090

#### ROADWAY NOISE

Because the City of Moorpark does not have noise standards for operational mobile sources, this analysis relies on the recommendations of the FTA for the allowable increase in roadway noise exposure due to a project as set forth in the FTA's *Transit Noise and Vibration Impact Assessment*, which are summarized in Table 17 (2018).

### Table 17 Significance of Changes in Roadway Noise Exposure

| Existing Noise Exposure (dBA $L_{dn}$ or $L_{eq}$) | Noise Exposure Increase Significance Threshold (dBA $L_{dn}$ or $L_{eq}$) |
|---|---|
| 45-50 | 7 |
| 50-55 | 5 |
| 55-60 | 3 |
| 60-65 | 2 |
| 65-74 | 1 |
| 75+ | 0 |

Source: FTA 2018

#### AMBIENT NOISE LEVELS

The primary off-site noise sources in the project site vicinity are motor vehicles (e.g., automobiles, buses, and trucks) along High Street and Moorpark Avenue. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create sustained noise levels. Ambient noise levels are generally highest during the daytime and rush hour unless congestion slows traffic speeds substantially. Other intermittent sources of noise in the project vicinity include railway noise, and general conversations from passersby activities associated with nearby residential and commercial development.

To determine ambient noise levels at the project site, three 15-minute noise measurements ($L_{eq}$[15] dBA) were taken between 7:00 a.m. and 9:00 a.m. (morning peak hour) on Monday, June 12, 2018. Table 18 summarizes the results of the short-term noise measurements. As shown in Table 18, short-term measured noise levels ranged from 55.0 to 69.0 dBA $L_{eq}$. Noise Measurement ST-1 was

taken approximately 30 feet from the centerline of High Street, and 150 feet from the railroad tracks to the south and gives an estimate of the combined noise of roadway traffic and a passing-by train. Noise Measurement ST-2 was taken in the center of the project site and gives an estimate of roadway noise only. Noise Measurement ST-3 was taken adjacent to nearby residences and provides an estimate of existing ambient sound levels at the nearest sensitive receivers.

### Table 18 Short-Term Sound Level Monitoring Results

| Measurement Number | Measurement Location | Sample Time | Approximate Distance to Centerline of Roadway (feet) | $L_{eq}$[15] (dBA)[1] |
|---|---|---|---|---|
| ST-1 | High Street | 7:57 a.m. – 8:12 a.m. | 30 [2] | 69.0 |
| ST-2 | Center of Project Site | 7:41 a.m. – 7:56 a.m. | 60 [3] | 65.4 |
| ST-3 | Walnut Street adjacent to nearby residence (sensitive receiver) | 8:16 a.m. – 8:31 a.m. | 30 [4] | 55.0 |

See Appendix I for noise monitoring data.

[1] The equivalent noise level ($L_{eq}$) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For this measurement, the $L_{eq}$ was over a 15-minute period ($L_{eq}$[15]).

[2] Distance from centerline of High Street.

[3] Distance from centerline of High Street.

[4] Distance from centerline of Walnut Street.

Note: During Noise Measurement 1, a train passed by approximately 150 feet south of Noise Measurement Location 1. Additionally, train crossing bells were sounding.

Source: Rincon Consultants, field measurements on June 12, 2018 using ANSI Type II Integrating sound level meter.

In addition, a 24-hour noise measurement was taken from 8:43 a.m. on Wednesday, October 2, 2019 to 8:43 a.m. on Thursday, October 3, 2019. The 24-hour noise level was measured as 69 CNEL. Table 19 summarizes the hourly results of the 24-hour noise measurement. See Figure 4 for the noise measurement location.

**Figure 4 Sound Level Measurement Locations**




*Imagery provided by Microsoft Bing and its licensors © 2019.*

## Table 19 24-Hour Sound Level Monitoring Results

| Time | Hourly $L_{eq}$ (dBA) |
|---|---|
| 8:00 – 9:00 a.m. | 55.3 |
| 9:00 – 10:00 a.m. | 51.7 |
| 10:00 – 11:00 a.m. | 50.1 |
| 11:00 a.m. – 12:00 p.m. | 52.7 |
| 12:00 – 1:00 p.m. | 52.3 |
| 1:00 – 2:00 p.m. | 54.0 |
| 2:00 – 3:00 p.m. | 63.1 |
| 3:00 – 4:00 p.m. | 52.4 |
| 4:00 – 5:00 p.m. | 68.0 |
| 5:00 – 6:00 p.m. | 51.9 |
| 6:00 – 7:00 p.m. | 61.4 |
| 7:00 – 8:00 p.m. | 77.5 |
| 8:00 – 9:00 p.m. | 59.5 |
| 9:00 – 10:00 p.m. | 48.2 |
| 10:00 – 11:00 p.m. | 46.8 |
| 11:00 p.m. – 12:00 a.m. | 43.8 |
| 12:00 – 1:00 a.m. | 44.3 |
| 1:00 – 2:00 a.m. | 43.0 |
| 2:00 – 3:00 a.m. | 40.8 |
| 3:00 – 4:00 a.m. | 44.7 |
| 4:00 – 5:00 a.m. | 48.8 |
| 5:00 – 6:00 a.m. | 49.7 |
| 6:00 – 7:00 a.m. | 55.2 |
| 7:00 – 8:00 a.m. | 59.0 |

$L_{eq}$ = average noise level equivalent; dBA = A-weighted decibel

See Appendix I for noise monitoring data.

Source: Rincon Consultants, field measurement from October 2, 2019 to October 3, 2019 using ANSI Type II Integrating sound level meter.

#### RAILWAY NOISE

The existing industrial and commercial buildings on-site partially block the line of sight between the railway and adjacent commercial development across High Street. As discussed under *Noise Background*, a single row of intervening structures between a noise source and a receiver provides a 5 dBA reduction in noise levels (FTA 2018). Therefore, existing buildings on-site provide a 5 dBA reduction in intermittent noise from railway operations at nearby commercial properties.

## Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise sensitive land uses typically include residences, hospitals, schools guest lodging, libraries, and parks. The closest residences are located approximately 105 feet north of the project site across High Street, which are shielded by various commercial uses along High Street, and approximately 175 feet south of the project site across the existing railway. Additionally, the proposed project would include 91 residential units, which would be new sensitive receivers.

*a. Would the project result generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

## Construction Noise Impacts

Construction of the proposed project, including the demolition of existing commercial and industrial buildings, would generate temporary noise that would exceed existing ambient noise levels in the project site vicinity, but would cease upon project completion. Noise impacts associated with construction activity are a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Noise levels from individual pieces of construction equipment and the combined operation of multiple pieces of equipment are based on the FHWA *Highway Construction Noise Handbook* (2006). Peak noise levels associated with the use of individual pieces of heavy equipment can range from about 70 to 89 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and phase of construction (FHWA 2006).

Table 20 shows estimated project construction noise by phase for multiple pieces of construction equipment operating simultaneously and the typical overall noise level that would be expected during each phase. Table 20 also shows the maximum hourly construction noise levels ($L_{eq}$) for the nearest commercial and residential properties located approximately 75 feet and 105 feet from the project site, respectively.

**Table 20 Construction Noise Levels by Phase**

| Construction Phase | Equipment | Estimated Noise at 75 feet at Commercial Properties (dBA $L_{eq}$) | Estimated Noise at 105 feet at Residences (dBA $L_{eq}$) |
|---|---|---|---|
| Demolition | Concrete Saw, Dozer, Backhoe/Tractors (3) | 81.4 | 78.5 |
| Site Preparation | Grader, Scraper, Backhoe/Tractor | 80.3 | 77.4 |
| Grading | Grader, Dozer, Backhoe/Tractors (2) | 80.1 | 77.2 |
| Building Construction | Crane, Forklift (2), Generator, Backhoe/Tractor, Welders (3) | 78.0 | 75.0 |
| Paving | Cement and Mortar Mixer, Paver, Paving Equipment, Rollers (2), Backhoe/Tractor | 81.2 | 78.3 |
| Architectural Coating | Air Compressor | 70.2 | 67.2 |

Note: See Appendix C for CalEEMod construction list and Appendix I for RCNM data sheets.

As shown in Table 20, operation of equipment during various phases of construction could generate maximum noise levels of approximately 70 to 81 dBA $L_{eq}$ at the nearest commercial properties and average hourly noise levels of approximately 67 to 79 dBA $L_{eq}$ at the nearest residences. These construction noise levels would exceed the existing ambient noise level of 69 dBA (which includes railway noise) and therefore would be the dominant source of ambient noise during construction. Average hourly construction noise levels would exceed the MMC daytime residential standard for mobile and stationary construction equipment of 75 dBA $L_{eq}$. Furthermore, maximum construction noise levels would exceed the MMC daytime commercial standard for mobile equipment of 75 dBA $L_{eq}$ and the daytime commercial standard for stationary equipment of 65 dBA $L_{eq}$. It should be noted, however, that construction-related noise disturbances would be temporary in nature, and peak noise levels would likely occur during the initial demolition and grading phases.

The following mitigation measure would be required to reduce the effects of temporary construction noise on nearby receivers to a less than significant level.

## Mitigation Measure

### *N-1 Construction Noise*

- Operate all diesel equipment with closed engine doors and equip all diesel equipment with mufflers that reduce construction equipment noise by at least 5 dBA.
- For stationary equipment, designate equipment areas with appropriate acoustic shielding on building and grading plans and locate these areas to maximize the distance between the activity and the existing commercial uses. Equipment and shielding will be installed prior to construction and remain in designated location throughout construction activities. Appropriate acoustic shielding shall completely obscure the noise source from sensitive receptors along the north

side of High Street. The shielding shall be non-reflective and shall composed of sound absorbing materials like vinyl, polyester, wool, woven fiberglass, or wood.

- Electrical power shall be used to run to run air compressors and similar power tools and to power any temporary structures, such as construction trailers.
- Require all contractors, as a condition of contract, to maintain and tune-up all construction equipment to minimize noise emissions and provide monthly reports documenting equipment maintenance activities.
- Erect temporary sound barriers along the northern boundary of the project site between active on-site construction work using heavy equipment and adjacent receivers (commercial properties). Such barriers will be of sufficient height to break the line-of-sight between noise-generating equipment and the noise-sensitive receiver, and will be continuous with no gaps or holes between panels or the ground. Temporary sound barriers may include noise curtains, sound blankets, or solid temporary barriers.
- The applicant shall retain a City-approved noise consultant to conduct a noise survey at the beginning of each phase of construction (i.e., demolition, site preparation, grading, building construction, paving, and architectural coating) and when the equipment mix changes significantly (e.g., heavy-duty pieces of equipment begin to be utilized during a certain phase that differ from those utilized during the start of that phase). Noise monitoring shall occur over the course of the first full day of construction activities and shall commence at the start of daily construction activities (including equipment warm-up) and end when all heavy-duty equipment has been shut down for the day. If the noise survey measures construction noise levels that are within 3 dBA of the limits specified in Moorpark Municipal Code Section 17.53.070, Tables 1, 2, and 2A, the noise consultant shall conduct continuous monitoring during construction activities over the course of three consecutive days to verify noise levels. If the noise limits specified in Moorpark Municipal Code Section 17.53.070, Tables 1, 2, and 2A are exceeded, significant noise-generating construction activities shall halt, and the applicant shall develop a noise control plan that includes additional noise reduction measures, including but not limited to installing sound barriers of greater height and scheduling construction activities such that fewer pieces of construction equipment are in operation at any given time. Upon completion of the noise control plan, construction activities shall recommence with implementation of the additional noise control measures, at which time the noise consultant shall perform an additional noise survey to evaluate the effectiveness of the additional measures. The noise consultant shall prepare a brief memorandum summarizing the results of the noise survey conducted for each phase of construction, for any times when the equipment mix changes significantly, and for times at which implementation of a noise control plan is required. The memorandum shall be submitted to the City within five working days of the noise survey.

Installation of temporary sound attenuating barriers between construction activities and adjacent sensitive receivers typically provides 10 to 20 dBA attenuation (Federal Highway Administration 2017). Table 21 summarizes mitigated construction noise levels by phase, conservatively assuming a 10 dBA reduction from the barriers. As shown therein, maximum construction noise levels would be reduced to approximately 60 to 72 dBA $L_{eq}$ at the nearest commercial properties, which would be below the City's standard of 75 dBA $L_{eq}$ daytime commercial standard for mobile equipment and the 65 dBA $L_{eq}$ daytime commercial standard for stationary equipment. Furthermore, maximum construction noise levels would be reduced to approximately 57 to 71 dBA $L_{eq}$, which would not exceed the MMC 75 dBA $L_{eq}$ daytime residential standard for mobile and stationary equipment. Residences and commercial properties would not be exposed to excessive noise during nighttime

hours because the MMC restricts construction to the hours of 7:00 a.m. to 7:00 p.m. on Mondays through Saturdays. Furthermore, residences located to the north of the project site would be shielded by existing commercial properties located along High Street and would be separated by High Street itself, which would further attenuate construction noise. Therefore, with the incorporation of mitigation, the project would be consistent with MMC construction noise standards.

**Table 21 Mitigated Construction Noise Levels by Phase**

| Construction Phase | Equipment | Estimated Noise at 75 feet at Commercial Properties (dBA $L_{eq}$) | Estimated Noise at 105 feet at Residences (dBA $L_{eq}$) |
|---|---|---|---|
| Demolition | Concrete Saw, Dozer, Backhoe/Tractors (3) | 69.9 | 67.0 |
| Site Preparation | Grader, Scraper, Backhoe/Tractor | 65.3 | 62.4 |
| Grading | Grader, Dozer, Backhoe/Tractors (2) | 65.1 | 62.2 |
| Building Construction | Crane, Forklift (2), Generator, Backhoe/Tractor, Welders (3) | 67.0 | 64.1 |
| Paving | Cement and Mortar Mixer, Paver, Paving Equipment, Rollers (2), Backhoe/Tractor | 72.4 | 70.6 |
| Architectural Coating | Air Compressor | 60.2 | 57.2 |

Note: See Appendix C for CalEEMod construction list and Appendix I for RCNM data sheets.

## Railway Noise Impacts

Existing business owners along High Street have expressed concerns about the potential for an increase in train-related noise during project construction, specifically between the period of removal of the existing commercial and industrial buildings and construction of the proposed project. The removal of existing buildings would result in up to a 5 dBA increase in the noise from railway operations at adjacent commercial properties located north of the project site across High Street. However, on-site construction noise would still be the dominant source of noise during construction and therefore no perceptible increase in train noise is anticipated upon completion of building demolition. Furthermore, the increase in railway noise would be temporary because construction of the proposed development would result in a row of structures, most of which would be approximately 35 feet height, that would exceed the height of the majority of existing structures (with the exception of the existing granary building tower) and would cover more of the project site, thereby breaking the line of sight between the railway and the adjacent commercial properties and providing more effective sound attenuation at the commercial properties located north of the project site than experienced under existing conditions (FTA 2018). Furthermore, the proposed project buildings would be constructed of materials such as metal, wood, and brick, and the interior walls would be lined with sound-attenuating insulation. The resulting increase in wall density would provide greater sound attenuation when compared to existing conditions (Federal Highway Administration 1974). Therefore, railway noise impacts during project construction would be less

than significant. Nevertheless, the project schedule included in the Development Agreement would require the construction of new buildings to occur immediately after completion of all on-site demolition activities.

## Operational Noise Impacts

The proposed project would introduce new residences and commercial uses to the project site and would result in new on-site sources of noise including HVAC equipment, outdoor recreation uses, delivery and trash-hauling trucks, and parking lot activities as well as off-site roadway noise impacts. Existing sensitive receivers near the project site and proposed new uses on-site may be subject to noise associated with operation of the proposed project.

### *HVAC Equipment*

Mechanical equipment on the project site would include HVAC equipment. This equipment typically is placed on the roof or within mechanical equipment rooms and is not usually a significant source of noise. Noise from HVAC equipment ranges from 60 to 70 dBA $L_{eq}$ at 15 feet from the source (Illingworth & Rodkin 2009). For a conservative estimate, this analysis assumes that HVAC equipment generates a noise level of 70 dBA $L_{eq}$ at 15 feet from the source. Based on the project plans, HVAC equipment could be located 90 feet from commercial properties and 190 feet from the nearest residence. Given that the project would include six separate buildings, this analysis conservatively assumes that each building would house its own HVAC equipment. Based on the typical attenuation rate of 6 dBA per doubling of distance, noise from HVAC equipment at the nearest commercial property would be 63.8 dBA $L_{eq}$, and noise at the nearest residence would be 60.9 dBA $L_{eq}$. HVAC equipment noise levels would not exceed the City's exterior daytime standard of 65 dBA $L_{eq}$ for general commercial uses but would exceed the exterior daytime standard of 60 dBA $L_{eq}$ for residential uses. Furthermore, noise levels could exceed the City's exterior nighttime standards of 60 dBA for general commercial uses and 55 dBA $L_{eq}$ for residential uses. Therefore, mitigation measure N-2 would be required to reduce the HVAC equipment noise levels below the City's exterior nighttime standards and reduce impacts to a less than significant level.

### *Outdoor Recreational Uses*

Outdoor recreational uses associated with the project would include the plaza and patio located in the commercial component of the project as well as open space located on the western portion of the project site. These outdoor recreational uses would be utilized by on-site residents and by employees and/or customers of the proposed commercial uses. Residential units would also include decks on the second and third floor. Noise levels associated with residential decks would also be negligible because the proposed building would be two to three stories tall and commercial uses adjacent to the project site are only one or two stories in height.

In social situations, people often talk at distances of approximately 3 to 13 feet. A typical voice level at this distance is approximately 60 dBA (The Engineering Toolbox n.d.). As shown in Table 18, ambient noise levels at the project site range from 65 to 69 dBA $L_{eq}$. On-site human voices would not typically generate an audible noise level increase in excess of the existing noise environment. In addition, such noise would be temporary and intermittent and would be similar to what is generated at existing nearby commercial development.

Residents would also be subject to the provisions of Section 17.53.050 of the MMC, which prohibits any person from willfully or negligently making or continuing any loud, unnecessary, or unusual noise which disturbs the peace and quiet of any neighborhood or which causes any discomfort or

annoyance to any reasonable person of normal sensitivity residing in the area. In addition, Section 17.53.070 of the MMC prohibits the use of any radio, television set, stereo or digital equipment, drum, musical instrument, or similar device that would disturb nearby residences or businesses. Noise levels would be consistent with existing ambient noise levels, and proposed outdoor recreational uses would not generate an audible increase in the ambient noise environment. Therefore, impacts would be less than significant.

### *Delivery and Trash Hauling Trucks*

The proposed mixed use project would require periodic delivery and trash hauling services, which generate noise from idling, loading and unloading activities, and back-up alarms. The project site is located in an urbanized area and is surrounded by existing commercial uses and a railroad. Therefore, delivery and trash trucks are already a common occurrence in the project vicinity. According to the project site plans, loading areas would be developed adjacent to the commercial components on its southeast corner (see Figure 3). Delivery and trash-hauling trucks would use these areas for loading and unloading activities throughout which temporary noise would be generated. The loading area would be located 140 feet from commercial properties and 200 feet from the nearest residence. Delivery trucks are assumed to generate a noise level of 68 dBA $L_{max}$ at 30 feet from the source (Charles M. Salter 2017). Based on an attenuation rate of 6 dBA per doubling of distance, the maximum anticipated noise levels from delivery and haul trucks within the loading dock area would be 54.6 dBA $L_{max}$ at commercial properties and 51.5 dBA $L_{max}$ at the nearest residences. Noise levels from delivery and trash trucks would not exceed the City's exterior daytime standards of 65 dBA $L_{eq}$ for general commercial uses and 60 dBA $L_{eq}$ for residential uses. Noise levels would also not exceed the City's exterior nighttime standards of 60 dBA for general commercial uses and 55 dBA $L_{eq}$ for residential uses. In addition, the existing nearby commercial properties would be shielded by the proposed buildings on-site, which would further attenuate delivery and haul truck equipment noise. Impacts would be less than significant.

### *Parking Noise*

Nearby residences would be exposed to noise from parking lot activities on the project site. The major noise sources associated with parking lot activities include moving cars, engine start-ups, door slams, radios, car alarms, and tire squeals (human conversations are generally dominated by other sources of vehicle noise in a parking lot). Parking lot activity is assumed to generate instantaneous noise levels up to 66 dBA $L_{max}$ at 100 feet from the source (Gordon Bricken & Associates 1996). The closest on-site parking stall is located approximately 130 feet from the nearest commercial property and approximately 220 feet from the nearest residential property line. Based on an attenuation rate of 6 dBA per doubling of distance, parking lot noise would be 63.7 dBA $L_{max}$ at commercial properties and 59.2 dBA $L_{max}$ at the nearest residences. Noise levels from parking activities would not exceed the City's exterior daytime standards of 65 dBA for general commercial uses and 60 dBA for residential uses. Maximum parking lot noise levels would exceed the City's exterior nighttime standards of 60 dBA for general commercial uses and 55 dBA for residential uses. However, peak noise levels from parking lot noise would be intermittent, and when averaged over a one-hour period, peak noise levels would not exceed ambient noise levels on the site, which are dominated by traffic and railway noise (see Table 18). Therefore, parking lot noise would not exceed 5 dBA over the exterior nighttime standards for more than a cumulative 15 minutes in one hour. In addition, nearby commercial properties would be shielded by the proposed buildings on-site, which would further attenuate parking lot noise. Therefore, impacts would be less than significant.

*Off-site Transportation Noise*

The project would generate vehicle trips, thereby increasing traffic on area roadways as a result of the project. According to the Traffic and Parking Study prepared for the project (Appendix D), the project would generate approximately 1,703 average daily trips (ADT).

Roadway noise was modeled using the U.S. Department of Housing and Urban Development (HUD) Exchange DNL Calculator. HUD Day Night average level (DNL) utilizes the DNL method that adds 10 dBA to actual nighttime (10:00 p.m. to 7:00 a.m.) noise levels to account for greater sensitivity to noise during that time period. DNL was used to analyze project impacts from roadway noise on sensitive receivers near East High Street, Moorpark Avenue, and Spring Road. Roadway noise impacts on sensitive receivers near East Los Angeles Avenue were not evaluated because project-related traffic would not add a significant number of trips to the segment of East Los Angeles Avenue between Moorpark Avenue and Spring Road (ATE 2019). The Traffic and Parking Study (Appendix D) provided peak hour trip rates for area roadways, and ADT were estimated by multiplying total PM peak hour traffic volumes by an industry-standard factor of 10. It was assumed that cars make up 97 percent of ADT, medium trucks make up 2 percent, and heavy trucks account for 1 percent. Additional model assumptions include a standard estimate of 15 percent of daily trips occurring at night, a standard estimate of a 2 percent road gradient, and vehicle speeds consistent with posted speed limits on Moorpark Avenue, Spring Road, and East High Street.

Sensitive receivers are also exposed to railway noise from the existing railroad line that serves Metrolink, Amtrak, and Union Pacific routes. Therefore, railway noise was added to the transportation noise models for an accurate representation of existing noise conditions. The HUD DNL Calculator incorporates railway noise through distance to the train tracks, average train speed, engines per train, railway cars per train, number of trains per day, the percentage of trains at night, the presence of whistles and horns, and if the tracks have bolted or welded tracks. This analysis includes the following conservative assumptions:

- All trains would be diesel-powered with a default average train speed of 30 miles per hour
- Whistles and horns are used, and tracks are bolted.
- Passenger trains
  - Each passenger train has one engine and five railway cars, which was assumed to be typical of Metrolink and Amtrak trains.
  - At the Moorpark station, Metrolink trains make 16 daily stops on Mondays through Fridays with no service offered on Saturdays and Sundays, and Amtrak trains make 11 daily stops on Mondays through Sundays (Metrolink 2019, Amtrak 2018). Therefore, this analysis conservatively assumes average passenger train operations of 27 trains per day.
  - Of these 27 daily trains, four pass through the Moorpark station during nighttime hours (10:00 p.m. to 7:00 a.m.); therefore, this analysis uses a night fraction of 15 percent (4 divided by 27).
- Freight trains
  - Each freight train has two engines and 50 railway cars.
  - In 2013, Union Pacific estimated an average daily volume of 1,100 cars at the West Colton railyard, which is located approximately 88 miles southeast of the project site. Based on the traffic density map, approximately 20 percent of these cars travel through the Moorpark Station (Union Pacific Corporation 2013). Therefore, average freight train operations for this

segment of railway are approximately 4 trains per day (220 cars divided by 50 cars per train).

- This analysis assumes a model default night fraction of 15 percent for freight rail.

Table 22 summarizes the average noise levels at the closest residences under existing and existing plus project conditions, including traffic along High Street, Moorpark Avenue, Spring Road, and East Long Angeles Avenue. For roadways where the existing noise level is between 65 and 74 CNEL, the FTA recommends a significance threshold of 1 CNEL (FTA 2018). The increase of ADT under existing conditions would result in increases in roadway noise of less than 0.1 dBA at all roadway segments analyzed, which would not exceed the significance threshold of 1 dBA. Therefore, the project's contribution to existing traffic noise levels in the project site vicinity would be less than significant.

**Table 22 Existing Plus Project Roadway and Railway Noise Levels**

| Roadway Segment | Noise Level (CNEL)[1] | | | Significance Threshold (CNEL) | Significant Impact? |
|---|---|---|---|---|---|
| | Existing | Existing Plus Project | Change in Noise Level | | |
| High Street (Moorpark Avenue to Spring Road) | 71.2[2] | 71.2 | < 0.1 | 1 | No |
| Moorpark Avenue (Poindexter Avenue to East Los Angeles Avenue) | 75.5 | 75.5 | < 0.1 | 1 | No |
| Spring Road (High Street to East Los Angeles Avenue) | 75.8 | 75.8 | < 0.1 | 1 | No |

See Appendix I for HUD DNL Calculator outputs.

[1] The HUD DNL Calculator calculates noise in $L_{dn}$; however, $L_{dn}$ and CNEL are interchangeable.

[2] The modeled existing noise level along High Street is within 3 dBA of the measured existing noise level of 69 CNEL; therefore, modeled noise levels adequately represent real-life conditions (see *Ambient Noise Levels*).

Table 23 summarizes the average noise levels at the closest residences under cumulative and cumulative project conditions. In contrast to the results above that consider existing conditions, these results are based on changes in traffic volume anticipated in the near future, taking into account cumulative growth. The increase of ADT under cumulative plus project conditions would result in cumulative increases in roadway noise of 0.4 dBA or less at all roadway segments analyzed. Of this, the project's contribution would be approximately 0.1 dBA, which would not exceed the significance threshold of 1 dBA. Therefore, the project's contribution to cumulative traffic noise levels in the project site vicinity would be less than significant.

**Table 23 Cumulative Plus Project Roadway and Railway Noise Levels**

| Roadway Segment | Noise Level (CNEL)[1] | | | | | Significance Threshold (CNEL) | Significant Impact? |
|---|---|---|---|---|---|---|---|
| | Existing | Cumulative | Cumulative Plus Project | Cumulative Change in Noise Level | Project Contribution | | |
| High Street (Moorpark Avenue to Spring Road) | 71.2 | 71.3 | 71.4 | 0.2 | 0.1 | 1 | No |
| Moorpark Avenue (Poindexter Avenue to East Los Angeles Avenue) | 75.5 | 75.8 | 75.9 | 0.4 | 0.1 | 1 | No |
| Spring Road (High Street to East Los Angeles Avenue) | 75.8 | 76.1 | 76.2 | 0.4 | 0.1 | 1 | No |

See Appendix I for HUD DNL Calculator outputs.

[1] The HUD DNL Calculator calculates noise in $L_{dn}$; however, $L_{dn}$ and CNEL are interchangeable.

## Impacts to Proposed Residential Units (Noise/Land Use Compatibility)

The ruling for *California Building Industry Association v. Bay Area Air Quality Management District* (*CBIA v. BAAQMD*) determined that under CEQA, except for a few specified and limited instances, noise impacts on residents of a proposed project are not required to be analyzed. Therefore, the following discussion is provided for informational purposes only.

The City of Moorpark General Plan Noise Element establishes "clearly compatible" noise standards for single-family and multiple-family residential land uses of 65 CNEL for the exterior environment, 55 CNEL for the interior environment with windows open, and 45 CNEL for the interior environment with windows closed (City of Moorpark 1998). As discussed under *Ambient Noise Levels*, the existing ambient noise level at the project site are approximately 69 CNEL, which exceeds the City's "clearly compatible" exterior noise standard of 65 CNEL for multiple-family residential land uses. However, the existing ambient noise level of 69 CNEL falls within the "normally compatible" range of 65 to 70 CNEL for multiple family residential land uses. Per guidance in Table 1 of the Noise Element, new construction or development proposed in areas with ambient noise levels in the "normally compatible" range should be undertaken only after detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice. Therefore, in order to comply with the City's noise standards, the project would be required to incorporate design features such as noise barriers, Sound Transmission Class (STC)-rated windows and doors, orientation of windows away from the railroad, upgraded exterior wall and/or roof construction, insulation batts, and/or forced air ventilation that reduce exterior and interior noise levels to below the City's standards. To verify that the building has been properly designed, the City may require an acoustical study as a condition of approval.

## Mitigation Measure

### *N-2 HVAC Equipment Noise*

A noise barrier (such as a screen or parapet) shall be installed around HVAC equipment. To be an effective noise barrier, the screen or parapet should extend at least one foot above the tallest rooftop piece of HVAC equipment and be of sufficient length to block line of sight between the

HVAC units and the nearest commercial and residential properties. The screen or parapet shall achieve at least a 6 dBA reduction in HVAC equipment noise.

After mitigation, noise from HVAC equipment would be reduced to 57.8 dBA $L_{eq}$ at the nearest commercial properties and 54.9 dBA $L_{eq}$ at the nearest residential properties. Impacts would be less than significant with mitigation incorporated.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

As a residential and commercial use, the proposed project would not generate significant stationary sources of vibration, such as heavy equipment operations. Operational vibration in the project vicinity would be generated by additional vehicular travel on local roadways; however, any increase in traffic related vibration levels would not be perceptible as the project would only incrementally increase existing traffic volumes on local roadways. Therefore, operation of the proposed residential development would not generate significant ground-borne vibration and this analysis considers vibration impacts only from project construction.

Table 24 lists ground-borne vibration levels for project construction equipment including a loaded truck, dozer, and roller at 105 feet from the source, the distance to the nearest noise sensitive receiver. As shown in Table 24, the highest impact piece of equipment that would be used during project construction (see Appendix C) is the vibratory roller, which is anticipated to be using during the paving phase of project construction.

### Table 24 Vibration Level for Construction Equipment

| Equipment | Approximate VdB at Single-Family Residences (105 ft.) |
|---|---|
| Loaded Truck | 67 |
| Dozer | 68 |
| Roller | 76 |

Source: See Appendix I for vibration analysis.

As shown in Table 24, project construction would generate peak vibration levels ranging from 67 VdB to 76 VdB at the residences to the north. Although vibration levels may be intermittently perceptible during daytime construction activities, construction would be limited to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday per Section 17.53.070 of the MMC and would not disrupt residences during recognized hours of sleep. Ground-borne vibration would not reach levels that could cause building damage (100 VdB) at structures in the project site vicinity. Therefore, the project would not generate significant vibration impacts.

**LESS THAN SIGNIFICANT IMPACT**

*c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The closest public and public use airports to the project site are the Santa Paula Airport, which is approximately 11.5 miles northwest of the project site, and the Camarillo Airport, which is approximately 13 miles southwest of the project site. The project site is not located within an airport influence area or an airport runway protection zone. There are no nearby private airstrips within the vicinity of the project site. Therefore, no impact related to airport and airstrip noise would occur.

**NO IMPACT**

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# 14 Population and Housing

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)? | ☐ | ☐ | ■ | ☐ |
| b. Displace substantial amounts of existing people or housing, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ■ |

*a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

According to the CDOF, the current population of Moorpark is estimated at 37,020 (CDOF 2019a) with a forecasted population of 43,000 for the year 2040 (SCAG 2016). This is an increase of 5,980 (16 percent) residents. The proposed project involves construction of 91 residential apartment units and approximately 15,018 sf of commercial space. The commercial spaces are envisioned to include a 3,824-sf brewery or winery, a 1,386-sf restaurant, a 1,408-sf coffee or ice cream shop, and 8,400 sf of neighborhood-serving retail space. Based on the CDOF estimate of an average of 3.32 persons per household in the City of Moorpark, the addition of 91 units would generate approximately 302 residents. As discussed in Section 3, *Air Quality*, the proposed project is estimated to generate 88 new jobs. While it should not be assumed that all employees would become new residents of Moorpark (they may, for example, already live in the City or live outside of the City after they are hired), if they did, generated employees would create an additional population growth of 88 residents for a total estimated population growth of 390 (302 plus 88). Therefore, implementation of the proposed project would increase the City's estimated existing population of 37,020 to 37,410, which would still be within SCAG's 2040 population forecast of 43,000 (SCAG 2016). Impacts relating to substantial population growth would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

The project does not propose any demolition of residential structures. The project involves development of 91 residential units and approximately 15,018 sf of commercial space on a parcel that is currently developed with an abandoned granary and non-operational industrial buildings. The project would have no impacts relating to the displacement of housing or people.

**NO IMPACT**

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# 15 Public Services

| | | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| a. | Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | |
| | 1 Fire protection? | ☐ | ☐ | ■ | ☐ |
| | 2 Police protection? | ☐ | ☐ | ■ | ☐ |
| | 3 Schools? | ☐ | ☐ | ■ | ☐ |
| | 4 Parks? | ☐ | ☐ | ■ | ☐ |
| | 5 Other public facilities? | ☐ | ☐ | ■ | ☐ |

*a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

The project site is serviced by the Ventura County Fire Department (VCFD). The VCFD provides a full range of emergency and non-emergency services to the community. In 2016, the VCFD had 637 personnel and served more than 480,000 people in the unincorporated areas of Ventura County and six of its cities including: Ojai, Port Hueneme, Moorpark, Camarillo, Simi Valley, and Thousand Oaks. This is a staffing ratio of approximately 0.75 per 1,000 residents (VCFD 2016). Response time to incidents for a fire service call to the downtown area of Moorpark average six minutes or less (Moorpark 2006). The closest fire station to the project site is Fire Station 42, which is just northeast of the project site across High Street (located at 295 High Street).

Construction activity would increase traffic adjacent to the project site during working hours because commuting construction workers, trucks, and other large construction vehicles would temporarily be added to normal traffic. Slow moving construction traffic along local roadways may reduce optimal traffic flows on these roadways and could delay emergency vehicles or contribute to a vehicle accident. This potential fire hazard impact would be minimal due to the temporary nature

of construction traffic and implementation of standard construction practices (i.e., flagmen, detours, etc.).

During the project's operational phase, the frequency of emergency calls may incrementally increase because residential uses would be introduced to the site. For a residential project, the majority of calls are likely to be emergency medical and rescue. The project would be required to conform to the California Fire Code and follow requirements in the Moorpark Municipal Code, which requires integration of fire safety features such as fire sprinklers, fire hydrants, and water service infrastructure capable of delivering the required fire flows rates. According to Section 14, *Population and Housing*, the project could increase the population of the City of Moorpark by 390 people, if all employees were to relocate to the City. However, this addition would not significantly affect the staffing ratio. In addition, the project site is within the VCFD's current service area and the industrial buildings onsite are currently served by the VCFD, therefore this increase would not create the need for new or expanded fire protection facilities. Therefore, the project's impacts to fire protection would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

The City of Moorpark contracts out police services to the Ventura County Sheriff's Department. The nearest police department is approximately 0.7 mile southeast of the project site. In fiscal year 2017-2018, the city was allocated approximately 28 sworn officers from the County Sheriff's Department. This is a staffing ratio of approximately 1.3 officers per 1,000 residents. The Ventura County Sheriff's Department has an average response time of 6.44 minutes to emergency calls and 16.43 minutes to non-emergency calls (Ventura Local Agency Formation Commission [LAFCo] 2018). The project could increase the population of Moorpark by 390 people, if all employees were to relocate to the City. The increase in population would not alter the current officer staffing ratio and would not create the need for new or expanded police protection facilities. Therefore, the project's impacts to police protection would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

The City of Moorpark is served by the Moorpark Unified School District (MUSD), which has four preschools, five elementary schools, one kindergarten through eighth grade school, two middle schools, and two high schools. The project would increase the population of the City of Moorpark by 390 people if all future employees were to relocate to the City. According to the 2017-2018 Second Interim Report for the MUSD Fiscal Services, enrollment within the district has been declining over the last six years and is projected to continue to decline. To offset a project's potential impact on schools, Government Code 65995 (b) establishes the base amount of allowable developer fees a school district can collect from development projects located within its boundaries. The fees obtained by MUSD are used to maintain the desired school capacity and the maintenance and/or

development of new school facilities. The project applicant would be required to pay the state-mandated school impact fees. Pursuant to Section 65995 (3)(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), the payment of statutory fees "…is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." The project proponent would be required to pay the school impact development mitigation fees (Moorpark Municipal Code, 17.76.060, *Fees*). Therefore, with the required payment of mitigation fees, the project's impacts to schools would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?*

The City of Moorpark maintains 20 parks, which include 18 playgrounds, 10 outdoor courts, 39 ball fields, one skate park, five trails, and other park and recreational facilities within approximately 153 acres of parkland. The City of Moorpark has a goal to provide five acres of parkland per 1,000 residents according to its *Parks and Recreation Master Plan* (2009). The City is not currently meeting this goal and instead provides approximately 4 acres of parkland per 1,000 residents. However, the City is financing several capital improvement projects that will support its park and recreation program and will include improvements, upgrades, and expansions to existing parkland. The *Parks and Recreation Master Plan* states that with the 2040 population projection of 47,739 residents, 238 acres of parkland would be required to meet its goals. However, the City also states that 238 acres of parkland is not realistic and that instead, the City will need to share resources and convert unused or underused spaces in order to serve the population.

Construction of the proposed project would increase the City's population by 390 people if all future employees were to relocate to the City. Although the City is not currently meeting its goal of providing five acres of parkland per 1,000 residents, the City has a plan to increase park space for its residents. The addition of 390 residents from the proposed project would not alter the current ratio of parkland to residents. In addition, the proposed project would include open space for its residents and a public plaza. Therefore, the project would not substantially increase the need for new or physically altered parks in the City and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*a.5. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?*

Development of the proposed project would result in incremental impacts to the City's public services and facilities such as storm drain usage, solid-waste disposal, water usage, and wastewater disposal. Refer to the impact analysis in Section 10 *Hydrology and Water Quality*, and Section 19, *Utilities and Service Systems*, for discussion of the proposed project's impacts to public services and facilities. Other commonly used public facilities include libraries and medical facilities. As discussed in Section 14, *Population and Housing*, the proposed project would increase the City's population by approximately 390 residents, if all employees relocated to Moorpark. However, the project site is

located in the downtown portion of the City, which is currently serviced by existing public libraries and medical facilities. These facilities would continue to accommodate the needs of the City. Because the proposed project would not substantially increase the City's population, increased demand on existing libraries and medical facilities would be negligible. Impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

# 16 Recreation

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ■ | ☐ |
| b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ■ | ☐ |

*a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

As discussed in Section 15, *Public Services*, the City currently owns and operates a total of 20 public parks, open space areas, and recreation sites, occupying approximately 153 acres of land (Ventura LAFCo 2018). These areas are all part of the City's recreation and parks system. The closest public park to the project site is the Veteran's Memorial, located approximately 0.4 mile southeast of the project site.

The City recognizes that parkland space is limited and that it is not realistic to increase the amount of parkland space to five acres per 1,000 residents in order to meet 2040 population projections. However, the City has a goal to increase park space by expanding where it can and also repurposing underused areas in order to serve the needs of the current residents. As discussed in Section 14 *Population and Housing,* construction of the proposed project could increase the City's population by 390 people if all future employees were to relocate to the City. The project would include outdoor space for residents, such as open space in the western portion of the site and a public plaza and patio located in the commercial component of the site. These outdoor areas would help the City further its plan of repurposing underused areas as recreational and open space since the project site is currently occupied by an abandoned granary and non-operational industrial buildings. As such, an increased demand for parks or recreational services would not occur from the proposed project. Accordingly, the project would have a less than significant impact on recreation resources.

**LESS THAN SIGNIFICANT IMPACT**

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# 17 Transportation

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | ☐ | ■ | ☐ | ☐ |
| b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | ☐ | ☐ | ■ | ☐ |
| c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)? | ☐ | ☐ | ■ | ☐ |
| d. Result in inadequate emergency access? | ☐ | ☐ | ■ | ☐ |

*a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

A traffic report was completed for the project by Associated Transportation Engineers (ATE) on December 10, 2019 (Appendix D). The report describes existing conditions, project trip generation rates, and the impact of the project on existing conditions. It also includes an analysis of the proposed and developing projects in the vicinity of the project's related impacts to traffic and circulation in a future setting.

The project site is served by a system of highways, arterial roads and collector streets. Traffic flow on urban arterials is most constrained at intersections. Therefore, a detailed analysis of traffic flows must examine the operating conditions of critical intersections during peak travel periods. Levels of Service (LOS) A through F are used to rate intersection operations with LOS A indicating free flow operations and LOS F indicating congested operations. In the City of Moorpark, LOS C is the minimum acceptable operating standard for intersections.

The City of Moorpark Circulation Element contains Policy 2.1, which states that Level of Service (LOS) C shall be the system performance objective. For facilities already operating at LOS C, the system performance objective shall be to maintain or improve the current level of service. The City of Moorpark "Guidelines for Preparing Traffic and Circulation Studies" states that if a level of service degradation of one level of service or greater is attributable to a project, it will be considered significant enough to require mitigation measures. The City's criteria also state that a level of service degradation of less than one level of service may also be considered significant, depending on circumstances.

## Existing Conditions

The existing AM and PM peak hour traffic volumes at the study area intersections were calculated based on vehicle trips counts collected by ATE in June 2018. Existing LOS for the study area intersections were calculated using the "Intersection Capacity Utilization" (ICU) methodology adopted by the City of Moorpark. Worksheets illustrating the LOS calculations are contained in the Technical Appendix of the traffic study (Appendix D). Table 25 below lists the existing LOS for the study area intersections during the AM and PM peak hour periods.

**Table 25 Existing Peak Hour Levels of Service**

| | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| **Intersection** | **ICU** | **LOS** | **ICU** | **LOS** |
| Moorpark Avenue/High Street | 0.68 | B | 0.68 | B |
| Spring Road/High Street | 0.63 | B | 0.72 | C |
| Moorpark Avenue/Poindexter Avenue | 0.68 | B | 0.67 | B |
| Los Angeles Avenue/Moorpark Avenue | 0.65 | B | 0.68 | B |
| Los Angeles Avenue/Spring Road | 0.70 | B | 0.70 | B |

ICU = Intersection Capacity Utilization, LOS = Level of Service

Source: ATE 2019

As shown in Table 25, intersections in the study area currently operate at LOS C or better during the AM and PM peak hour periods, which meets the City's LOS C standard.

## Project Trip Generation

Trip generation estimates were calculated for the proposed project based on the rates presented in the *Institute of Transportation Engineers (ITE), Trip Generation, 10th Edition* for Multi-Family Housing (Land Use Code #220), Shopping Center (Land Use Code #820), and High Turnover Restaurant (Land Use Code #932). The proposed project would generate approximately 1,725 average daily trips (ADT), 78 AM peak hour trips, and 147 PM peak hour trips. Table 26 below summarizes the average daily AM and PM peak hour trip generation estimates for the project. The traffic report utilizes a mixed-use model and a transit-oriented development (TOD) factor to account for the mixed-use nature of the project site and its proximity to public transit. Therefore, the traffic report assumes that 10 percent of AM peak hour trips and 36 percent of PM peak hour trips would be internal to the project and that approximately 10 percent of external project trips would be transit-oriented.

**Table 26 Project Weekday Peak Hour Trip Generation**

| | | ADT | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|---|
| **Land Use** | **Size** | **Rate** | **Trips** | **Rate** | **Trips (In/Out)** | **Rate** | **Trips (In/Out)** |
| Apartments | 91 units | 7.32 | 666 | 0.46 | 42 (10/32) | 0.56 | 51 (32/19) |
| Brewery | 3,824 sf | 112.18 | 429 | 0.00 | 0 (0/0) | 9.77 | 37 (23/14) |
| Restaurant | 2,794 sf | 112.18 | 313 | 9.94 | 28 (15/13) | 9.77 | 27 (17/10) |
| Retail Commercial | 8,400 sf | 37.75 | 317 | 0.94 | 8 (5/3) | 3.81 | 32 (15/17) |
| **Total Trip Generation** | | | **1,725** | | **78 (30/48)** | | **147 (87/60)** |

ADT = Average Daily Trips

Source: ATE 2019

## Project Trip Distribution and Assignment

The project-generated AM and PM peak hour traffic volumes were distributed and assigned to the adjacent street network based on percentages from recent traffic studies, existing traffic patterns observed in the study-area and consideration of the most logical travel routes for drivers accessing the proposed development (Appendix D).

## Project-Specific Impacts

LOS was calculated for the study area intersections assuming the Existing plus Project volumes. Table 27 shows the results of the calculation and identifies the project's impacts based on the City of Moorpark thresholds.

**Table 27 Existing Plus Project Peak Hour Levels of Service**

| | Existing | | Existing plus Project | | | |
|---|---|---|---|---|---|---|
| **Intersection** | **ICU** | **LOS** | **ICU** | **LOS** | **Change** | **Impact?** |
| **AM Peak Hour** | | | | | | |
| Moorpark Avenue/High Street | 0.68 | B | 0.69 | B | No | No |
| Spring Road/High Street | 0.63 | B | 0.64 | B | No | No |
| Moorpark Avenue/Poindexter Avenue | 0.68 | B | 0.69 | B | No | No |
| Los Angeles Avenue/Moorpark Avenue | 0.65 | B | 0.65 | B | No | No |
| Los Angeles Avenue/Spring Road | 0.70 | B | 0.71 | C | Yes | No |
| **PM Peak Hour** | | | | | | |
| Moorpark Avenue/High Street | 0.68 | B | 0.69 | B | No | No |
| Spring Road/High Street | 0.72 | C | 0.72 | C | No | No |
| Moorpark Avenue/Poindexter Avenue | 0.67 | B | 0.67 | B | No | No |
| Los Angeles Avenue/Moorpark Avenue | 0.68 | B | 0.69 | B | No | No |
| Los Angeles Avenue/Spring Road | 0.70 | B | 0.70 | B | No | No |

Notes: ICU = Intersection Capacity Utilization, LOS = Level of Service

Source: ATE 2019

As shown in Table 27, the study-area intersections would continue to operate at LOS C or better, meeting City of Moorpark thresholds. While the addition of project-generated traffic to the Spring Road/High Street study-area intersection would degrade the existing LOS by one level of service, the project would not generate project-specific impacts at the study-area intersection based on City of Moorpark thresholds because the intersection would operate acceptably in the LOS C range.

## Cumulative (Existing plus Approved/Pending Projects) Conditions

Cumulative traffic volumes were forecast for the study-area intersections assuming the development of the approved and pending projects located in the City of Moorpark and the immediate surrounding area that would add traffic to the study-area intersections. The list of developments was provided by City staff as part of their Quarterly Development Status Report for October 2018 (City of Moorpark 2018b). Trip generation estimates were developed for the cumulative projects using the rates published in the ITE, Trip Generation, 10th Edition. Table 28 summarizes the average daily, AM and PM peak hour trip generation for the cumulative projects.

**Table 28 Cumulative Development Projects Trip Generation**

| Number | Project | Land Use | Size | ADT | Peak Hour | |
|---|---|---|---|---|---|---|
| | | | | | AM | PM |
| 1 | Triliad Development | Movie Studio | 37 Acres | 100 | 10 | 10 |
| 2 | Pacific Communities | SFR | 283 Units | 2,694 | 212 | 283 |
| 3 | Essex Moorpark | Apartments | 200 Units | 1,318 | 92 | 112 |
| 4 | Spring Road, LLC | Condos | 95 Units | 552 | 42 | 49 |
| 5 | City Ventures | SFR | 110 Units | 1,047 | 82 | 110 |
| 6 | Oakmont Senior Housing | Assisted Living | 84 Beds | 219 | 16 | 22 |
| 7 | Birdsall Group, LLC | SFR | 21 Units | 200 | 16 | 12 |
| 8 | Aldersgate Senior Housing | SFR<br>Assisted Living | 258 Units<br>212 Beds | 1,468 | 90 | 125 |
| 9 | Moorpark Hospitality | Hotel | 108 Rooms | 903 | 51 | 65 |
| 10 | Grand Moorpark | Condos | 66 Units | 383 | 29 | 34 |
| 11 | John C. Chiu, FLP-N | Condos | 60 Units | 349 | 26 | 31 |
| 12 | AHA Scattered Sites | Apartments | 56 Units | 418 | 26 | 31 |
| 13 | Hitch Ranch | SFR<br>Townhomes<br>MFR<br>Church | 235 Units<br>295 Units<br>225 Units<br>30,000 SF | 6,394 | 495 | 611 |
| 14 | Moorpark 67/Rasmussen | SFR | 138 Units | 1,303 | 102 | 137 |
| 15 | A-B Properties | Industrial | 36 Acres | 1,865 | 224 | 261 |
| 16 | National Ready Mix | Batch Plant | 10 Acres | 600 | 20 | 20 |
| 17 | CEMEX | Quarry | N/A | 980 | 276 | 148 |
| 19 | Wayne J. Sand & Gravel | Quarry | N/A | 504 | 92 | 34 |
| 20 | Grimes Rock | Quarry | N/A | 480 | 35 | 14 |
| **Total Trips** | | | | **21,777** | **1,982** | **2,054** |

Note: The current cumulative trip generation estimate resulted in fewer trips than what was assumed in the traffic and circulation study for the Aldersgate Senior Living Project prepared by ATE in 2016.

ADT = Average Daily Trip, SFR = Single-Family Residential, MFR = Multi-Family Residential, SF = Square-Feet

Source: ATE 2019

The data presented in Table 28 indicate that the approved and pending projects would generate a total of 21,777 average daily trips, 1,982 AM peak hour trips and 2,054 PM peak hour trips. The traffic generated by the approved and pending projects was distributed and assigned to the study area intersections based on the location of each project, recent traffic studies, existing traffic patterns observed in the study area as well as a general knowledge of the population, employment and commercial centers in Moorpark, Ventura, Oxnard, Thousand Oaks, and Simi Valley. The Cumulative and Cumulative plus Project LOS for the study area intersections are shown below in Table 29.

### Table 29 Cumulative and Cumulative plus Project AM and PM Peak Hour Levels of Service

| Intersection | Cumulative | | Cumulative + Project | | LOS Change? | |
|---|---|---|---|---|---|---|
| | ICU | LOS | ICU | LOS | Change | Impact |
| **AM Peak Hour** | | | | | | |
| Moorpark Avenue/High Street | 0.80 | C | 0.81 | D | Yes | Yes |
| Spring Road/High Street | 0.71 | C | 0.72 | C | No | No |
| Moorpark Avenue/Poindexter Avenue | 0.73 | C | 0.74 | C | No | No |
| Los Angeles Avenue/Moorpark Avenue | 0.79 | C | 0.79 | C | No | No |
| Los Angeles Avenue/Spring Road | 0.86 | D | 0.86 | D | No | No |
| **PM Peak Hour** | | | | | | |
| Moorpark Avenue/High Street | 0.93 | E | 0.93 | E | No | No |
| Spring Road/High Street | 0.80 | C | 0.80 | C | No | No |
| Moorpark Avenue/Poindexter Avenue | 0.71 | C | 0.72 | C | No | No |
| Los Angeles Avenue/Moorpark Avenue | 0.76 | C | 0.77 | C | No | No |
| Los Angeles Avenue/Spring Road | 0.83 | D | 0.84 | D | No | No |

Notes: ICU = Intersection Capacity Utilization, LOS = Level of Service

Source: ATE 2019

The data presented in Table 29 indicates that the majority of the study area intersections would operate at LOS C or better during the AM and PM peak hour periods with cumulative and cumulative plus project traffic volumes, which meets the City's LOS C standard. The Los Angeles Avenue/Spring Road intersection would operate at LOS D during the AM and PM peak hour periods under cumulative and cumulative plus project conditions. As a result, the project would not have a significant impact to this intersection.

The Moorpark Avenue/High Street intersection would operate in the LOS E range with or without the addition of project trips during the PM peak hour. However, during the AM peak hour, the addition of project-generated traffic to the Moorpark Avenue/High Street study area intersection would degrade the LOS from LOS C to LOS D, and thus the project would have a cumulatively considerable contribution to the cumulative impact at the intersection based on City of Moorpark thresholds. Therefore, impacts would be potentially significant, and mitigation is required to reduce impacts to less than significant.

The project would be required to pay an Area of Contribution (AOC) Fee and a Citywide Traffic Mitigation Fee. The AOC and Citywide Traffic Mitigation fees would be applied towards programmed improvements that the City has identified for the Los Angeles Avenue/Spring Road, Los Angeles Avenue/Moorpark Avenue, and Moorpark Avenue/High Street intersections. These improvements are identified within the City of Moorpark Department of Public Works Seven Year Capital Improvement Plan (FY 2015/2016 through FY 2021/2022) and would be funded by these fee contributions. With the improvements discussed below under TRA-1, the Los Angeles Avenue/Spring Road intersection would improve from LOS D to LOS C during AM and PM peak hours, and the Moorpark Avenue/High Street intersection would improve from LOS D to LOS B in the AM peak hour and from LOS E to LOS C in the PM peak hour. Therefore, with mitigation, cumulative traffic impacts would be reduced to a less than significant level.

## Mitigation Measure

### *TRA-1 Area of Contribution (AOC) Fees*

The project would be required to pay the applicable AOC and Citywide Traffic Impact Mitigation fees based upon the level of traffic added within the Los Angeles Avenue and Moorpark Avenue corridor. The project's monetary contribution shall be based on its percent contribution to traffic at the impacted intersections, which is 1.79 percent for the Moorpark Avenue/High Street intersection, 0.35 percent for the Spring Road/High Street intersection, and 0.61 percent for the Los Angeles Avenue/Spring Road intersection. As part of the City's plan to mitigate cumulative traffic impacts, the City has identified and programmed the following additional improvements for the Los Angeles Avenue/Spring Road and Moorpark Avenue/High Street intersections that would mitigate cumulative impacts:

- Los Angeles Avenue/Spring Road Intersection: Add an additional through lane on the eastbound and westbound approaches.
- Moorpark Avenue/High Street Intersection: Add an additional through lane on the southbound approach and provide a left-turn lane, through lane, and right-turn lane on the northbound approach.

The project applicant shall pay the AOC and Citywide Traffic Impact Mitigation fees prior to issuance of a certificate of occupancy for the first residential building.

## Transit, Bicycle, and Pedestrian Facilities

The proposed project would involve construction of 91 residential units and 15,018 sf of commercial space. The Moorpark Metrolink Station is adjacent to the southern boundary. Development of the proposed project would not disrupt access to the Metrolink Station and would encourage new residents of the proposed project to utilize the public transit.

As discussed under *Project Description*, although new sidewalks and streetscape landscaping are proposed along High Street adjacent to the northern boundary of the project site, it is likely that portions of the existing sidewalk would need to be temporarily closed during construction activities. However, access to the existing Metrolink train platform would remain open during construction by allowing pedestrian access along properties immediately to the east because these properties currently provide direct access and vehicle parking for the Metrolink train platform.

In addition, during construction of the proposed project, activities would be restricted to the project site and would not interfere with roadway traffic or use of the railroad. The project would also be subject to standard conditions of approval, which require the use of flagmen, temporary signage, and traffic calming measures, if necessary, during temporary construction activities. All construction equipment would be stored on-site and would also not block the roadway. Therefore, the project would not conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, and would not otherwise substantially reduce the performance or safety features of such facilities. No impact would occur.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

Section 15064.3(b) of the CEQA Guidelines describes criteria for analyzing transportation impacts. Depending on the type of project, different thresholds of significance are applicable. Section 15064.3(b)(1) applies to land use projects, including the proposed project:

> "Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact."

The project would generate a total vehicle miles travelled (VMT) of 2,206,014 annual miles, or 6,044 daily miles (Appendix C). The project is located south of High Street, adjacent to Amtrak's Moorpark Station and within 300 feet of Moorpark Metrolink Bust Station. Amtrak provides service to major cities in California (including Santa Barbara, Ventura, Oxnard, Los Angeles, Anaheim, and Riverside) and other states (including Arizona, New Mexico, and Nevada) (Amtrak 2019). Amtrak's Pacific Surfliner and California Coastal Routes provide service to the Moorpark Amtrak Station 11 times each day (Amtrak 2018). The Metrolink Bus Station is along the Ventura County Line, which operates between Ventura and Los Angeles Union Station. The Ventura County Line provides service to the Moorpark Station 16 times per day, Monday through Friday (Metrolink 2018). Therefore, per CEQA Guidelines Section 15064.3(b)(1), because the project site is located within 0.5 miles of a high quality transit corridor the project would have a less than significant impact.

**LESS THAN SIGNIFICANT IMPACT**

*c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*

*d. Would the project result in inadequate emergency access?*

The project does not have any hazardous design features such as sharp curves or dangerous intersections. The project is compatible with surrounding uses. The project's circulation system will be reviewed by the City's emergency response personnel and the City's Public Works Department to ensure that ingress and egress widths are sufficient and that the proposed circulation system would not interfere with an emergency response access route. Impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

# 18 Tribal Cultural Resources

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | | | | |
| a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | ☐ | ■ | ☐ | ☐ |
| b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe. | ☐ | ■ | ☐ | ☐ |

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency. These tribes include the Santa Ynez Band of Chumash Indians, Barbareño/Ventureño Band of Mission Indians, and the Coastal Band of the Chumash Nation.

On April 15, 2019, the City of Moorpark distributed AB 52 consultation letters for the proposed project, including project information, location map, and contact information, to six Native American contacts. The Native American contacts provided with an AB 52 consultation letter via certified mail include the following list of recipients:

- Barbareño/Ventureño Band of Mission Indians
- Torres Martinez Desert Cahuilla Indians
- Santa Ynez Band of Chumash Indians
- Coastal Band of Chumash Indians
- San Gabriel Band of Mission Indians

Under AB 52, Native American tribes have 30 days to respond and request further project information and formal consultation. All letters were received by April 22, 2019. Therefore, the consultation request period closed on May 22, 2019. The City of Moorpark did not receive any requests for consultation for the project and was not notified of any tribal cultural resources that are present on the project site. However, the City did receive recommendations from the Barbareño/Ventureño Band of Mission Indians to retain a full-time Native American monitor and archaeologist on-site during all ground-disturbing activities and to perform an extensive Phase I in the Area of Potential Effect.

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 2024.1?*

As discussed in Section 5, *Cultural Resources*, the project site is in an urbanized area and has been previously disturbed in conjunction with construction of the granary, industrial buildings, and paved surfaces. As stated above, the City of Moorpark did not receive any requests for consultation nor notification of any tribal cultural resources on the project site. Although it is not anticipated that intact tribal cultural resources are present in the project site, there is the potential for the recovery of buried cultural materials during project construction activities. Upon compliance with Mitigation Measures CUL-1 through CUL-3 in Section 5, *Cultural Resources*, and Mitigation Measure TCR-1 below, potential impacts would be reduced to a less than significant level by providing a process for evaluating and, as necessary, avoiding impacts to any identified resources. Impacts would be less than significant with mitigation incorporated.

## Mitigation Measure

*TCR-1 Unanticipated Discovery of Tribal Cultural Resources*

During ground-disturbing activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall monitor excavation and ground-disturbing activities within native soils that have not been previously disturbed. If cultural resources are encountered during excavation and/or ground-disturbing activities, work in the immediate area must halt and a Native American representative who is ancestrally related to the project area must be contacted immediately to evaluate the find and consult with the City of Moorpark and the archaeologist as to the treatment of the find which may determine additional measures to avoid or reduce impacts to the resource are required. These additional measures to avoid or reduce impacts shall be determined on a case by case basis and approved by the City's Community Development Director.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

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# 19 Utilities and Service Systems

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | ☐ | ☐ | ■ | ☐ |
| b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | ☐ | ☐ | ■ | ☐ |
| c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ■ | ☐ |
| d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | ☐ | ☐ | ■ | ☐ |
| e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | ☐ | ☐ | ■ | ☐ |

*a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

*b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

*c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

## Wastewater Generation

A significant impact to wastewater facilities may occur if a project would:

- Discharge wastewater, whose content exceeds the regulatory limits established by the governing agency;
- Increase water consumption or wastewater generation to such a degree that the capacity of facilities currently serving the project site would be exceeded; or
- Increase wastewater flows such that a sewer or treatment plant is constrained or would become constrained.

The Ventura County Water and Sanitation Department (VCWSD) operates and maintains water and wastewater infrastructure for the City, which is located in Ventura County Waterworks District (VCWWD) No. 1. The Moorpark Water Reclamation Facility (MWRF), located along California State Route 118 just west of the City of Moorpark, serves the project site. The MWRF currently receives an average of 2.0 million gallons per day and is designed to treat up to 5 million gallons per day (mgd) per day (VCWWD 2016). Therefore, the MWRF has an available surplus capacity of approximately 3 million gallons per day.

Table 30 shows that the project would produce an estimated 23,002 gallons of wastewater per day, which would be within the available surplus capacity at the MWRF. All wastewater from the proposed project would be treated according to requirements of the NPDES permit authorized by the Los Angeles Regional Water Quality Control Board (LARWQCB). On April 15, 2019, VCWSD provided written correspondence confirming sanitary sewer service would be available for the proposed project (Appendix J). In addition, prior to any future construction activities, building permits would be issued by VCWWD to allow the required connections to the wastewater system pursuant to the approved construction drawings. Therefore, impacts related to wastewater would be less than significant.

### Table 30 Average Daily Wastewater Generation

| Unit Type | Quantity | Wastewater Generation Rate[1] (gallons per unit) | Total Wastewater Generation (gallons per day) |
|---|---|---|---|
| Studio | 18 units | 80/dwelling unit | 1,440 |
| 1-Bedroom | 26 units | 120/dwelling unit | 3,120 |
| 2-Bedroom | 39 units | 160/dwelling unit | 6,240 |
| 3-Bedroom | 8 units | 200/dwelling unit | 1,600 |
| Retail | 8,400 sf | 80/1000 gsf | 672 |
| Restaurants[2] | 331 seats | 30/seat | 9,930 |
| **Total Proposed Project** | | | **23,002** |

gsf = gross square feet

[1] Source: City of Los Angeles 2006, Exhibit M.2-12

[2] Estimated based on the proposed square footage for the restaurants (6,618 sf). Specifically, it was assumed that the restaurant square footage would be 60 percent dining area and 40 percent food preparation area. An industry standard of one seat per 12 sf of dining area was also assumed (Total Food Service 2013).

## Water Supply

A significant impact would occur if the project would increase water consumption or wastewater generation to such a degree that the capacity of facilities currently serving the project site would be exceeded or that new water sources would need to be identified. The VCWWD No. 1 provides water within the City limits. VCWWD No. 1 water sources in 2015 included Metropolitan imported water (approximately 76 percent), local groundwater (approximately 18 percent), and recycled water (approximately 6 percent, VCWWD 2016). As of 2015, the VCWWD No. 1 supplied water to 10,944 connections. The VCWWD No. 1 has planned improvement projects, including the Moorpark Desalter Project, a groundwater production and treatment system with a potential capacity of 5,000 acre-feet per year (AFY), which is in the design phase, and the expansion of the MWRP's tertiary treatment capacity for recycled water production to 2,200 AFY by 2040, which is in the construction phase (VCWWD 2016, County of Ventura n.d.).

According to the CalEEMod modeling prepared for the project, the project would increase water demand by approximately 11,295,898 gallons per year or 34.7 acre-feet per year (AFY) (Appendix C). Table 31 shows the service area reliability assessment for a potential multiple dry year period from 2020 to 2040 such as was experienced from the years 2010 to 2015, according to VCWWD No. 1's recently updated 2015 Urban Water Management Plan (UWMP). Total supply includes estimated surplus imported water supply from Calleguas based on planned local water supply projects including the VCWWD No. 1 Moorpark Desalter Project and expansions to the MWRF recycled water system.

**Table 31 Multiple Dry Years Water Supply and Demand**

| | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| Total Demand (AFY) | 12,636 | 13,104 | 13,472 | 13,798 | 14,138 |
| Total Supply | 13,149 | 14,143 | 14,442 | 14,606 | 14,918 |
| Difference | 513 | 1,039 | 970 | 808 | 780 |

Source: VCWD 2016, Table 7-4

The VCWWD projects that if new local water supply projects are constructed as planned in the Calleguas jurisdiction, a surplus of water supplies will be available even in the multiple dry year scenario. Total demand in Table 31 was calculated based on VCWWD's service area population, which is expected to increase from 35,782 in 2015 to 45,000 in 2040 (VCWWD 2016). As discussed above under Section 14, *Population and Housing*, the project would not generate population growth exceeding SCAG population forecasts. Therefore, the project's population and associated water demand increase has been accounted for in the UWMP. On April 15, 2019, VCWWD No.1 provided written correspondence confirming water would be available for the project (Appendix J). In addition, the project would be required to comply with the permanent water conservation measures contained in Part 1 – Section L of the Ventura County Waterworks Districts' Rules and Regulations for District Nos. 1, 16, 17, 19, and 38. These measures include installing water-saving devices and limiting landscape irrigation (VCWWD n.d.). In addition, the project would be required to comply with all provisions of the City of Moorpark's water efficient landscape ordinance (MMC 15.23.010).

Therefore, demand for water would not require new water supply entitlements and/or require the expansion or construction of water treatment facilities beyond those already considered in the VCWWD No. 1's 2015 UWMP. Despite the recent drought conditions, adequate water supplies are

available to serve the project. Water supply and infrastructure impacts would be less than significant.

## Stormwater

A significant impact to stormwater facilities may occur if the volume of stormwater runoff would increase to a level exceeding the capacity of the storm drain system serving a project site, resulting in the construction of new stormwater drainage facilities. As described under *Project Description*, the project includes installation of on-site stormwater facilities, including pervious paving/landscaping; storm drain signage; treatment control BMPs such as planter boxes, bio-retention areas, biofiltration basins, and "StormTreat" linear stormwater filtration devices; and 175 feet of oversized 48-inch drain pipe in the western drainage area and 65 feet of 36-inch pipe within the eastern drainage area. These drain pipes would detain and accumulate stormwater runoff, then release runoff at various metered rates that meet City and County criteria for detained flow release depending on the size of the storm event. As discussed in Section 10, *Hydrology and Water Quality*, these features would eliminate the potential to adversely affect the local storm drain system. Accordingly, potential impacts to stormwater drainage facilities would be less than significant.

## Electricity, Natural Gas, and Telecommunications

A significant impact to electricity, natural gas, and telecommunications facilities may occur if the demand for services exceeds the capacity of local providers. As described in Section 6, *Energy*, the project would require approximately 2,452 MMBtu/yr of electricity and approximately 2,816 MMtu/yr of natural gas. Electricity would be provided to the project site by SCE, and natural gas would be provided by SoCalGas. Telecommunications services would be provided by AT&T, Spectrum, Viasat, or other providers, at the discretion of future tenants. Telecommunications are generally available in the project area, and facility upgrades would not likely be necessary.

SCE's Big Creek/Ventura local capacity area includes the project site, and has an excess annual capacity of 2,459 MW (8,290 MMBtu), which is more than enough to accommodate the electricity requirements of the project (SCE 2018b). For 2019, the estimated surplus of natural gas capacity is 794 MMcf/day (823,378 MMBtu/day), which is more than enough to accommodate the natural gas requirements of the project (SoCalGas 2018). Improvements to existing facilities or the provision of new electricity and natural gas facilities is not anticipated. The project would have a less than significant impact on local electricity, natural gas, and telecommunications providers.

**LESS THAN SIGNIFICANT IMPACT**

*d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

*e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

A significant impact may occur if a project were to increase solid waste generation to a degree such that the existing and projected landfill capacity would be insufficient to accommodate the additional solid waste or if a project would generate solid waste that was not disposed of in accordance with applicable regulations.

To comply with AB 939, the City must divert at least 50 percent of its annual waste. In addition, AB 341 sets a 75 percent recycling goal for California by 2020. The City has achieved a landfill diversion rate of at least 50 percent (City of Moorpark n.d.). AB 341 also requires businesses generating more

than four cubic yards of solid waste to recycle and requires owners of multi-family housing with five or more units to provide recycling for their tenants.

For projects valued at over $500,000 or that require a demolition permit, the Moorpark Municipal Code Section 8.36 requires the preparation of a construction and demolition materials management plan that details how the project will divert or recycle at least 65 percent of construction and demolition material. Construction and demolition waste generated by the project must be taken to a facility approved by the City of Moorpark for the diversion of construction and demolition materials within the County of Ventura (City of Moorpark n.d.).

In addition, the project will likely be required to comply with AB 341 and AB 1826 if future commercial tenants of the project generate a quantity of solid waste that meets applicable thresholds. AB 341 mandates commercial recycling for any business that generates four cubic yards or more of commercial solid waste per week, and AB 1826 mandates commercial organics recycling for any business that generates four or more cubic yards of commercial organic waste per week beginning January 1, 2019 (City of Moorpark 2016).

The project's solid waste would be handled by private waste collection services. Solid waste from the City of Moorpark is taken to the Simi Valley Landfill & Recycling Center (SVLRC), which currently receives approximately 5,000 tons of solid waste per day and has a permitted daily throughput of 9,250 tons per day (California Department of Resources Recycling and Recovery [CalRecycle] 2018a, 2018b). As of February 1, 2017, the SVLRC had a remaining capacity of 88,300,000 cubic yards and an estimated closure date of January 31, 2052 (CalRecycle 2018a).

The project would produce an estimated 2,040 pounds, or approximately one ton, of solid waste per day, as shown in Table 32. This estimate is conservative since it does not factor in any recycling or waste diversion programs. This quantity would constitute a 0.02 percent increase in daily throughput at the SVLRC and would not exceed the SVLRC's permitted daily capacity. The project would comply with federal, state, and local statutes and regulations related to solid waste, such as AB 939, AB 341, the County Integrated Waste Management Summary Plan, and the City's recycling program. Additionally, there is adequate landfill capacity in the region to accommodate project-generated waste. Therefore, impacts related to solid waste would be less than significant impact.

### Table 32 Average Daily Solid Waste Generation

| Land Use | Quantity | Solid Waste Generation Rate[1] (pounds per day) | Total Solid Waste Generation (pounds per day) |
|---|---|---|---|
| Residential | 91 households (units) | 12.23/household | 1,113 |
| Commercial | 88 employees | 10.53/employee | 927 |
| Total Proposed Project | | | 2,040 |

[1] Source: City of Los Angeles 2006, Section M.3

**LESS THAN SIGNIFICANT IMPACT**

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# 20 Wildfire

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: | | | | |
| a. Substantially impair an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ■ |
| b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | ☐ | ☐ | ■ | ☐ |
| c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | ☐ | ☐ | ■ | ☐ |
| d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | ☐ | ☐ | ■ | ☐ |

*a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

While the project site is not within a state responsibility area or very high fire hazard severity zone, it is located within 50 feet of a very high fire hazard severity zone (CAL FIRE 2010). The County's Emergency Preparedness Guide provides basic emergency information for residents of the County. The project would be required to comply with applicable City codes and regulations pertaining to emergency response and evacuation plans maintained by the County police department and fire departments. No roads would be permanently closed as a result of the construction or operation of the proposed project, and no structures would be developed that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The City also has a grid pattern of streets within the downtown area so at no point would any parcel or building be rendered inaccessible. The proposed project would be accessed via existing driveways along High Street. These driveways would provide sufficient ingress/egress for

vehicles, trucks, and heavy duty trucks that would frequent the project site. As such, implementation of the proposed project would not interfere with existing emergency evacuation plans or emergency response plans in the area.

**NO IMPACT**

*b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

The project site is relatively flat, with hills located near the site to the north of Everett Street. In the vicinity of the project site, wind blows southeast (NOAA 2018). Due to the presence of nearby gentle slopes and wind direction, which could carry fires toward the site from very high fire hazard severity zones to the north of the site, construction on the project site would expose new residents to wildfire impacts. However, building code fire safety requirements and DTSP and General Plan policies would require the provision of fire suppression and alarm systems, and payment of fire protection facility fees, which would aid in preventing the spread of wildfires. Therefore, compliance with these policies would ensure this impact is less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

The project is located within an urbanized area and would involve the development of the majority of the project site with structures. No new roads would be constructed and fuel breaks would not be required. The project will comply with building code and fire safety requirements, as well as DTSP and General Plan policies. Construction BMPs, such as ensuring equipment has spark arresters installed, would ensure temporary construction does not exacerbate fire risks in the area. This impact would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The project would introduce new residents to the project site, which is adjacent to a very high fire hazard severity zone. As discussed in Section 10, *Hydrology and Water Quality*, development of the proposed project would introduce more impervious surfaces, which would increase the volume of stormwater runoff from the site. This increase in runoff volume could also increase the rate of surface runoff and flooding on- or off-site. However, landscaping of the project area would help reduce off-site flows and reduce runoff volumes and rates. Furthermore, the project would comply with all NPDES requirements, Ventura County's MS4 Permit, and the City's runoff requirements and would therefore not significantly increase the rate of surface runoff and flooding on- or off-site. The project site is separated from the gently-sloped hills north of the site by existing urban development; therefore, post-fire slope instability resulting in landslides or flooding would not be

likely to result in impacts to development on the project site. Additionally, there are no creeks or drainage systems within the project site that may be affected by post-fire flooding or landslides. Further, the gently-sloping hillside north of the site has not been identified as a landslide area (City of Moorpark 2001, Figure 4-3).

**LESS THAN SIGNIFICANT IMPACT**

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# 21 Mandatory Findings of Significance

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Does the project: | | | | |
| a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | ■ | ☐ | ☐ |
| b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | ☐ | ■ | ☐ | ☐ |
| c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ■ | ☐ |

*a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

The project site is located in an urbanized area of the City and has been previously disturbed in conjunction with on-site development. The project site contains a former granary, industrial buildings, associated paved surfaces, and vacant land. As described in Section 4, *Biological Resources,* implementation of Mitigation Measures BIO-1 would address potential impacts to nesting birds. As noted under Section 5, *Cultural Resources,* and Section 18, *Tribal Cultural Resources*, no historical, archeological, or tribal resources were identified on-site. Nevertheless, implementation of Mitigation Measures CUL-1 through CUL-3 and TCR-1 would reduce impacts to

unanticipated cultural resources to a less than significant level by providing a process for evaluating and, as necessary, avoiding impacts to any identified resources during construction. Impacts would be less than significant with the mitigation incorporated for biological, cultural, and tribal resources.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

As described in the discussion of environmental checklist Sections 1 through 19, the project would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated, with respect to all environmental issues. No known planned or pending projects are located in the immediate site vicinity that would substantially contribute to any additive effects in conjunction with the project with respect to issues such as aesthetics, land use, and construction-related impacts (i.e. traffic, air quality, and noise). The project's contribution to cumulative regional and global impacts with respect to such issues as air quality, climate change, and noise would not be substantial due to the project size, location, and design. Some of the other resource areas (agricultural and mineral) were determined to have no impact in comparison to existing conditions. Therefore, the project would not contribute to cumulative impacts related to these issues. In addition, as discussed in Section 17, *Transportation/Traffic*, the TIA analyzes potential cumulative traffic impacts due to the development of the approved and pending projects located in the City of Moorpark and the immediate surrounding area (see Table 28 for cumulative projects list). The resulting cumulative traffic impacts were found to be less than significant with Mitigation Measure TRA-1 incorporated. As such, with implementation of the mitigation measures included in this Initial Study and compliance with applicable rules and regulations, cumulative impacts would be less than significant (not cumulatively considerable).

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in analyses for air quality, hazards and hazardous materials, and noise, the proposed project would not result, either directly or indirectly, in adverse hazards related to air quality, hazardous materials or noise. Compliance with applicable rules and regulations and recommended mitigation measures would reduce potential impacts on human beings to a less than significant level.

**LESS THAN SIGNIFICANT IMPACT**

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# Appendix A

Project Renderings

**Figure 1 Conceptual Site Rendering – View of Building B1 from High Street Facing South**




Source: KTGY

**Figure 2 Conceptual Site Rendering – View of Building A from High Street Facing Southwest**




Source: KTGY

**Figure 3 Conceptual Site Rendering – Village Green and Commercial Buildings**




Source: KTGY

**Figure 4 Conceptual Site Rendering – Building F from High Street Facing Southeast**




Source: KTGY

# Appendix B

Preliminary Hydrologic and Hydraulic/Stormwater Quality Report

# PRELIMINARY HYDROLOGIC AND HYDRAULIC/ STORMWATER QUALITY REPORT

**for**

**High Street Depot**
**High Street**
**Moorpark, CA 93021**

**Prepared For:**

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# PRELIMINARY HYDROLOGIC AND HYDRAULIC / STORMWATER QUALITY REPORT

**for**

## High Street Depot
## High Street
## Moorpark, CA 93021

| | |
|---|---|
| Date: | June 18, 2019 |
| Project Manager: | Randy Chapman, P.E.<br>RCE No. 69614 |
| Project Engineer: | Ben Bourne |
| CCE Job Number: | 2018-0028 |

Prepared By: _____

Randy Chapman, P.E. Date
CCE Design Associates, Inc

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# 2. Introduction

## PURPOSE

The purpose of this project is to validate the grading and drainage design for the proposed High Street Depot Station project. The project will involve grading of an existing vacant parcel to create a mixed-use project of approximately 91 apartment units and "town plaza" commercial space.

## SITE LOCATION

This project encompasses two parcels adjacent to High Street between Moorpark Avenue and Magnolia Street. The assessor's parcel number is 512-0-090-115. This site is bounded on the south by the Moorpark Metrolink rail station, to the north by High Street, to the west by the Moorpark Chamber of Commerce, and to the east by a vacant lot that is in the process of being developed into additional parking for the rail station

## DESCRIPTION

The existing site is located on approximately 2.15 acres. The parcel contains several vacant buildings and intermittent hardscape that will be demolished and removed to create room for this project. Drainage patterns in the area trend gently from east to west, with slopes of approximately 1% within High Street.

The project, as proposed, intends to convert the existing space into a mixed-use site consisting of 91 residential units and approximately 13,656 square feet of commercial space, including a "Plaza" green space, LID BMPs, landscaping, and associated parking and sidewalk hardscape. Overall drainage patterns will remain relatively unchanged; however, storm drain inlets will be added to collect parking areas along the southern portion of the site and new LID BMPs (bioretention areas and biofiltration planter boxes) integrated into the building and landscaping design, streetscape, and parking lot areas. Storm drain inlets will be collected by a new onsite storm drain system which will discharge into the existing storm drain within High Street which drains to Moorpark Storm Drain No. 1.

As it relates to flood control, the project is located within the Calleguas Creek Watershed (Zone 3) and drains to Moorpark Storm Drain No. 1. Per requirements imposed by the Ventura County Watershed Protection District and per findings within the "Gabbert & Walnut Canyon Channels Flood Control Deficiency Study" prepared in 1997, updated in 2005, and adopted by the City of Moorpark, the project is required to mitigate post-development peak flowrates to 90-pecent or below that of the pre-development flowrate. This is proposed to be accomplished through the inclusion of new underground detention devices. Additionally, the site is not located within a FEMA Special Flood Hazard Area (SFHA); however, the site is located within a shaded Zone X (within the 500-year floodplain). Flood zone information and designation is per Flood Insurance Rate Map (FIRM) number 06111C0817E dated January 20, 2010.

The site, being located within the Downtown Specific Plan area, is subject to the current 2011 Ventura County Technical Guidance Manual (Order R4-2010-0108). This project proposes to implement Low Impact Development (LID) Best Management Practices (BMPs) to the maximum extent possible and will treat the full stormwater quality design volume (SQDV) per guidelines within the current VC TGM.

Lastly, as the surrounding area and watershed are largely built out, there are no anticipated substantial changes to drainage patterns in the area from future development. Rather, as sites redevelop and fall under current MS4 requirements, drainage patterns in the area will likely improve.

## 3. References


- "Ventura County Hydrology Manual," Ventura County Watershed Protection District, Revised 2017.
- "Ventura County Technical Guidance Manual for Stormwater Quality Control Measures," Ventura County Watershed Protection District, 2011, Errata Update 2018.
- "Technical Guidance Manual for Stormwater Quality Control Measures," Ventura County Watershed Protection District, Revised 2002.


## 4. Objectives

The objectives of this report are to determine the existing and proposed stormwater flow rates for this project based on existing topography, land use and impervious cover, and to design drainage infrastructure to convey and mitigate as required proposed storm runoff, as well as to meet stormwater treatment measures in an acceptable manner to the City of Moorpark. This report will address the following items:

- Hydrology – This report will discuss existing and proposed peak runoff flowrates as anticipated from the development of this project.
- Hydraulics – This report will validate the sizing of proposed storm drain facilities associates with the development of the site.
- Stormwater Treatment – This report will detail proposed LID BMPs to be implemented as part of the development to treat stormwater runoff per City and County requirements.
- Flood Control – This project will be designed in a manner to exceed the FEMA 100-year storm event elevation and will provide detention pursuant to city and county requirements.

## 5. Procedure

This study was prepared using the design criteria and methodology developed by the Ventura County Watershed Protection District. Calculations presented within this study were determined using the Ventura County Watershed Protection District Modified Rational Method Hydrology Program (VCRat v.2.64). As the minimum input area for VCRat is 5 acres and the total project is only comprised of approximately 2.15 acres, areas were input using a factor of 10 and all results were scaled down accordingly.

In regard to hydrologic calculations, the existing condition (pre-development) peak flowrate was determined using the VCRat TC Calculator to establish the allowable discharge rate for the project, which was determined to be 90-percent of the pre-development peak flowrate.

For calculation of the proposed condition (post-development) peak flowrate, the site was divided into two separate tributary areas; the East Tributary and the West Tributary. The dividing line was taken at the center of the Plaza Green area with all area west of that high point elevation being collected be a storm drain system within the westerly parking lot and driveway, and all area east of that high point

being collected by a separate storm drain system located within the easterly parking lot. Each storm drain system will have its own detention system comprised of an oversized reach of pipe (see Section 7 below), and separate connection to the existing storm drain system within High Street.

## 6. Hydrology

The following inputs were utilized to calculate the existing condition (pre-development) 100-year storm event peak runoff flowrate:

- Total Area: 2.15 ac
- Flood Zone: 3
- Rainfall Zone: J'
- Development Type: Commercial
- Soil Type: 5.00
- Percent Impervious: 30
- Time of concentration: 9 minutes

The resultant peak flowrate was determined to be 4.62 cfs. See Attachment A of this report for supporting calculations.

The following inputs were utilized to calculate the East Tributary proposed condition (post-development) 100-year storm event peak runoff flowrate:

- Total Area: 0.67 ac
- Flood Zone: 3
- Rainfall Zone: J'
- Development Type: Commercial
- Soil Type: 5.00
- Percent Impervious: 80
- Time of concentration: 13 minutes

The resultant peak flowrate was determined to be 1.74 cfs. See Attachment B-1 of the report for supporting calculations.

The following inputs were utilized to calculate the West Tributary proposed condition (post-development) 100-year storm event peak runoff flowrate:

- Total Area: 1.47 ac
- Flood Zone: 3
- Rainfall Zone: J'
- Development Type: Commercial
- Soil Type: 5.00
- Percent Impervious: 80
- Time of concentration: 16 minutes

The resultant peak flowrate was determined to be 3.34 cfs. See Attachment B-2 of the report for supporting calculations.

The following summarizes the hydrologic results from each subarea:

| Area ID | Area (ac) | $Q_{100}$ (cfs) |
|---|---|---|
| **East (Proposed)** | 0.68 | 1.74 |
| **West (Proposed)** | 1.47 | 3.34 |
| **Total (Proposed)** | 2.15 | 5.08 |
| **Existing** | 2.15 | 4.62 |

# 7. Flood Control (Detention)

Per findings within the "Gabbert & Walnut Canyon Channels Flood Control Deficiency Study" and due to the limited capacity of existing downstream conveyance facilities, the Ventura County Watershed Protection District has established that the allowable peak discharge flowrate for this project is 90-percent or less of the pre-development peak flowrate. As the pre-development peak flowrate for this project has been determined to be 4.62 cfs (see Section 6), the allowable peak discharge flowrate for this project is 4.16 cfs.

This project proposes to mitigate the increase in peak runoff flowrate caused by increased impervious cover by providing underground storage, or detention, through the inclusion of oversized storm drainpipe with orifice plates to restrict outflow to the allowable rates as defined by this report. Per Section 6 of this report, the East Tributary proposed condition yields a 100-year storm peak flowrate of 1.74 cfs and the West Tributary proposed condition yields a 100-year storm peak flowrate of 3.34 cfs, combining for a total 100-year storm event peak discharge flowrate for the proposed condition of 5.08 cfs. As the allowable peak discharge flowrate for the project is 4.16 cfs, the additional 0.92 cfs will be mitigated through onsite detention, specifically through the inclusion of 65-feet of oversized 36-inch pipe within the East Tributary and 450-feet of oversized 30-inch pipe within the West Tributary. The reach of oversized pipe within the East Tributary is proposed to be located within the Plaza Green area and will restrict proposed peak flowrates to 1.48 cfs, and the reach of oversized pipe within the West Tributary is proposed to be located within the western drive aisle of the parking lot and will restrict proposed peak flowrates to 2.61 cfs, yielding a total peak flowrate in the proposed condition of 4.09 cfs. Detention sizing calculations are contained within Attachment C of this report and specific locations of oversized pipe are shown on the Hydrology Map found within Attachment F.

As this is a preliminary report, calculations were only run for the 100-year storm event to ensure adequate space is available to implement detention devices as required. At the time of final design, all relevant storm events will be calculated, and orifice control devices will be sufficiently designed to restrict outflow during all applicable storm events.

# 8. Stormwater Quality

Stormwater quality for this project is in accordance with the 2011 Ventura County Technical Guidance Manual (TGM) and intends to treat the full stormwater quality design volume (SQDV) onsite through the inclusion of Low Impact Development (LID) Best Management Practices (BMPs).

### SITE CONDITIONS

As previously stated in this report, the site is relatively flat and slopes are generally 5% or less, suggesting infiltration or other retention BMPs are an effective option; however, site geotechnical

conditions and design elements render infiltration as infeasible as the site is subject to liquefaction and is adjacent to existing and future railroad right-of-way.

## SITE DESIGN PRINCIPLES AND TECHNIQUES

Site design principles and techniques have been applied to this proposed development to reduce the hydrologic and water quality impacts typically associated with new development. The following is a list of site design features incorporated in this project and a brief explanation of how they were implemented:

- Site planning –The site has also been laid out in a manner to effectively disconnect impervious surface so that 5% Effective Impervious Area (EIA) is achieved.
- Protect and restore natural areas – Existing natural areas were preserved to the maximum extent possible. The Village Green plaza area adjacent to the commercial buildings, along with areas adjacent to the parking lots, have been designed to be natural, pervious areas.
- Minimize land disturbance – To be implemented during construction activities.
- Minimize impervious cover – Landscape areas were included throughout the site where practical.

## SOURCE CONTROL MEASURES

Source Control Measures are operational practices that reduce potential pollutants at the source. Applicable Source Control Measures for this project are storm drainage signage (S-1) which are to be added to all storm drain inlets, and proper design of outdoor trash storage and waste handling areas (S-3).

## TREATMENT CONTROL BMPS

As previously discussed with City staff, mechanical treatment, specifically through the inclusion of stormfilters, is highly discouraged and an approach more in line with current Low Impact Development (LID) standards is preferred for treatment of the proposed project. With that in mind, the proposed treatment scheme as presented herein attempts to utilize LID Best Management Practices (BMPs) to the maximum extent possible in order to promote natural treatment processes and volume mitigation. In addition, the project will match pre/post flowrates discharging from the site through the inclusion of onsite detention (see Section 7 above).

Due to the linear nature of the site and the proposed site layout, stormwater treatment of the site is broken into three separate locations which are as follows; treatment of building roof areas, treatment of parking / drive-aisle areas, and treatment of street frontage areas. Each are discussed in detail below.

*Building Roof Areas:*

Treatment of the building roof areas is proposed to be accomplished through the inclusion of flow-through planter boxes (BIO-2 per the TGM). Building roof areas will be collected by roof drains and conveyed through downspouts to proposed planter boxes located adjacent to the buildings. Planter boxes will be sized to treat the full SQDV per the current VC TGM sizing criteria. Sizing calculations for planter boxes are contained within Attachment D of this report.

*Parking / Drive-Aisle Areas:*

Treatment of the parking / drive-aisle areas is proposed to be accomplished through the inclusion of bio-retention areas with underdrains (BIO-1 per the TGM). Parking stalls along the southerly side of the drive-aisle are proposed to be constructed of pervious pavement in order to render the area 'ineffective' and essentially function as pervious area. Due to the mixed-use nature of the site plan, the existing geotechnical constraints that are being mitigated, and the adjacent railroad right-of-way, there isn't adequate area available to treat this entire area through the inclusion of surface bio-retention; therefore, this project proposes to treat to the maximum extent possible with the bio-retention, and use an 'in-lieu' approach to treat the remaining area. The 'in-lieu' method intends to treat the equivalent area within High Street with biofiltration. As only a small portion of Parking / Drive-Aisle – 1 cannot be met by onsite bioretention, an equivalent area within High Street will be treated by the inclusion of a linear stormwater biofiltration system (BIO-5) within the street frontage as described below. The entire Parking / Drive-Aisle – 2 is proposed to be treated with the 'in-lieu' approach by creating a bioretention area (BIO-1) at the location of the bulb-out along High Street, which will collect and treat and equivalent area of street runoff. Sizing calculations are contained within Attachment D of this report.

*Street Frontage Areas:*

Treatment of the street frontage areas is proposed to be met through the inclusion of linear biofiltration (BIO-5 per the TGM), specifically through the use of the StormTreat Linear Stormwater Treatment device. The StormTreat is listed in the VC TGM as an approved proprietary biofiltration device and lends itself well to this project based on its linear nature.

Please refer to Attachment E for detailed specification sheets for stormwater quality treatment devices.

## 9. Summary and Conclusions

This project proposes to construct a new mixed-use development of approximately 2.15 acres on the south side of High Street in between Moorpark Avenue and Magnolia Street within the City of Moorpark in Ventura County, CA. The existing site is currently unoccupied and consists of vacant buildings and intermittent hardscape. As part of the development of the site, a series of new drainage inlets and underground storm drain facilities will be constructed to safely convey runoff away from new structures.

The project will install new underground detention facilities in the fashion of oversized storm drainpipe with orifice controls in order to release post-development peak flowrates at 90-percent or less of that of the pre-development peak flowrate. Additionally, the proposed grading design and new underground drainage system are designed to provide protection from flooding pursuant to City of Moorpark, County of Ventura, and FEMA requirements.

And lastly, the project will implement LID BMPs which will improve water quality and help to mitigate volume. Specifically, treatment will be through the inclusion of bioretention planters, flow-through planter boxes, and proprietary biofiltration.

# 10. Attachments

Attachment A Existing Hydrology Calculations
Attachment B Proposed Hydrology Calculations
1. East Tributary
2. West Tributary

Attachment C Detention Calculations (PondPack Results)
1. East Tributary
2. West Tributary

Attachment D Stormwater Quality Treatment Calculations
Attachment E BMP Specification Sheets
Attachment F Hydrology Map

DESIGN ASSOCIATES INC

# Attachment A

Existing Hydrology Calculations

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.64.0.30
Project: Moorpark Depot
Date: 12:00:00 AM
Engineer: Randy Chapman
Consultant: CCE Design Associates
---
Watershed Name: Watershed
---
Sub-Area Name: SubArea
Computing Tc for all rainfall frequencies for sub-area SubArea...
---
**Tc for frequency = 10.00: 12.754 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 12.754 min. = 13 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 2.15
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 10
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 30
SUB AREA OUTPUT
---
Intensity (in/hr): 1.550
C Total: 0.650
Sum Q Segments (cfs): 2.16
**Q Total (cfs): 2.16**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 765.26
Time of Concentration (min): 12.754
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 4.7580
Flow Type: Overland
Length (ft): 115
Top Elevation (ft): 520.5
Bottom Elevation (ft): 520.1
Contributing Area (acres): 0.15
Percent of Sub-Area (%): 7.0

Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0035
Effective Slope: 0.0035
Q for Flow Path (cfs): 0.15
Avg Velocity (ft/s): 0.40
Passed Scour Check: YES
Scour Velocity (ft/sec): 0.65
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 7.9964
Flow Type: Street
Length (ft): 940
Top Elevation (ft): 520.1
Bottom Elevation (ft): 513.7
Contributing Area (acres): 2
Percent of Sub-Area (%): 93.0
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0068
Q for Flow Path (cfs): 2.01
Q Top (cfs): 0.15
Q Bottom (cfs): 2.16
Velocity Top (ft/s): 0.88
Velocity Bottom (ft/s): 1.73
Avg Velocity (ft/s): 1.31
Wave Velocity (ft/s): 1.96

**Tc for frequency = 25.00: 10.937 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 10.937 min. = 11 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 2.15
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 25
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 30
SUB AREA OUTPUT
---
Intensity (in/hr): 2.169
C Total: 0.711
Sum Q Segments (cfs): 3.31
**Q Total (cfs): 3.31**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 656.25
Time of Concentration (min): 10.937
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 3.7533
Flow Type: Overland
Length (ft): 115
Top Elevation (ft): 520.5
Bottom Elevation (ft): 520.1
Contributing Area (acres): 0.15
Percent of Sub-Area (%): 7.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0035
Effective Slope: 0.0035
Q for Flow Path (cfs): 0.23
Avg Velocity (ft/s): 0.51
Passed Scour Check: YES
Scour Velocity (ft/sec): 0.69
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 7.1842
Flow Type: Street

Length (ft): 940
Top Elevation (ft): 520.1
Bottom Elevation (ft): 513.7
Contributing Area (acres): 2
Percent of Sub-Area (%): 93.0
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0068
Q for Flow Path (cfs): 3.08
Q Top (cfs): 0.23
Q Bottom (cfs): 3.31
Velocity Top (ft/s): 0.98
Velocity Bottom (ft/s): 1.92
Avg Velocity (ft/s): 1.45
Wave Velocity (ft/s): 2.18

**Tc for frequency = 50.00: 10.021 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 10.021 min. = 10 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 2.15
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 50
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 30
SUB AREA OUTPUT
---
Intensity (in/hr): 2.604
C Total: 0.732
Sum Q Segments (cfs): 4.10
**Q Total (cfs): 4.10**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 601.25
Time of Concentration (min): 10.021
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 3.2111
Flow Type: Overland
Length (ft): 115
Top Elevation (ft): 520.5
Bottom Elevation (ft): 520.1
Contributing Area (acres): 0.15
Percent of Sub-Area (%): 7.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0035
Effective Slope: 0.0035
Q for Flow Path (cfs): 0.29
Avg Velocity (ft/s): 0.60
Passed Scour Check: YES
Scour Velocity (ft/sec): 0.71
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 6.8097
Flow Type: Street

Length (ft): 940
Top Elevation (ft): 520.1
Bottom Elevation (ft): 513.7
Contributing Area (acres): 2
Percent of Sub-Area (%): 93.0
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0068
Q for Flow Path (cfs): 3.81
Q Top (cfs): 0.29
Q Bottom (cfs): 4.10
Velocity Top (ft/s): 1.04
Velocity Bottom (ft/s): 2.03
Avg Velocity (ft/s): 1.53
Wave Velocity (ft/s): 2.30

**Tc for frequency = 100.00: 9.023 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 9.023 min. = 9 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 2.15
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 100
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 30
SUB AREA OUTPUT
---
Intensity (in/hr): 2.873
C Total: 0.748
Sum Q Segments (cfs): 4.62
**Q Total (cfs): 4.62**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 541.35
Time of Concentration (min): 9.023
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 2.4150
Flow Type: Overland
Length (ft): 115
Top Elevation (ft): 520.5
Bottom Elevation (ft): 520.1
Contributing Area (acres): 0.15
Percent of Sub-Area (%): 7.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0035
Effective Slope: 0.0035
Q for Flow Path (cfs): 0.32
Avg Velocity (ft/s): 0.79
Passed Scour Check: YES
Scour Velocity (ft/sec): 0.73
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 6.6076
Flow Type: Street

Length (ft): 940
Top Elevation (ft): 520.1
Bottom Elevation (ft): 513.7
Contributing Area (acres): 2
Percent of Sub-Area (%): 93.0
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0068
Q for Flow Path (cfs): 4.30
Q Top (cfs): 0.32
Q Bottom (cfs): 4.62
Velocity Top (ft/s): 1.07
Velocity Bottom (ft/s): 2.09
Avg Velocity (ft/s): 1.58
Wave Velocity (ft/s): 2.37

DESIGN ASSOCIATES INC

# Attachment B

Proposed Hydrology Calculations

DESIGN ASSOCIATES INC

# Attachment B-1

East Tributary

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.64.0.30
Project: Moorpark Depot
Date: 12:00:00 AM
Engineer: Randy Chapman
Consultant: CCE Design Associates
---
Watershed Name: Watershed
---
Sub-Area Name: SubArea
Computing Tc for all rainfall frequencies for sub-area SubArea...
---
**Tc for frequency = 10.00: 16.973 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 16.973 min. = 17 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 0.67
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 10
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 80
SUB AREA OUTPUT
---
Intensity (in/hr): 1.391
C Total: 0.855
Sum Q Segments (cfs): 0.80
**Q Total (cfs): 0.80**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,018.38
Time of Concentration (min): 16.973
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 1.2667
Flow Type: Overland
Length (ft): 38
Top Elevation (ft): 520.6
Bottom Elevation (ft): 520.5
Contributing Area (acres): 0.04
Percent of Sub-Area (%): 6.0

Overland Type: Valley
Development Type: Commercial
Map Slope: 0.0026
Effective Slope: 0.0026
Q for Flow Path (cfs): 0.05
Avg Velocity (ft/s): 0.50
Passed Scour Check: N/A
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 13.4839
Flow Type: Channel
Length (ft): 200
Top Elevation (ft): 520.5
Bottom Elevation (ft): 519.5
Contributing Area (acres): 0.6
Percent of Sub-Area (%): 89.6
Bottom Width (ft): 15
Side Slope (H:V): 12
Manning's N: 0.15
Map Slope: 0.0050
Q for Flow Path (cfs): 0.71
Q Top (cfs): 0.05
Q Bottom (cfs): 0.76
Velocity Top (ft/s): 0.08
Velocity Bottom (ft/s): 0.22
Avg Velocity (ft/s): 0.15
Wave Velocity (ft/s): 0.25
DATA FOR FLOW PATH 3
---
Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 2.2224
Flow Type: Pipe
Length (ft): 146
Top Elevation (ft): 515
Bottom Elevation (ft): 513.54
Contributing Area (acres): 0.03
Percent of Sub-Area (%): 4.5
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 9
Used Pipe Diameter (in): 18
Manning's N: 0.015
Map Slope: 0.0100
Q for Flow Path (cfs): 0.04
Q Top (cfs): 0.76
Q Bottom (cfs): 0.80
Avg Velocity (ft/s): 0.83
Wave Velocity (ft/s): 1.09

**Tc for frequency = 25.00: 15.687 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 15.687 min. = 16 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 0.67
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 25
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 80
SUB AREA OUTPUT
---
Intensity (in/hr): 1.779
C Total: 0.872
Sum Q Segments (cfs): 1.04
**Q Total (cfs): 1.04**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 941.20
Time of Concentration (min): 15.687
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 1.2414
Flow Type: Overland
Length (ft): 38
Top Elevation (ft): 520.6
Bottom Elevation (ft): 520.5
Contributing Area (acres): 0.04
Percent of Sub-Area (%): 6.0
Overland Type: Valley
Development Type: Commercial
Map Slope: 0.0026
Effective Slope: 0.0026
Q for Flow Path (cfs): 0.06
Avg Velocity (ft/s): 0.51
Passed Scour Check: N/A
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 12.2553
Flow Type: Channel
Length (ft): 200

Top Elevation (ft): 520.5
Bottom Elevation (ft): 519.5
Contributing Area (acres): 0.6
Percent of Sub-Area (%): 89.6
Bottom Width (ft): 15
Side Slope (H:V): 12
Manning's N: 0.15
Map Slope: 0.0050
Q for Flow Path (cfs): 0.93
Q Top (cfs): 0.06
Q Bottom (cfs): 0.99
Velocity Top (ft/s): 0.09
Velocity Bottom (ft/s): 0.24
Avg Velocity (ft/s): 0.16
Wave Velocity (ft/s): 0.27
DATA FOR FLOW PATH 3
---
Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 2.1899
Flow Type: Pipe
Length (ft): 146
Top Elevation (ft): 515
Bottom Elevation (ft): 513.54
Contributing Area (acres): 0.03
Percent of Sub-Area (%): 4.5
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 9
Used Pipe Diameter (in): 18
Manning's N: 0.015
Map Slope: 0.0100
Q for Flow Path (cfs): 0.05
Q Top (cfs): 0.99
Q Bottom (cfs): 1.04
Avg Velocity (ft/s): 0.88
Wave Velocity (ft/s): 1.11

**Tc for frequency = 50.00: 14.244 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 14.244 min. = 14 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 0.67
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 50
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 80
SUB AREA OUTPUT
---
Intensity (in/hr): 2.162
C Total: 0.881
Sum Q Segments (cfs): 1.28
**Q Total (cfs): 1.28**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 854.64
Time of Concentration (min): 14.244
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 0.6333
Flow Type: Overland
Length (ft): 38
Top Elevation (ft): 520.6
Bottom Elevation (ft): 520.5
Contributing Area (acres): 0.04
Percent of Sub-Area (%): 6.0
Overland Type: Valley
Development Type: Commercial
Map Slope: 0.0026
Effective Slope: 0.0026
Q for Flow Path (cfs): 0.08
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 11.4208
Flow Type: Channel
Length (ft): 200

Top Elevation (ft): 520.5
Bottom Elevation (ft): 519.5
Contributing Area (acres): 0.6
Percent of Sub-Area (%): 89.6
Bottom Width (ft): 15
Side Slope (H:V): 12
Manning's N: 0.15
Map Slope: 0.0050
Q for Flow Path (cfs): 1.14
Q Top (cfs): 0.08
Q Bottom (cfs): 1.22
Velocity Top (ft/s): 0.09
Velocity Bottom (ft/s): 0.26
Avg Velocity (ft/s): 0.18
Wave Velocity (ft/s): 0.29
DATA FOR FLOW PATH 3
---
Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 2.1899
Flow Type: Pipe
Length (ft): 146
Top Elevation (ft): 515
Bottom Elevation (ft): 513.54
Contributing Area (acres): 0.03
Percent of Sub-Area (%): 4.5
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 9
Used Pipe Diameter (in): 18
Manning's N: 0.015
Map Slope: 0.0100
Q for Flow Path (cfs): 0.06
Q Top (cfs): 1.22
Q Bottom (cfs): 1.28
Avg Velocity (ft/s): 0.92
Wave Velocity (ft/s): 1.11

**Tc for frequency = 100.00: 12.594 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 12.594 min. = 13 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 0.67
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 100
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 80
SUB AREA OUTPUT
---
Intensity (in/hr): 2.492
C Total: 0.886
Sum Q Segments (cfs): 1.48
**Q Total (cfs): 1.48**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 755.64
Time of Concentration (min): 12.594
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 0.6333
Flow Type: Overland
Length (ft): 38
Top Elevation (ft): 520.6
Bottom Elevation (ft): 520.5
Contributing Area (acres): 0.04
Percent of Sub-Area (%): 6.0
Overland Type: Valley
Development Type: Commercial
Map Slope: 0.0026
Effective Slope: 0.0026
Q for Flow Path (cfs): 0.09
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 10.9053
Flow Type: Channel
Length (ft): 200

Top Elevation (ft): 520.5
Bottom Elevation (ft): 519.5
Contributing Area (acres): 0.6
Percent of Sub-Area (%): 89.6
Bottom Width (ft): 15
Side Slope (H:V): 12
Manning's N: 0.15
Map Slope: 0.0050
Q for Flow Path (cfs): 1.32
Q Top (cfs): 0.09
Q Bottom (cfs): 1.41
Velocity Top (ft/s): 0.10
Velocity Bottom (ft/s): 0.27
Avg Velocity (ft/s): 0.18
Wave Velocity (ft/s): 0.31
DATA FOR FLOW PATH 3
---
Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.0554
Flow Type: Pipe
Length (ft): 146
Top Elevation (ft): 515
Bottom Elevation (ft): 513.54
Contributing Area (acres): 0.03
Percent of Sub-Area (%): 4.5
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 12
Used Pipe Diameter (in): 18
Manning's N: 0.015
Map Slope: 0.0100
Q for Flow Path (cfs): 0.07
Q Top (cfs): 1.41
Q Bottom (cfs): 1.48
Avg Velocity (ft/s): 1.71
Wave Velocity (ft/s): 2.31

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.64)

Modified Rational Model Results Report

Job: 1 Project: High Street Depot – East Tributary Proposed

Project Description

---

---

VCRat version: 2.64.0.30
VCRain version: 201601
DOS EXE version: PC 2.64-201605
VCRain Curve Set: VCWPD 2016 Revised Curve Set
Curve A: REV1: South Mountain to Moorpark
Curve B: None
Curve C: None
Curve D: None

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.64)

Job: 1 Project: High Street Depot – East Tributary Proposed

## Model Results

| NODE ID | SOIL TYPE | RAIN ZONE | TC (MIN) | % IMP | AREA (AC) | FLOW (CFS) | AREA (AC) | FLOW (CFS) | TIME (MIN) | CHANNEL TYPE | LENGTH (FT) | SLOPE (FT/FT) | SIZE (FT) | H:V (Z) | N VALUES CHNL | SIDES | VEL (FT/S) | DEPTH (FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | 050 | A100 | 13 | 80 | 7 | 17 | 7 | 17 | 1154 | PIPE | 10 | 0.00100 | 2.75 | ---- | ----- | ----- | -- | -- |
| 2A | --- | --- | -- | -- | --- | --- | 7 | 17 | 1154 | ------- | ---- | ------- | --- | ---- | ----- | ----- | -- | -- |

**********

* INCOMING HYDROGRAPH PEAK (cfs): 17.39 VOLUME (acre-ft): 3.18 *

* NO HYDROGRAPH ADJUSTMENT *

* RUNOFF FACTOR(in): 6.14 *

* FATTENED HYDROGRAPH PEAK (cfs): 17.39 VOLUME (acre-ft): 3.58 *

**********

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2A | --- | --- | -- | -- | --- | --- | 7 | 17 | ---- | ------- | ---- | ------- | --- | ---- | ----- | ----- | -- | -- |
| 3A | --- | --- | -- | -- | --- | --- | 7 | 17 | 1154 | ------- | ---- | ------- | --- | ---- | ----- | ----- | -- | -- |

## Issue/Warning Messages

| TYPE | ERR NO | PROCEDURE | LOCATION | MESSAGE |
|---|---|---|---|---|

NO ISSUES OR WARNINGS DETECTED

HYDROGRAPH FATTENED AT 2A

---

**********

* INCOMING HYDROGRAPH PEAK (cfs): 17.39 VOLUME (acre-ft): 3.18

*

* NO HYDROGRAPH ADJUSTMENT

*

* RUNOFF FACTOR(in): 6.14

*

* FATTENED HYDROGRAPH PEAK (cfs): 17.39 VOLUME (acre-ft): 3.58

*

**********

| TIME (min) | PRE-ADJ (cfs) | PRE-FAT (cfs) | FATTENED (cfs) | TIME (min) | PRE-ADJ (cfs) | PRE-FAT (cfs) | FATTENED (cfs) |
|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.00 | 100 | 0.75 | 0.75 | 0.76 |
| 200 | 0.75 | 0.75 | 0.77 | 300 | 0.75 | 0.75 | 0.78 |
| 400 | 0.75 | 0.75 | 0.78 | 500 | 0.75 | 0.75 | 0.79 |
| 600 | 0.87 | 0.87 | 0.91 | 700 | 1.21 | 1.21 | 1.28 |
| 800 | 1.21 | 1.21 | 1.31 | 900 | 1.60 | 1.60 | 1.76 |
| 1000 | 2.30 | 2.30 | 2.59 | 1050 | 2.95 | 2.95 | 3.38 |
| 1100 | 3.82 | 3.82 | 4.52 | 1110 | 5.69 | 5.69 | 6.38 |
| 1120 | 7.50 | 7.50 | 8.17 | 1130 | 7.78 | 7.78 | 8.54 |
| 1131 | 7.74 | 7.74 | 8.51 | 1132 | 7.70 | 7.70 | 8.49 |
| 1133 | 7.66 | 7.66 | 8.46 | 1134 | 7.62 | 7.62 | 8.44 |
| 1135 | 7.61 | 7.61 | 8.44 | 1136 | 7.56 | 7.56 | 8.41 |
| 1137 | 7.54 | 7.54 | 8.41 | 1138 | 7.49 | 7.49 | 8.38 |
| 1139 | 7.47 | 7.47 | 8.37 | 1140 | 7.43 | 7.43 | 8.35 |
| 1141 | 7.45 | 7.45 | 8.39 | 1142 | 7.50 | 7.50 | 8.44 |
| 1143 | 7.53 | 7.53 | 8.49 | 1144 | 7.61 | 7.61 | 8.58 |
| 1145 | 7.94 | 7.94 | 8.89 | 1146 | 8.33 | 8.33 | 9.25 |
| 1147 | 8.65 | 8.65 | 9.56 | 1148 | 9.02 | 9.02 | 9.90 |
| 1149 | 10.49 | 10.49 | 11.23 | 1150 | 12.15 | 12.15 | 12.73 |
| 1151 | 13.69 | 13.69 | 14.10 | 1152 | 15.35 | 15.35 | 15.59 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1153 | 16.92 | 16.92 | 16.97 | 1154 | 17.39 | 17.39 | 17.39 |
| 1155 | 17.38 | 17.38 | 17.38 | 1156 | 17.36 | 17.36 | 17.36 |
| 1157 | 17.26 | 17.26 | 17.27 | 1158 | 16.95 | 16.95 | 17.00 |
| 1159 | 16.60 | 16.60 | 16.69 | 1160 | 16.33 | 16.33 | 16.44 |
| 1161 | 15.97 | 15.97 | 16.12 | 1162 | 14.56 | 14.56 | 14.85 |
| 1163 | 12.91 | 12.91 | 13.37 | 1164 | 11.44 | 11.44 | 12.03 |
| 1165 | 9.52 | 9.52 | 10.29 | 1166 | 7.67 | 7.67 | 8.61 |
| 1167 | 6.88 | 6.88 | 7.88 | 1168 | 6.62 | 6.62 | 7.62 |
| 1169 | 6.25 | 6.25 | 7.27 | 1170 | 6.08 | 6.08 | 7.10 |
| 1171 | 5.75 | 5.75 | 6.79 | 1172 | 5.48 | 5.48 | 6.53 |
| 1173 | 5.15 | 5.15 | 6.20 | 1174 | 4.86 | 4.86 | 5.92 |
| 1175 | 4.50 | 4.50 | 5.58 | 1176 | 4.22 | 4.22 | 5.30 |
| 1177 | 3.88 | 3.88 | 4.98 | 1178 | 3.81 | 3.81 | 4.90 |
| 1179 | 3.75 | 3.75 | 4.82 | 1180 | 3.66 | 3.66 | 4.73 |
| 1181 | 3.62 | 3.62 | 4.67 | 1182 | 3.54 | 3.54 | 4.59 |
| 1183 | 3.47 | 3.47 | 4.51 | 1184 | 3.42 | 3.42 | 4.45 |
| 1185 | 3.35 | 3.35 | 4.37 | 1186 | 3.27 | 3.27 | 4.28 |
| 1187 | 3.22 | 3.22 | 4.22 | 1188 | 3.15 | 3.15 | 4.14 |
| 1189 | 3.04 | 3.04 | 4.02 | 1190 | 2.97 | 2.97 | 3.95 |
| 1191 | 2.91 | 2.91 | 3.88 | 1192 | 2.85 | 2.85 | 3.81 |
| 1193 | 2.79 | 2.79 | 3.74 | 1194 | 2.71 | 2.71 | 3.65 |
| 1195 | 2.68 | 2.68 | 3.61 | 1196 | 2.61 | 2.61 | 3.54 |
| 1197 | 2.54 | 2.54 | 3.46 | 1198 | 2.49 | 2.49 | 3.40 |
| 1199 | 2.42 | 2.42 | 3.32 | 1200 | 2.34 | 2.34 | 3.24 |



Hydrograph Printouts

| TIME (min) | PRE-ADJ (cfs) | PRE-FAT (cfs) | FATTENED (cfs) | TIME (min) | PRE-ADJ (cfs) | PRE-FAT (cfs) | FATTENED (cfs) |
|---|---|---|---|---|---|---|---|
| 1201 | 2.31 | 2.31 | 3.20 | 1202 | 2.31 | 2.31 | 3.18 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1203 | 2.29 | 2.29 | 3.15 | 1204 | 2.28 | 2.28 | 3.14 |
| 1205 | 2.29 | 2.29 | 3.13 | 1206 | 2.30 | 2.30 | 3.14 |
| 1207 | 2.31 | 2.31 | 3.14 | 1208 | 2.29 | 2.29 | 3.10 |
| 1209 | 2.28 | 2.28 | 3.09 | 1210 | 2.28 | 2.28 | 3.08 |
| 1211 | 2.30 | 2.30 | 3.09 | 1212 | 2.31 | 2.31 | 3.09 |
| 1213 | 2.31 | 2.31 | 3.08 | 1214 | 2.29 | 2.29 | 3.05 |
| 1215 | 2.28 | 2.28 | 3.03 | 1216 | 2.29 | 2.29 | 3.03 |
| 1217 | 2.30 | 2.30 | 3.04 | 1218 | 2.31 | 2.31 | 3.04 |
| 1219 | 2.29 | 2.29 | 3.00 | 1220 | 2.28 | 2.28 | 3.00 |
| 1221 | 2.28 | 2.28 | 2.99 | 1222 | 2.30 | 2.30 | 3.00 |
| 1223 | 2.31 | 2.31 | 3.00 | 1224 | 2.29 | 2.29 | 2.97 |
| 1225 | 2.22 | 2.22 | 2.90 | 1226 | 2.14 | 2.14 | 2.82 |
| 1227 | 2.05 | 2.05 | 2.72 | 1228 | 1.97 | 1.97 | 2.64 |
| 1229 | 1.90 | 1.90 | 2.57 | 1230 | 1.80 | 1.80 | 2.46 |
| 1231 | 1.73 | 1.73 | 2.38 | 1232 | 1.64 | 1.64 | 2.29 |
| 1233 | 1.56 | 1.56 | 2.21 | 1234 | 1.49 | 1.49 | 2.13 |
| 1235 | 1.39 | 1.39 | 2.03 | 1236 | 1.31 | 1.31 | 1.95 |
| 1237 | 1.22 | 1.22 | 1.86 | 1238 | 1.20 | 1.20 | 1.83 |
| 1239 | 1.21 | 1.21 | 1.83 | 1240 | 1.22 | 1.22 | 1.84 |
| 1241 | 1.23 | 1.23 | 1.85 | 1242 | 1.20 | 1.20 | 1.81 |
| 1243 | 1.20 | 1.20 | 1.81 | 1244 | 1.20 | 1.20 | 1.80 |
| 1245 | 1.22 | 1.22 | 1.81 | 1246 | 1.23 | 1.23 | 1.81 |
| 1247 | 1.21 | 1.21 | 1.79 | 1248 | 1.20 | 1.20 | 1.78 |
| 1249 | 1.20 | 1.20 | 1.77 | 1250 | 1.22 | 1.22 | 1.79 |
| 1251 | 1.23 | 1.23 | 1.79 | 1252 | 1.21 | 1.21 | 1.76 |
| 1253 | 1.20 | 1.20 | 1.75 | 1254 | 1.20 | 1.20 | 1.75 |
| 1255 | 1.22 | 1.22 | 1.76 | 1256 | 1.23 | 1.23 | 1.76 |
| 1257 | 1.21 | 1.21 | 1.74 | 1258 | 1.20 | 1.20 | 1.73 |
| 1259 | 1.20 | 1.20 | 1.72 | 1260 | 1.22 | 1.22 | 1.74 |
| 1261 | 1.21 | 1.21 | 1.72 | 1262 | 1.20 | 1.20 | 1.71 |
| 1263 | 1.21 | 1.21 | 1.71 | 1264 | 1.20 | 1.20 | 1.70 |
| 1265 | 1.22 | 1.22 | 1.72 | 1266 | 1.21 | 1.21 | 1.70 |
| 1267 | 1.20 | 1.20 | 1.69 | 1268 | 1.21 | 1.21 | 1.69 |
| 1269 | 1.20 | 1.20 | 1.68 | 1270 | 1.22 | 1.22 | 1.70 |
| 1271 | 1.21 | 1.21 | 1.68 | 1272 | 1.20 | 1.20 | 1.67 |
| 1273 | 1.21 | 1.21 | 1.67 | 1274 | 1.22 | 1.22 | 1.68 |
| 1275 | 1.23 | 1.23 | 1.68 | 1276 | 1.21 | 1.21 | 1.66 |
| 1277 | 1.20 | 1.20 | 1.65 | 1278 | 1.20 | 1.20 | 1.65 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1279 | 1.22 | 1.22 | 1.66 | 1280 | 1.23 | 1.23 | 1.67 |
| 1281 | 1.21 | 1.21 | 1.64 | 1282 | 1.20 | 1.20 | 1.63 |
| 1283 | 1.20 | 1.20 | 1.63 | 1284 | 1.22 | 1.22 | 1.64 |
| 1285 | 1.23 | 1.23 | 1.65 | 1286 | 1.21 | 1.21 | 1.62 |
| 1287 | 1.20 | 1.20 | 1.62 | 1288 | 1.20 | 1.20 | 1.61 |
| 1289 | 1.22 | 1.22 | 1.63 | 1290 | 1.23 | 1.23 | 1.63 |
| 1291 | 1.21 | 1.21 | 1.61 | 1292 | 1.20 | 1.20 | 1.60 |
| 1293 | 1.20 | 1.20 | 1.60 | 1294 | 1.22 | 1.22 | 1.61 |
| 1295 | 1.23 | 1.23 | 1.62 | 1296 | 1.21 | 1.21 | 1.59 |
| 1297 | 1.18 | 1.18 | 1.57 | 1298 | 1.14 | 1.14 | 1.52 |
| 1299 | 1.11 | 1.11 | 1.49 | 1300 | 1.09 | 1.09 | 1.46 |
| 1310 | 0.75 | 0.75 | 1.11 | 1320 | 0.75 | 0.75 | 1.09 |
| 1330 | 0.77 | 0.77 | 1.08 | 1340 | 0.75 | 0.75 | 1.05 |
| 1350 | 0.75 | 0.75 | 1.03 | 1360 | 0.75 | 0.75 | 1.01 |
| 1370 | 0.75 | 0.75 | 1.00 | 1380 | 0.77 | 0.77 | 1.00 |
| 1390 | 0.75 | 0.75 | 0.98 | 1400 | 0.75 | 0.75 | 0.96 |
| 1420 | 0.76 | 0.76 | 0.95 | 1440 | 0.75 | 0.75 | 0.93 |
| 1460 | 0.75 | 0.75 | 0.91 | 1500 | 0.75 | 0.75 | 0.89 |



Hydrograph Printouts

---

HYDROGRAPH PRINTOUT AT: 3A

---

| | | |
|---|---|---|
| TOTAL AREA TO HYDROGRAPH: | 7 | acres |
| HYDROGRAPH PEAK: | 17 | cfs |
| TIME OF PEAK: | 1154 | minutes |
| HYDROGRAPH VOLUME: | 3.58 | acre-ft |

| TIME (min) | FLOW (cfs) | TIME (min) | FLOW (cfs) | TIME (min) | FLOW (cfs) | TIME (min) | FLOW (cfs) | TIME (min) | FLOW (cfs) |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 100 | 0.76 | 200 | 0.77 | 300 | 0.78 | 400 | 0.78 |
| 500 | 0.79 | 600 | 0.91 | 700 | 1.28 | 800 | 1.31 | 900 | 1.76 |
| 1000 | 2.59 | 1050 | 3.38 | 1100 | 4.52 | 1110 | 6.38 | 1120 | 8.17 |
| 1130 | 8.54 | 1131 | 8.51 | 1132 | 8.49 | 1133 | 8.46 | 1134 | 8.44 |
| 1135 | 8.44 | 1136 | 8.41 | 1137 | 8.41 | 1138 | 8.38 | 1139 | 8.37 |
| 1140 | 8.35 | 1141 | 8.39 | 1142 | 8.44 | 1143 | 8.49 | 1144 | 8.58 |
| 1145 | 8.89 | 1146 | 9.25 | 1147 | 9.56 | 1148 | 9.90 | 1149 | 11.23 |
| 1150 | 12.73 | 1151 | 14.10 | 1152 | 15.59 | 1153 | 16.97 | 1154 | 17.39 |
| 1155 | 17.38 | 1156 | 17.36 | 1157 | 17.27 | 1158 | 17.00 | 1159 | 16.69 |
| 1160 | 16.44 | 1161 | 16.12 | 1162 | 14.85 | 1163 | 13.37 | 1164 | 12.03 |
| 1165 | 10.29 | 1166 | 8.61 | 1167 | 7.88 | 1168 | 7.62 | 1169 | 7.27 |
| 1170 | 7.10 | 1171 | 6.79 | 1172 | 6.53 | 1173 | 6.20 | 1174 | 5.92 |
| 1175 | 5.58 | 1176 | 5.30 | 1177 | 4.98 | 1178 | 4.90 | 1179 | 4.82 |
| 1180 | 4.73 | 1181 | 4.67 | 1182 | 4.59 | 1183 | 4.51 | 1184 | 4.45 |
| 1185 | 4.37 | 1186 | 4.28 | 1187 | 4.22 | 1188 | 4.14 | 1189 | 4.02 |
| 1190 | 3.95 | 1191 | 3.88 | 1192 | 3.81 | 1193 | 3.74 | 1194 | 3.65 |
| 1195 | 3.61 | 1196 | 3.54 | 1197 | 3.46 | 1198 | 3.40 | 1199 | 3.32 |
| 1200 | 3.24 | 1201 | 3.20 | 1202 | 3.18 | 1203 | 3.15 | 1204 | 3.14 |
| 1205 | 3.13 | 1206 | 3.14 | 1207 | 3.14 | 1208 | 3.10 | 1209 | 3.09 |
| 1210 | 3.08 | 1211 | 3.09 | 1212 | 3.09 | 1213 | 3.08 | 1214 | 3.05 |
| 1215 | 3.03 | 1216 | 3.03 | 1217 | 3.04 | 1218 | 3.04 | 1219 | 3.00 |
| 1220 | 3.00 | 1221 | 2.99 | 1222 | 3.00 | 1223 | 3.00 | 1224 | 2.97 |
| 1225 | 2.90 | 1226 | 2.82 | 1227 | 2.72 | 1228 | 2.64 | 1229 | 2.57 |
| 1230 | 2.46 | 1231 | 2.38 | 1232 | 2.29 | 1233 | 2.21 | 1234 | 2.13 |
| 1235 | 2.03 | 1236 | 1.95 | 1237 | 1.86 | 1238 | 1.83 | 1239 | 1.83 |
| 1240 | 1.84 | 1241 | 1.85 | 1242 | 1.81 | 1243 | 1.81 | 1244 | 1.80 |
| 1245 | 1.81 | 1246 | 1.81 | 1247 | 1.79 | 1248 | 1.78 | 1249 | 1.77 |
| 1250 | 1.79 | 1251 | 1.79 | 1252 | 1.76 | 1253 | 1.75 | 1254 | 1.75 |
| 1255 | 1.76 | 1256 | 1.76 | 1257 | 1.74 | 1258 | 1.73 | 1259 | 1.72 |
| 1260 | 1.74 | 1261 | 1.72 | 1262 | 1.71 | 1263 | 1.71 | 1264 | 1.70 |
| 1265 | 1.72 | 1266 | 1.70 | 1267 | 1.69 | 1268 | 1.69 | 1269 | 1.68 |
| 1270 | 1.70 | 1271 | 1.68 | 1272 | 1.67 | 1273 | 1.67 | 1274 | 1.68 |
| 1275 | 1.68 | 1276 | 1.66 | 1277 | 1.65 | 1278 | 1.65 | 1279 | 1.66 |
| 1280 | 1.67 | 1281 | 1.64 | 1282 | 1.63 | 1283 | 1.63 | 1284 | 1.64 |
| 1285 | 1.65 | 1286 | 1.62 | 1287 | 1.62 | 1288 | 1.61 | 1289 | 1.63 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1290 | 1.63 | 1291 | 1.61 | 1292 | 1.60 | 1293 | 1.60 | 1294 | 1.61 |
| 1295 | 1.62 | 1296 | 1.59 | 1297 | 1.57 | 1298 | 1.52 | 1299 | 1.49 |
| 1300 | 1.46 | 1310 | 1.11 | 1320 | 1.09 | 1330 | 1.08 | 1340 | 1.05 |
| 1350 | 1.03 | 1360 | 1.01 | 1370 | 1.00 | 1380 | 1.00 | 1390 | 0.98 |
| 1400 | 0.96 | 1420 | 0.95 | 1440 | 0.93 | 1460 | 0.91 | 1500 | 0.89 |



VCRat Model Input

Model Lines

```
005     1  001A Header place holder
005     1  002A Header place holder
005     1  003A Header place holder
999
999
006     1  001A 050080000713A97400010000100                    G1
006     1  002A 010      099A97                              1
110
111            1.00000    6.14
110
006     1  003A 010      099A97                              1  2
999
```

DESIGN ASSOCIATES INC

# Attachment B-2

West Tributary

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.64.0.30
Project: Moorpark Depot
Date: 12:00:00 AM
Engineer: Randy Chapman
Consultant: CCE Design Associates
---
Watershed Name: Watershed
---
Sub-Area Name: SubArea
Computing Tc for all rainfall frequencies for sub-area SubArea...
---
**Tc for frequency = 10.00: 20.214 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 20.214 min. = 20 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 1.47
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 10
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 80
SUB AREA OUTPUT
---
Intensity (in/hr): 1.290
C Total: 0.847
Sum Q Segments (cfs): 1.61
**Q Total (cfs): 1.61**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,212.87
Time of Concentration (min): 20.214
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 1.3333
Flow Type: Overland
Length (ft): 40

Top Elevation (ft): 517.1
Bottom Elevation (ft): 517
Contributing Area (acres): 0.04
Percent of Sub-Area (%): 2.7
Overland Type: Valley
Development Type: Commercial
Map Slope: 0.0025
Effective Slope: 0.0025
Q for Flow Path (cfs): 0.04
Avg Velocity (ft/s): 0.50
Passed Scour Check: N/A
DATA FOR FLOW PATH 2
---
Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 17.8912
Flow Type: Channel
Length (ft): 432
Top Elevation (ft): 520
Bottom Elevation (ft): 514.5
Contributing Area (acres): 1.4
Percent of Sub-Area (%): 95.2
Bottom Width (ft): 15
Side Slope (H:V): 12
Manning's N: 0.15
Map Slope: 0.0127
Q for Flow Path (cfs): 1.53
Q Top (cfs): 0.04
Q Bottom (cfs): 1.57
Velocity Top (ft/s): 0.10
Velocity Bottom (ft/s): 0.38
Avg Velocity (ft/s): 0.24
Wave Velocity (ft/s): 0.40
DATA FOR FLOW PATH 3
---
Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 0.9899
Flow Type: Pipe
Length (ft): 101
Top Elevation (ft): 510.5
Bottom Elevation (ft): 509.99
Contributing Area (acres): 0.03
Percent of Sub-Area (%): 2.0
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 12

Used Pipe Diameter (in): 18
Manning's N: 0.015
Map Slope: 0.0050
Q for Flow Path (cfs): 0.03
Q Top (cfs): 1.57
Q Bottom (cfs): 1.61
Avg Velocity (ft/s): 1.35
Wave Velocity (ft/s): 1.70

**Tc for frequency = 25.00: 18.736 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 18.736 min. = 19 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 1.47
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 25
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 80
SUB AREA OUTPUT
---
Intensity (in/hr): 1.635
C Total: 0.868
Sum Q Segments (cfs): 2.08
**Q Total (cfs): 2.08**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,124.15
Time of Concentration (min): 18.736
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 1.3070
Flow Type: Overland
Length (ft): 40
Top Elevation (ft): 517.1
Bottom Elevation (ft): 517
Contributing Area (acres): 0.04
Percent of Sub-Area (%): 2.7
Overland Type: Valley
Development Type: Commercial
Map Slope: 0.0025
Effective Slope: 0.0025
Q for Flow Path (cfs): 0.06
Avg Velocity (ft/s): 0.51
Passed Scour Check: N/A
DATA FOR FLOW PATH 2
---

Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 16.4389
Flow Type: Channel
Length (ft): 432
Top Elevation (ft): 520
Bottom Elevation (ft): 514.5
Contributing Area (acres): 1.4
Percent of Sub-Area (%): 95.2
Bottom Width (ft): 15
Side Slope (H:V): 12
Manning's N: 0.15
Map Slope: 0.0127
Q for Flow Path (cfs): 1.99
Q Top (cfs): 0.06
Q Bottom (cfs): 2.04
Velocity Top (ft/s): 0.11
Velocity Bottom (ft/s): 0.42
Avg Velocity (ft/s): 0.26
Wave Velocity (ft/s): 0.44
DATA FOR FLOW PATH 3
---
Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 0.9899
Flow Type: Pipe
Length (ft): 101
Top Elevation (ft): 510.5
Bottom Elevation (ft): 509.99
Contributing Area (acres): 0.03
Percent of Sub-Area (%): 2.0
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 12
Used Pipe Diameter (in): 18
Manning's N: 0.015
Map Slope: 0.0050
Q for Flow Path (cfs): 0.04
Q Top (cfs): 2.04
Q Bottom (cfs): 2.08
Avg Velocity (ft/s): 1.41
Wave Velocity (ft/s): 1.70

**Tc for frequency = 50.00: 16.554 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 16.554 min. = 17 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 1.47
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 50
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 80
SUB AREA OUTPUT
---
Intensity (in/hr): 1.958
C Total: 0.877
Sum Q Segments (cfs): 2.53
**Q Total (cfs): 2.53**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 993.22
Time of Concentration (min): 16.554
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 0.6667
Flow Type: Overland
Length (ft): 40
Top Elevation (ft): 517.1
Bottom Elevation (ft): 517
Contributing Area (acres): 0.04
Percent of Sub-Area (%): 2.7
Overland Type: Valley
Development Type: Commercial
Map Slope: 0.0025
Effective Slope: 0.0025
Q for Flow Path (cfs): 0.07
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2
---

Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 15.3411
Flow Type: Channel
Length (ft): 432
Top Elevation (ft): 520
Bottom Elevation (ft): 514.5
Contributing Area (acres): 1.4
Percent of Sub-Area (%): 95.2
Bottom Width (ft): 15
Side Slope (H:V): 12
Manning's N: 0.15
Map Slope: 0.0127
Q for Flow Path (cfs): 2.41
Q Top (cfs): 0.07
Q Bottom (cfs): 2.47
Velocity Top (ft/s): 0.12
Velocity Bottom (ft/s): 0.45
Avg Velocity (ft/s): 0.28
Wave Velocity (ft/s): 0.47
DATA FOR FLOW PATH 3
---
Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 0.5460
Flow Type: Pipe
Length (ft): 101
Top Elevation (ft): 510.5
Bottom Elevation (ft): 509.99
Contributing Area (acres): 0.03
Percent of Sub-Area (%): 2.0
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 18
Manning's N: 0.015
Map Slope: 0.0050
Q for Flow Path (cfs): 0.05
Q Top (cfs): 2.47
Q Bottom (cfs): 2.53
Avg Velocity (ft/s): 2.38
Wave Velocity (ft/s): 3.08

**Tc for frequency = 100.00: 15.808 Minutes**
DATA FOR SUB AREA 1
---
SUB AREA TIME OF CONCENTRATION: 15.808 min. = 16 min.
---
SUB AREA INPUT DATA
---
Sub Area Name: SubArea
Total Area (ac): 1.47
Flood Zone: 3
Rainfall Zone: J'
Storm Frequency (years): 100
Development Type: Commercial
Soil Type: 5.00
Percent Impervious: 80
SUB AREA OUTPUT
---
Intensity (in/hr): 2.288
C Total: 0.883
Sum Q Segments (cfs): 2.97
**Q Total (cfs): 2.97**
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 948.49
Time of Concentration (min): 15.808
---
DATA FOR FLOW PATH 1
---
Flow Path Name: Initial
FLOW PATH TRAVEL TIME (min): 0.6667
Flow Type: Overland
Length (ft): 40
Top Elevation (ft): 517.1
Bottom Elevation (ft): 517
Contributing Area (acres): 0.04
Percent of Sub-Area (%): 2.7
Overland Type: Valley
Development Type: Commercial
Map Slope: 0.0025
Effective Slope: 0.0025
Q for Flow Path (cfs): 0.08
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2
---

Flow Path Name: Gutter
FLOW PATH TRAVEL TIME (min): 14.5955
Flow Type: Channel
Length (ft): 432
Top Elevation (ft): 520
Bottom Elevation (ft): 514.5
Contributing Area (acres): 1.4
Percent of Sub-Area (%): 95.2
Bottom Width (ft): 15
Side Slope (H:V): 12
Manning's N: 0.15
Map Slope: 0.0127
Q for Flow Path (cfs): 2.83
Q Top (cfs): 0.08
Q Bottom (cfs): 2.91
Velocity Top (ft/s): 0.13
Velocity Bottom (ft/s): 0.47
Avg Velocity (ft/s): 0.30
Wave Velocity (ft/s): 0.49
DATA FOR FLOW PATH 3
---
Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 0.5460
Flow Type: Pipe
Length (ft): 101
Top Elevation (ft): 510.5
Bottom Elevation (ft): 509.99
Contributing Area (acres): 0.03
Percent of Sub-Area (%): 2.0
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 18
Manning's N: 0.015
Map Slope: 0.0050
Q for Flow Path (cfs): 0.06
Q Top (cfs): 2.91
Q Bottom (cfs): 2.97
Avg Velocity (ft/s): 2.45
Wave Velocity (ft/s): 3.08

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.64)

Modified Rational Model Results Report

Job: 1 Project: High Street Depot _West Tributary Proposed

Project Description

---

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VCRat version: 2.64.0.30
VCRain version: 201601
DOS EXE version: PC 2.64-201605
VCRain Curve Set: VCWPD 2016 Revised Curve Set
Curve A: REV1: South Mountain to Moorpark
Curve B: None
Curve C: None
Curve D: None

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.64)

Job: 1 Project: High Street Depot _West Tributary Proposed

## Model Results

| NODE ID | SOIL TYPE | RAIN ZONE | TC (MIN) | % IMP | AREA (AC) | FLOW (CFS) | AREA (AC) | FLOW (CFS) | TIME (MIN) | CHANNEL TYPE | LENGTH (FT) | SLOPE (FT/FT) | SIZE (FT) | H:V (Z) | N VALUES CHNL | SIDES | VEL (FT/S) | DEPTH (FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | 050 | A100 | 16 | 80 | 15 | 33 | 15 | 33 | 1156 | PIPE | 10 | 0.00100 | 3.50 | ---- | ----- | ----- | -- | -- |
| 2A | --- | --- | -- | -- | --- | --- | 15 | 33 | 1156 | ------- | ---- | ------- | --- | ---- | ----- | ----- | -- | -- |

**********

* INCOMING HYDROGRAPH PEAK (cfs): 33.47 VOLUME (acre-ft): 6.83 *

* NO HYDROGRAPH ADJUSTMENT *

* RUNOFF FACTOR(in): 6.14 *

* FATTENED HYDROGRAPH PEAK (cfs): 33.47 VOLUME (acre-ft): 7.67 *

**********

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2A | --- | --- | -- | -- | --- | --- | 15 | 33 | ---- | ------- | ---- | ------- | --- | ---- | ----- | ----- | -- | -- |
| 3A | --- | --- | -- | -- | --- | --- | 15 | 33 | 1156 | ------- | ---- | ------- | --- | ---- | ----- | ----- | -- | -- |

## Issue/Warning Messages

| TYPE | ERR NO | PROCEDURE | LOCATION | MESSAGE |
|---|---|---|---|---|

NO ISSUES OR WARNINGS DETECTED

HYDROGRAPH FATTENED AT 2A

---

**********

* INCOMING HYDROGRAPH PEAK (cfs): 33.47 VOLUME (acre-ft): 6.83

*

* NO HYDROGRAPH ADJUSTMENT

*

* RUNOFF FACTOR(in): 6.14

*

* FATTENED HYDROGRAPH PEAK (cfs): 33.47 VOLUME (acre-ft): 7.67

*

**********

| TIME (min) | PRE-ADJ (cfs) | PRE-FAT (cfs) | FATTENED (cfs) | TIME (min) | PRE-ADJ (cfs) | PRE-FAT (cfs) | FATTENED (cfs) |
|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.00 | 100 | 1.61 | 1.61 | 1.63 |
| 200 | 1.61 | 1.61 | 1.66 | 300 | 1.61 | 1.61 | 1.66 |
| 400 | 1.61 | 1.61 | 1.68 | 500 | 1.61 | 1.61 | 1.69 |
| 600 | 1.85 | 1.85 | 1.96 | 700 | 2.59 | 2.59 | 2.73 |
| 800 | 2.60 | 2.60 | 2.81 | 900 | 3.43 | 3.43 | 3.77 |
| 1000 | 4.92 | 4.92 | 5.53 | 1050 | 6.33 | 6.33 | 7.23 |
| 1100 | 8.19 | 8.19 | 9.64 | 1110 | 11.43 | 11.43 | 12.86 |
| 1120 | 15.58 | 15.58 | 16.91 | 1130 | 16.71 | 16.71 | 18.16 |
| 1131 | 16.63 | 16.63 | 18.11 | 1132 | 16.57 | 16.57 | 18.07 |
| 1133 | 16.49 | 16.49 | 18.02 | 1134 | 16.42 | 16.42 | 17.98 |
| 1135 | 16.39 | 16.39 | 17.98 | 1136 | 16.28 | 16.28 | 17.91 |
| 1137 | 16.25 | 16.25 | 17.90 | 1138 | 16.17 | 16.17 | 17.86 |
| 1139 | 16.13 | 16.13 | 17.85 | 1140 | 16.05 | 16.05 | 17.81 |
| 1141 | 16.09 | 16.09 | 17.88 | 1142 | 16.17 | 16.17 | 17.97 |
| 1143 | 16.22 | 16.22 | 18.05 | 1144 | 16.30 | 16.30 | 18.15 |
| 1145 | 16.84 | 16.84 | 18.66 | 1146 | 17.43 | 17.43 | 19.22 |
| 1147 | 18.02 | 18.02 | 19.78 | 1148 | 18.69 | 18.69 | 20.39 |
| 1149 | 21.28 | 21.28 | 22.71 | 1150 | 24.18 | 24.18 | 25.29 |
| 1151 | 26.82 | 26.82 | 27.63 | 1152 | 29.73 | 29.73 | 30.19 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1153 | 32.40 | 32.40 | 32.53 | 1154 | 33.37 | 33.37 | 33.39 |
| 1155 | 33.35 | 33.35 | 33.36 | 1156 | 33.47 | 33.47 | 33.47 |
| 1157 | 33.35 | 33.35 | 33.36 | 1158 | 33.23 | 33.23 | 33.26 |
| 1159 | 33.19 | 33.19 | 33.22 | 1160 | 33.13 | 33.13 | 33.18 |
| 1161 | 32.63 | 32.63 | 32.73 | 1162 | 32.04 | 32.04 | 32.21 |
| 1163 | 31.55 | 31.55 | 31.78 | 1164 | 30.94 | 30.94 | 31.23 |
| 1165 | 28.02 | 28.02 | 28.64 | 1166 | 24.60 | 24.60 | 25.60 |
| 1167 | 21.54 | 21.54 | 22.86 | 1168 | 18.12 | 18.12 | 19.79 |
| 1169 | 14.92 | 14.92 | 16.91 | 1170 | 13.53 | 13.53 | 15.63 |
| 1171 | 13.11 | 13.11 | 15.22 | 1172 | 12.44 | 12.44 | 14.59 |
| 1173 | 12.18 | 12.18 | 14.32 | 1174 | 11.57 | 11.57 | 13.73 |
| 1175 | 11.10 | 11.10 | 13.28 | 1176 | 10.45 | 10.45 | 12.66 |
| 1177 | 9.87 | 9.87 | 12.10 | 1178 | 9.13 | 9.13 | 11.40 |
| 1179 | 8.58 | 8.58 | 10.87 | 1180 | 7.98 | 7.98 | 10.29 |
| 1181 | 7.88 | 7.88 | 10.16 | 1182 | 7.75 | 7.75 | 10.01 |
| 1183 | 7.62 | 7.62 | 9.86 | 1184 | 7.53 | 7.53 | 9.75 |
| 1185 | 7.41 | 7.41 | 9.61 | 1186 | 7.28 | 7.28 | 9.46 |
| 1187 | 7.19 | 7.19 | 9.35 | 1188 | 7.07 | 7.07 | 9.20 |
| 1189 | 6.83 | 6.83 | 8.95 | 1190 | 6.64 | 6.64 | 8.75 |
| 1191 | 6.44 | 6.44 | 8.54 | 1192 | 6.22 | 6.22 | 8.30 |
| 1193 | 6.09 | 6.09 | 8.15 | 1194 | 5.96 | 5.96 | 8.01 |
| 1195 | 5.90 | 5.90 | 7.93 | 1196 | 5.79 | 5.79 | 7.80 |
| 1197 | 5.65 | 5.65 | 7.65 | 1198 | 5.57 | 5.57 | 7.54 |
| 1199 | 5.44 | 5.44 | 7.40 | 1200 | 5.32 | 5.32 | 7.26 |



Hydrograph Printouts

| TIME (min) | PRE-ADJ (cfs) | PRE-FAT (cfs) | FATTENED (cfs) | TIME (min) | PRE-ADJ (cfs) | PRE-FAT (cfs) | FATTENED (cfs) |
|---|---|---|---|---|---|---|---|
| 1201 | 5.26 | 5.26 | 7.18 | 1202 | 5.15 | 5.15 | 7.06 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1203 | 5.01 | 5.01 | 6.90 | 1204 | 4.93 | 4.93 | 6.80 |
| 1205 | 4.91 | 4.91 | 6.77 | 1206 | 4.92 | 4.92 | 6.75 |
| 1207 | 4.91 | 4.91 | 6.72 | 1208 | 4.92 | 4.92 | 6.71 |
| 1209 | 4.92 | 4.92 | 6.68 | 1210 | 4.92 | 4.92 | 6.66 |
| 1211 | 4.92 | 4.92 | 6.64 | 1212 | 4.92 | 4.92 | 6.62 |
| 1213 | 4.92 | 4.92 | 6.60 | 1214 | 4.92 | 4.92 | 6.58 |
| 1215 | 4.92 | 4.92 | 6.56 | 1216 | 4.92 | 4.92 | 6.55 |
| 1217 | 4.92 | 4.92 | 6.53 | 1218 | 4.92 | 4.92 | 6.51 |
| 1219 | 4.92 | 4.92 | 6.49 | 1220 | 4.92 | 4.92 | 6.47 |
| 1221 | 4.92 | 4.92 | 6.46 | 1222 | 4.92 | 4.92 | 6.44 |
| 1223 | 4.92 | 4.92 | 6.42 | 1224 | 4.92 | 4.92 | 6.41 |
| 1225 | 4.81 | 4.81 | 6.29 | 1226 | 4.67 | 4.67 | 6.14 |
| 1227 | 4.48 | 4.48 | 5.94 | 1228 | 4.32 | 4.32 | 5.78 |
| 1229 | 4.21 | 4.21 | 5.66 | 1230 | 4.07 | 4.07 | 5.51 |
| 1231 | 3.95 | 3.95 | 5.38 | 1232 | 3.78 | 3.78 | 5.20 |
| 1233 | 3.61 | 3.61 | 5.03 | 1234 | 3.47 | 3.47 | 4.88 |
| 1235 | 3.35 | 3.35 | 4.75 | 1236 | 3.22 | 3.22 | 4.61 |
| 1237 | 3.06 | 3.06 | 4.44 | 1238 | 2.88 | 2.88 | 4.26 |
| 1239 | 2.75 | 2.75 | 4.12 | 1240 | 2.62 | 2.62 | 3.99 |
| 1241 | 2.60 | 2.60 | 3.96 | 1242 | 2.58 | 2.58 | 3.92 |
| 1243 | 2.60 | 2.60 | 3.92 | 1244 | 2.62 | 2.62 | 3.93 |
| 1245 | 2.60 | 2.60 | 3.90 | 1246 | 2.61 | 2.61 | 3.90 |
| 1247 | 2.57 | 2.57 | 3.85 | 1248 | 2.60 | 2.60 | 3.87 |
| 1249 | 2.61 | 2.61 | 3.86 | 1250 | 2.61 | 2.61 | 3.85 |
| 1251 | 2.61 | 2.61 | 3.84 | 1252 | 2.57 | 2.57 | 3.79 |
| 1253 | 2.60 | 2.60 | 3.81 | 1254 | 2.61 | 2.61 | 3.81 |
| 1255 | 2.61 | 2.61 | 3.79 | 1256 | 2.61 | 2.61 | 3.79 |
| 1257 | 2.57 | 2.57 | 3.74 | 1258 | 2.60 | 2.60 | 3.75 |
| 1259 | 2.61 | 2.61 | 3.76 | 1260 | 2.61 | 2.61 | 3.74 |
| 1261 | 2.58 | 2.58 | 3.70 | 1262 | 2.56 | 2.56 | 3.68 |
| 1263 | 2.61 | 2.61 | 3.71 | 1264 | 2.61 | 2.61 | 3.70 |
| 1265 | 2.61 | 2.61 | 3.69 | 1266 | 2.57 | 2.57 | 3.65 |
| 1267 | 2.56 | 2.56 | 3.63 | 1268 | 2.60 | 2.60 | 3.66 |
| 1269 | 2.61 | 2.61 | 3.66 | 1270 | 2.61 | 2.61 | 3.65 |
| 1271 | 2.57 | 2.57 | 3.60 | 1272 | 2.56 | 2.56 | 3.59 |
| 1273 | 2.60 | 2.60 | 3.62 | 1274 | 2.61 | 2.61 | 3.61 |
| 1275 | 2.61 | 2.61 | 3.60 | 1276 | 2.57 | 2.57 | 3.56 |
| 1277 | 2.60 | 2.60 | 3.58 | 1278 | 2.61 | 2.61 | 3.59 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1279 | 2.60 | 2.60 | 3.57 | 1280 | 2.61 | 2.61 | 3.57 |
| 1281 | 2.57 | 2.57 | 3.52 | 1282 | 2.60 | 2.60 | 3.54 |
| 1283 | 2.61 | 2.61 | 3.55 | 1284 | 2.61 | 2.61 | 3.53 |
| 1285 | 2.61 | 2.61 | 3.53 | 1286 | 2.57 | 2.57 | 3.48 |
| 1287 | 2.60 | 2.60 | 3.51 | 1288 | 2.61 | 2.61 | 3.51 |
| 1289 | 2.61 | 2.61 | 3.50 | 1290 | 2.61 | 2.61 | 3.50 |
| 1291 | 2.57 | 2.57 | 3.45 | 1292 | 2.60 | 2.60 | 3.47 |
| 1293 | 2.61 | 2.61 | 3.48 | 1294 | 2.61 | 2.61 | 3.46 |
| 1295 | 2.61 | 2.61 | 3.46 | 1296 | 2.57 | 2.57 | 3.42 |
| 1297 | 2.56 | 2.56 | 3.40 | 1298 | 2.50 | 2.50 | 3.33 |
| 1299 | 2.40 | 2.40 | 3.23 | 1300 | 2.36 | 2.36 | 3.19 |
| 1310 | 1.72 | 1.72 | 2.50 | 1320 | 1.61 | 1.61 | 2.35 |
| 1330 | 1.64 | 1.64 | 2.33 | 1340 | 1.61 | 1.61 | 2.26 |
| 1350 | 1.61 | 1.61 | 2.22 | 1360 | 1.61 | 1.61 | 2.19 |
| 1370 | 1.61 | 1.61 | 2.16 | 1380 | 1.64 | 1.64 | 2.16 |
| 1390 | 1.61 | 1.61 | 2.10 | 1400 | 1.61 | 1.61 | 2.08 |
| 1420 | 1.61 | 1.61 | 2.03 | 1440 | 1.61 | 1.61 | 2.00 |
| 1460 | 1.61 | 1.61 | 1.96 | 1500 | 1.61 | 1.61 | 1.91 |



Hydrograph Printouts

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HYDROGRAPH PRINTOUT AT: 3A

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TOTAL AREA TO HYDROGRAPH: 15 acres
HYDROGRAPH PEAK: 33 cfs
TIME OF PEAK: 1156 minutes
HYDROGRAPH VOLUME: 7.67 acre-ft

| TIME | FLOW | TIME | FLOW | TIME | FLOW | TIME | FLOW | TIME | FLOW |
|---|---|---|---|---|---|---|---|---|---|

| (min) | (cfs) | (min) | (cfs) | (min) | (cfs) | (min) | (cfs) | (min) | (cfs) |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 100 | 1.63 | 200 | 1.66 | 300 | 1.66 | 400 | 1.68 |
| 500 | 1.69 | 600 | 1.96 | 700 | 2.73 | 800 | 2.81 | 900 | 3.77 |
| 1000 | 5.53 | 1050 | 7.23 | 1100 | 9.64 | 1110 | 12.86 | 1120 | 16.91 |
| 1130 | 18.16 | 1131 | 18.11 | 1132 | 18.07 | 1133 | 18.02 | 1134 | 17.98 |
| 1135 | 17.98 | 1136 | 17.91 | 1137 | 17.90 | 1138 | 17.86 | 1139 | 17.85 |
| 1140 | 17.81 | 1141 | 17.88 | 1142 | 17.97 | 1143 | 18.05 | 1144 | 18.15 |
| 1145 | 18.66 | 1146 | 19.22 | 1147 | 19.78 | 1148 | 20.39 | 1149 | 22.71 |
| 1150 | 25.29 | 1151 | 27.63 | 1152 | 30.19 | 1153 | 32.53 | 1154 | 33.39 |
| 1155 | 33.36 | 1156 | 33.47 | 1157 | 33.36 | 1158 | 33.26 | 1159 | 33.22 |
| 1160 | 33.18 | 1161 | 32.73 | 1162 | 32.21 | 1163 | 31.78 | 1164 | 31.23 |
| 1165 | 28.64 | 1166 | 25.60 | 1167 | 22.86 | 1168 | 19.79 | 1169 | 16.91 |
| 1170 | 15.63 | 1171 | 15.22 | 1172 | 14.59 | 1173 | 14.32 | 1174 | 13.73 |
| 1175 | 13.28 | 1176 | 12.66 | 1177 | 12.10 | 1178 | 11.40 | 1179 | 10.87 |
| 1180 | 10.29 | 1181 | 10.16 | 1182 | 10.01 | 1183 | 9.86 | 1184 | 9.75 |
| 1185 | 9.61 | 1186 | 9.46 | 1187 | 9.35 | 1188 | 9.20 | 1189 | 8.95 |
| 1190 | 8.75 | 1191 | 8.54 | 1192 | 8.30 | 1193 | 8.15 | 1194 | 8.01 |
| 1195 | 7.93 | 1196 | 7.80 | 1197 | 7.65 | 1198 | 7.54 | 1199 | 7.40 |
| 1200 | 7.26 | 1201 | 7.18 | 1202 | 7.06 | 1203 | 6.90 | 1204 | 6.80 |
| 1205 | 6.77 | 1206 | 6.75 | 1207 | 6.72 | 1208 | 6.71 | 1209 | 6.68 |
| 1210 | 6.66 | 1211 | 6.64 | 1212 | 6.62 | 1213 | 6.60 | 1214 | 6.58 |
| 1215 | 6.56 | 1216 | 6.55 | 1217 | 6.53 | 1218 | 6.51 | 1219 | 6.49 |
| 1220 | 6.47 | 1221 | 6.46 | 1222 | 6.44 | 1223 | 6.42 | 1224 | 6.41 |
| 1225 | 6.29 | 1226 | 6.14 | 1227 | 5.94 | 1228 | 5.78 | 1229 | 5.66 |
| 1230 | 5.51 | 1231 | 5.38 | 1232 | 5.20 | 1233 | 5.03 | 1234 | 4.88 |
| 1235 | 4.75 | 1236 | 4.61 | 1237 | 4.44 | 1238 | 4.26 | 1239 | 4.12 |
| 1240 | 3.99 | 1241 | 3.96 | 1242 | 3.92 | 1243 | 3.92 | 1244 | 3.93 |
| 1245 | 3.90 | 1246 | 3.90 | 1247 | 3.85 | 1248 | 3.87 | 1249 | 3.86 |
| 1250 | 3.85 | 1251 | 3.84 | 1252 | 3.79 | 1253 | 3.81 | 1254 | 3.81 |
| 1255 | 3.79 | 1256 | 3.79 | 1257 | 3.74 | 1258 | 3.75 | 1259 | 3.76 |
| 1260 | 3.74 | 1261 | 3.70 | 1262 | 3.68 | 1263 | 3.71 | 1264 | 3.70 |
| 1265 | 3.69 | 1266 | 3.65 | 1267 | 3.63 | 1268 | 3.66 | 1269 | 3.66 |
| 1270 | 3.65 | 1271 | 3.60 | 1272 | 3.59 | 1273 | 3.62 | 1274 | 3.61 |
| 1275 | 3.60 | 1276 | 3.56 | 1277 | 3.58 | 1278 | 3.59 | 1279 | 3.57 |
| 1280 | 3.57 | 1281 | 3.52 | 1282 | 3.54 | 1283 | 3.55 | 1284 | 3.53 |
| 1285 | 3.53 | 1286 | 3.48 | 1287 | 3.51 | 1288 | 3.51 | 1289 | 3.50 |
| 1290 | 3.50 | 1291 | 3.45 | 1292 | 3.47 | 1293 | 3.48 | 1294 | 3.46 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1295 | 3.46 | 1296 | 3.42 | 1297 | 3.40 | 1298 | 3.33 | 1299 | 3.23 |
| 1300 | 3.19 | 1310 | 2.50 | 1320 | 2.35 | 1330 | 2.33 | 1340 | 2.26 |
| 1350 | 2.22 | 1360 | 2.19 | 1370 | 2.16 | 1380 | 2.16 | 1390 | 2.10 |
| 1400 | 2.08 | 1420 | 2.03 | 1440 | 2.00 | 1460 | 1.96 | 1500 | 1.91 |



VCRat Model Input

Model Lines

```
005     1  001A Header place holder
005     1  002A Header place holder
005     1  003A Header place holder
999
999
006     1  001A 050080001516A97400010000100                   G1
006     1  002A 010      099A97                            1
110
111            1.00000    6.14
110
006     1  003A 010      099A97                            1  2
999
```

DESIGN ASSOCIATES INC

# Attachment C

Detention Calculations

DESIGN ASSOCIATES INC

# Attachment C-1

East Tributary

| Project Summary | |
|---|---|
| Title | |
| Engineer | |
| Company | |
| Date | 5/28/2019 |

Notes

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## Subsection: User Notifications

| | |
|---|---|
| User Notifications? | No user notifications generated. |

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| CM-1 | Base | 0 | 0.385 | 19.233 | 1.74 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| O-1 | Base | 0 | 0.377 | 19.350 | 1.48 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow ($ft^3/s$) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| PO-1 (IN) | Base | 0 | 0.377 | 19.250 | 1.74 | (N/A) | (N/A) |
| PO-1 (OUT) | Base | 0 | 0.377 | 19.350 | 1.48 | 102.70 | 0.010 |

| | |
|---|---|
| Peak Discharge | 1.74 ft³/s |
| Time to Peak | 19.233 hours |
| Hydrograph Volume | 0.385 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.333 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.417 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.583 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.667 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.833 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.917 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.333 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.417 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.583 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.667 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.833 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.917 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.333 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.417 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.583 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.667 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.833 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.917 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 3.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.333 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.417 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.583 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.667 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.833 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.917 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.333 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.417 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.583 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.667 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.833 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.917 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.333 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.417 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.583 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.667 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.833 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.917 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.333 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.417 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.583 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.667 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.833 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 6.917 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.333 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.417 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.583 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.667 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.833 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.917 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.083 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.167 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.333 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.417 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.500 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.583 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.667 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.750 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.833 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.917 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.000 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.083 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.167 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.250 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.333 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.417 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.500 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.583 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.667 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.750 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.833 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.917 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 10.000 | 0.09 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.083 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.167 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.333 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.417 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |

Subsection: Read Hydrograph
Scenario: Base
Label: CM-1

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 10.583 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.667 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.833 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.917 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.083 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.167 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.333 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.417 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.583 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.667 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.833 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.917 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.083 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.167 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.333 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.417 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.583 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.667 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.833 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.917 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.083 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.167 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.333 | 0.13 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.417 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.500 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.583 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.667 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.833 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.917 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.000 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.083 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.167 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 14.250 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.333 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.417 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.500 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.583 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.667 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.833 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.917 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 15.000 | 0.18 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.083 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.167 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.250 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.333 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.417 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.500 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.583 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.667 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.750 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.833 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.917 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.000 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.083 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.167 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.250 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.333 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.417 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.500 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.583 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.667 | 0.26 | 0.34 | 0.34 | 0.34 | 0.34 |
| 16.750 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 16.833 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 16.917 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.000 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.083 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.167 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.250 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.333 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.417 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.500 | 0.34 | 0.45 | 0.45 | 0.45 | 0.45 |
| 17.583 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 17.667 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 17.750 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 17.833 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 17.917 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.000 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.083 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.167 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.250 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.333 | 0.45 | 0.64 | 0.64 | 0.64 | 0.64 |
| 18.417 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 |
| 18.500 | 0.64 | 0.82 | 0.82 | 0.82 | 0.82 |
| 18.583 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| 18.667 | 0.82 | 0.85 | 0.85 | 0.85 | 0.85 |
| 18.750 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| 18.833 | 0.85 | 0.85 | 0.85 | 0.85 | 0.84 |
| 18.917 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| 19.000 | 0.84 | 0.84 | 0.84 | 0.85 | 0.86 |
| 19.083 | 0.89 | 0.93 | 0.96 | 0.99 | 1.12 |
| 19.167 | 1.27 | 1.41 | 1.56 | 1.70 | 1.74 |
| 19.250 | 1.74 | 1.74 | 1.73 | 1.70 | 1.67 |
| 19.333 | 1.64 | 1.61 | 1.49 | 1.34 | 1.20 |
| 19.417 | 1.03 | 0.86 | 0.79 | 0.76 | 0.73 |
| 19.500 | 0.71 | 0.68 | 0.65 | 0.62 | 0.59 |
| 19.583 | 0.56 | 0.53 | 0.50 | 0.49 | 0.48 |
| 19.667 | 0.47 | 0.47 | 0.46 | 0.45 | 0.45 |
| 19.750 | 0.44 | 0.43 | 0.42 | 0.41 | 0.40 |
| 19.833 | 0.40 | 0.39 | 0.38 | 0.37 | 0.37 |
| 19.917 | 0.36 | 0.35 | 0.35 | 0.34 | 0.33 |
| 20.000 | 0.32 | 0.32 | 0.32 | 0.32 | 0.31 |
| 20.083 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| 20.167 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| 20.250 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |
| 20.333 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |
| 20.417 | 0.29 | 0.28 | 0.27 | 0.26 | 0.26 |
| 20.500 | 0.25 | 0.24 | 0.23 | 0.22 | 0.21 |
| 20.583 | 0.20 | 0.20 | 0.19 | 0.18 | 0.18 |
| 20.667 | 0.18 | 0.19 | 0.18 | 0.18 | 0.18 |
| 20.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 20.833 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 20.917 | 0.18 | 0.18 | 0.17 | 0.17 | 0.17 |
| 21.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 21.083 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 21.167 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 21.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 21.333 | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
| 21.417 | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
| 21.500 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |

Subsection: Read Hydrograph
Scenario: Base
Label: CM-1

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 21.583 | 0.16 | 0.16 | 0.16 | 0.15 | 0.15 |
| 21.667 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| 21.750 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| 21.833 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 21.917 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.000 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.083 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.167 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.250 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.333 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.417 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.500 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 22.583 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 22.667 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 22.750 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 22.833 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 22.917 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.000 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.083 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.167 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.250 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.333 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.417 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.500 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.583 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.667 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.750 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.833 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.917 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 24.000 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.083 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.167 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.250 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.333 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.417 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.500 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.583 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.667 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.750 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.833 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 24.917 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 25.000 | 0.09 | (N/A) | (N/A) | (N/A) | (N/A) |

## Summary for Hydrograph Addition at 'O-1'

| Upstream Link | Upstream Node |
|---|---|
| Outlet-2 | PO-1 |

## Node Inflows

| Inflow Type | Element | Volume (ac-ft) | Time to Peak (hours) | Flow (Peak) ($ft^3/s$) |
|---|---|---|---|---|
| Flow (From) | Outlet-2 | 0.377 | 19.350 | 1.48 |
| Flow (In) | O-1 | 0.377 | 19.350 | 1.48 |

## Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) |
|---|---|---|---|---|---|
| 0.000 | 100.00 | 100.10 | 100.17 | 100.18 | 100.18 |
| 0.250 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 0.500 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 0.750 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 1.000 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 1.250 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 1.500 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 1.750 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 2.000 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 2.250 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 2.500 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 2.750 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 3.000 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 3.250 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 3.500 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 3.750 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 4.000 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 4.250 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 4.500 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 4.750 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 5.000 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 5.250 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 5.500 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 5.750 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 6.000 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 6.250 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 6.500 | 100.18 | 100.18 | 100.18 | 100.18 | 100.18 |
| 6.750 | 100.19 | 100.19 | 100.19 | 100.19 | 100.19 |
| 7.000 | 100.19 | 100.19 | 100.19 | 100.19 | 100.19 |
| 7.250 | 100.19 | 100.19 | 100.19 | 100.19 | 100.19 |
| 7.500 | 100.19 | 100.19 | 100.19 | 100.19 | 100.19 |
| 7.750 | 100.19 | 100.19 | 100.19 | 100.19 | 100.19 |
| 8.000 | 100.19 | 100.19 | 100.19 | 100.19 | 100.19 |
| 8.250 | 100.19 | 100.19 | 100.19 | 100.20 | 100.20 |
| 8.500 | 100.20 | 100.20 | 100.20 | 100.20 | 100.20 |
| 8.750 | 100.20 | 100.20 | 100.20 | 100.20 | 100.20 |
| 9.000 | 100.20 | 100.20 | 100.20 | 100.20 | 100.20 |
| 9.250 | 100.20 | 100.20 | 100.20 | 100.20 | 100.20 |
| 9.500 | 100.20 | 100.20 | 100.20 | 100.20 | 100.20 |
| 9.750 | 100.20 | 100.20 | 100.20 | 100.20 | 100.20 |
| 10.000 | 100.20 | 100.22 | 100.24 | 100.24 | 100.24 |
| 10.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 10.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |

## Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) |
|---|---|---|---|---|---|
| 10.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 11.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 11.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 11.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 11.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 12.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 12.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 12.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 12.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 13.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 13.250 | 100.24 | 100.24 | 100.26 | 100.29 | 100.29 |
| 13.500 | 100.29 | 100.29 | 100.29 | 100.29 | 100.29 |
| 13.750 | 100.29 | 100.29 | 100.29 | 100.29 | 100.29 |
| 14.000 | 100.29 | 100.29 | 100.29 | 100.29 | 100.29 |
| 14.250 | 100.29 | 100.29 | 100.29 | 100.29 | 100.29 |
| 14.500 | 100.29 | 100.29 | 100.29 | 100.29 | 100.29 |
| 14.750 | 100.29 | 100.29 | 100.29 | 100.29 | 100.29 |
| 15.000 | 100.29 | 100.32 | 100.35 | 100.36 | 100.36 |
| 15.250 | 100.36 | 100.36 | 100.36 | 100.36 | 100.36 |
| 15.500 | 100.36 | 100.36 | 100.36 | 100.36 | 100.36 |
| 15.750 | 100.36 | 100.36 | 100.36 | 100.36 | 100.36 |
| 16.000 | 100.36 | 100.36 | 100.36 | 100.36 | 100.36 |
| 16.250 | 100.36 | 100.36 | 100.36 | 100.36 | 100.36 |
| 16.500 | 100.36 | 100.36 | 100.36 | 100.36 | 100.39 |
| 16.750 | 100.41 | 100.42 | 100.42 | 100.42 | 100.42 |
| 17.000 | 100.42 | 100.42 | 100.42 | 100.42 | 100.42 |
| 17.250 | 100.42 | 100.42 | 100.42 | 100.42 | 100.42 |
| 17.500 | 100.42 | 100.45 | 100.49 | 100.49 | 100.49 |
| 17.750 | 100.49 | 100.49 | 100.49 | 100.49 | 100.49 |
| 18.000 | 100.49 | 100.49 | 100.49 | 100.49 | 100.49 |
| 18.250 | 100.49 | 100.49 | 100.56 | 100.65 | 100.68 |
| 18.500 | 100.70 | 100.77 | 100.88 | 100.93 | 100.97 |
| 18.750 | 101.01 | 101.04 | 101.05 | 101.05 | 101.05 |
| 19.000 | 101.04 | 101.04 | 101.08 | 101.20 | 101.53 |
| 19.250 | 101.99 | 102.41 | 102.70 | 102.62 | 102.17 |
| 19.500 | 101.71 | 101.34 | 101.02 | 100.77 | 100.60 |
| 19.750 | 100.51 | 100.47 | 100.45 | 100.44 | 100.43 |
| 20.000 | 100.41 | 100.40 | 100.40 | 100.40 | 100.40 |
| 20.250 | 100.39 | 100.39 | 100.39 | 100.39 | 100.38 |
| 20.500 | 100.36 | 100.34 | 100.32 | 100.30 | 100.29 |
| 20.750 | 100.29 | 100.29 | 100.29 | 100.29 | 100.29 |
| 21.000 | 100.29 | 100.28 | 100.28 | 100.28 | 100.28 |
| 21.250 | 100.28 | 100.28 | 100.28 | 100.28 | 100.27 |

## Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) |
|---|---|---|---|---|---|
| 21.500 | 100.27 | 100.27 | 100.27 | 100.27 | 100.26 |
| 21.750 | 100.26 | 100.26 | 100.24 | 100.22 | 100.22 |
| 22.000 | 100.22 | 100.22 | 100.22 | 100.22 | 100.22 |
| 22.250 | 100.22 | 100.22 | 100.22 | 100.22 | 100.22 |
| 22.500 | 100.22 | 100.21 | 100.21 | 100.21 | 100.21 |
| 22.750 | 100.21 | 100.21 | 100.21 | 100.21 | 100.21 |
| 23.000 | 100.21 | 100.21 | 100.21 | 100.21 | 100.21 |
| 23.250 | 100.21 | 100.21 | 100.21 | 100.21 | 100.21 |
| 23.500 | 100.21 | 100.21 | 100.21 | 100.21 | 100.21 |
| 23.750 | 100.21 | 100.21 | 100.21 | 100.21 | 100.21 |
| 24.000 | 100.21 | (N/A) | (N/A) | (N/A) | (N/A) |

## Time vs. Volume (ac-ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) |
|---|---|---|---|---|---|
| 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

## Time vs. Volume (ac-ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) |
|---|---|---|---|---|---|
| 10.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 11.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 11.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 11.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 11.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 12.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 12.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 12.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 12.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 13.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 13.250 | 0.000 | 0.000 | 0.000 | 0.001 | 0.001 |
| 13.500 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 13.750 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 14.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 14.250 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 14.500 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 14.750 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 15.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 15.250 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 15.500 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 15.750 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 16.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 16.250 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 16.500 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 16.750 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 17.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 17.250 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 17.500 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 17.750 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 18.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 18.250 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |
| 18.500 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 |
| 18.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 19.000 | 0.003 | 0.003 | 0.003 | 0.004 | 0.005 |
| 19.250 | 0.007 | 0.009 | 0.010 | 0.010 | 0.008 |
| 19.500 | 0.006 | 0.005 | 0.003 | 0.002 | 0.002 |
| 19.750 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 20.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 20.250 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 20.500 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 20.750 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 21.000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 21.250 | 0.001 | 0.001 | 0.000 | 0.000 | 0.000 |

## Time vs. Volume (ac-ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) |
|---|---|---|---|---|---|
| 21.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 21.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 22.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 22.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 22.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 22.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 23.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 23.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 23.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 23.750 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 24.000 | 0.000 | (N/A) | (N/A) | (N/A) | (N/A) |

Subsection: Pipe Volume
Label: PO-1

Scenario: Base

| Volume Results (Pipe) | |
|---|---|
| Pipe Storage Upstream Invert | 100.00 ft |
| Pipe Storage Downstream Invert | 100.00 ft |
| Pipe Storage Length | 65.00 ft |
| Pipe Storage Diameter | 36.0 in |
| Pipe Storage Number of Barrels | 1 |
| Pipe Storage Slice Width | 10.00 ft |
| Pipe Storage Vertical Increment | 0.10 ft |

| Elevation (ft) | Perpendicular Downstream Depth (ft) | Perpendicular Downstream Area (ft²) | Wetted Length (ft) | Filled Length (ft) | Perpendicular Upstream Depth (ft) | Perpendicular Upstream Area (ft²) | Total Volume (ac-ft) |
|---|---|---|---|---|---|---|---|
| 100.00 | 0.00 | 0.0 | 65.00 | 0.00 | 0.00 | 0.0 | 0.000 |
| 100.10 | 0.10 | 0.1 | 65.00 | 0.00 | 0.10 | 0.1 | 0.000 |
| 100.20 | 0.20 | 0.2 | 65.00 | 0.00 | 0.20 | 0.2 | 0.000 |
| 100.30 | 0.30 | 0.4 | 65.00 | 0.00 | 0.30 | 0.4 | 0.001 |
| 100.40 | 0.40 | 0.6 | 65.00 | 0.00 | 0.40 | 0.6 | 0.001 |
| 100.50 | 0.50 | 0.8 | 65.00 | 0.00 | 0.50 | 0.8 | 0.001 |
| 100.60 | 0.60 | 1.0 | 65.00 | 0.00 | 0.60 | 1.0 | 0.001 |
| 100.70 | 0.70 | 1.3 | 65.00 | 0.00 | 0.70 | 1.3 | 0.002 |
| 100.80 | 0.80 | 1.5 | 65.00 | 0.00 | 0.80 | 1.5 | 0.002 |
| 100.90 | 0.90 | 1.8 | 65.00 | 0.00 | 0.90 | 1.8 | 0.003 |
| 101.00 | 1.00 | 2.1 | 65.00 | 0.00 | 1.00 | 2.1 | 0.003 |
| 101.10 | 1.10 | 2.3 | 65.00 | 0.00 | 1.10 | 2.3 | 0.004 |
| 101.20 | 1.20 | 2.6 | 65.00 | 0.00 | 1.20 | 2.6 | 0.004 |
| 101.30 | 1.30 | 2.9 | 65.00 | 0.00 | 1.30 | 2.9 | 0.004 |
| 101.40 | 1.40 | 3.2 | 65.00 | 0.00 | 1.40 | 3.2 | 0.005 |
| 101.50 | 1.50 | 3.5 | 65.00 | 0.00 | 1.50 | 3.5 | 0.005 |
| 101.60 | 1.60 | 3.8 | 65.00 | 0.00 | 1.60 | 3.8 | 0.006 |
| 101.70 | 1.70 | 4.1 | 65.00 | 0.00 | 1.70 | 4.1 | 0.006 |
| 101.80 | 1.80 | 4.4 | 65.00 | 0.00 | 1.80 | 4.4 | 0.007 |
| 101.90 | 1.90 | 4.7 | 65.00 | 0.00 | 1.90 | 4.7 | 0.007 |
| 102.00 | 2.00 | 5.0 | 65.00 | 0.00 | 2.00 | 5.0 | 0.007 |
| 102.10 | 2.10 | 5.3 | 65.00 | 0.00 | 2.10 | 5.3 | 0.008 |
| 102.20 | 2.20 | 5.6 | 65.00 | 0.00 | 2.20 | 5.6 | 0.008 |
| 102.30 | 2.30 | 5.8 | 65.00 | 0.00 | 2.30 | 5.8 | 0.009 |
| 102.40 | 2.40 | 6.1 | 65.00 | 0.00 | 2.40 | 6.1 | 0.009 |
| 102.50 | 2.50 | 6.3 | 65.00 | 0.00 | 2.50 | 6.3 | 0.009 |
| 102.60 | 2.60 | 6.5 | 65.00 | 0.00 | 2.60 | 6.5 | 0.010 |
| 102.70 | 2.70 | 6.7 | 65.00 | 0.00 | 2.70 | 6.7 | 0.010 |
| 102.80 | 2.80 | 6.9 | 65.00 | 0.00 | 2.80 | 6.9 | 0.010 |
| 102.90 | 2.90 | 7.0 | 65.00 | 0.00 | 2.90 | 7.0 | 0.010 |
| 103.00 | 3.00 | 7.1 | 65.00 | 65.00 | 3.00 | 7.1 | 0.011 |

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 100.00 ft |
| Increment (Headwater) | 0.10 ft |
| Maximum (Headwater) | 103.00 ft |

## Outlet Connectivity

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Orifice-Circular | Orifice - 1 | Forward | TW | 100.00 | 103.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |

| Structure ID: Orifice - 1<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 100.00 ft |
| Orifice Diameter | 6.0 in |
| Orifice Coefficient | 0.600 |

| Structure ID: TW<br>Structure Type: TW Setup, DS Channel | |
|---|---|
| Tailwater Type | Free Outfall |

| Convergence Tolerances | |
|---|---|
| Maximum Iterations | 30 |
| Tailwater Tolerance (Minimum) | 0.01 ft |
| Tailwater Tolerance (Maximum) | 0.50 ft |
| Headwater Tolerance (Minimum) | 0.01 ft |
| Headwater Tolerance (Maximum) | 0.50 ft |
| Flow Tolerance (Minimum) | 0.001 ft³/s |
| Flow Tolerance (Maximum) | 10.000 ft³/s |

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Orifice - 1 (Orifice-Circular)
---
Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 100.00 | 0.00 | (N/A) | 0.00 |
| 100.10 | 0.02 | (N/A) | 0.00 |
| 100.20 | 0.09 | (N/A) | 0.00 |
| 100.30 | 0.19 | (N/A) | 0.00 |
| 100.40 | 0.31 | (N/A) | 0.00 |
| 100.50 | 0.47 | (N/A) | 0.00 |
| 100.60 | 0.56 | (N/A) | 0.00 |
| 100.70 | 0.63 | (N/A) | 0.00 |
| 100.80 | 0.70 | (N/A) | 0.00 |
| 100.90 | 0.76 | (N/A) | 0.00 |
| 101.00 | 0.82 | (N/A) | 0.00 |
| 101.10 | 0.87 | (N/A) | 0.00 |
| 101.20 | 0.92 | (N/A) | 0.00 |
| 101.30 | 0.97 | (N/A) | 0.00 |
| 101.40 | 1.01 | (N/A) | 0.00 |
| 101.50 | 1.06 | (N/A) | 0.00 |
| 101.60 | 1.10 | (N/A) | 0.00 |
| 101.70 | 1.14 | (N/A) | 0.00 |
| 101.80 | 1.18 | (N/A) | 0.00 |
| 101.90 | 1.21 | (N/A) | 0.00 |
| 102.00 | 1.25 | (N/A) | 0.00 |
| 102.10 | 1.29 | (N/A) | 0.00 |
| 102.20 | 1.32 | (N/A) | 0.00 |
| 102.30 | 1.35 | (N/A) | 0.00 |
| 102.40 | 1.39 | (N/A) | 0.00 |
| 102.50 | 1.42 | (N/A) | 0.00 |
| 102.60 | 1.45 | (N/A) | 0.00 |
| 102.70 | 1.48 | (N/A) | 0.00 |
| 102.80 | 1.51 | (N/A) | 0.00 |
| 102.90 | 1.54 | (N/A) | 0.00 |
| 103.00 | 1.57 | (N/A) | 0.00 |

Computation Messages

Upstream HW &
DNstream TW < Inv.El
CRIT.DEPTH CONTROL
Vh= .025ft Dcr= .074ft
CRIT.DEPTH Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Orifice - 1 (Orifice-Circular)
---
Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

| Computation Messages |
| --- |
| CRIT.DEPTH CONTROL |
| Vh= .053ft Dcr= .146ft |
| CRIT.DEPTH Hev= .00ft |
| CRIT.DEPTH CONTROL |
| Vh= .083ft Dcr= .217ft |
| CRIT.DEPTH Hev= .00ft |
| CRIT.DEPTH CONTROL |
| Vh= .116ft Dcr= .283ft |
| CRIT.DEPTH Hev= .00ft |
| H =.25 |
| H =.35 |
| H =.45 |
| H =.55 |
| H =.65 |
| H =.75 |
| H =.85 |
| H =.95 |
| H =1.05 |
| H =1.15 |
| H =1.25 |
| H =1.35 |
| H =1.45 |
| H =1.55 |
| H =1.65 |
| H =1.75 |
| H =1.85 |
| H =1.95 |
| H =2.05 |
| H =2.15 |
| H =2.25 |
| H =2.35 |
| H =2.45 |
| H =2.55 |
| H =2.65 |
| H =2.75 |

Subsection: Composite Rating Curve
Label: Composite Outlet Structure - 1

Scenario: Base

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 100.00 | 0.00 | (N/A) | 0.00 |
| 100.10 | 0.02 | (N/A) | 0.00 |
| 100.20 | 0.09 | (N/A) | 0.00 |
| 100.30 | 0.19 | (N/A) | 0.00 |
| 100.40 | 0.31 | (N/A) | 0.00 |
| 100.50 | 0.47 | (N/A) | 0.00 |
| 100.60 | 0.56 | (N/A) | 0.00 |
| 100.70 | 0.63 | (N/A) | 0.00 |
| 100.80 | 0.70 | (N/A) | 0.00 |
| 100.90 | 0.76 | (N/A) | 0.00 |
| 101.00 | 0.82 | (N/A) | 0.00 |
| 101.10 | 0.87 | (N/A) | 0.00 |
| 101.20 | 0.92 | (N/A) | 0.00 |
| 101.30 | 0.97 | (N/A) | 0.00 |
| 101.40 | 1.01 | (N/A) | 0.00 |
| 101.50 | 1.06 | (N/A) | 0.00 |
| 101.60 | 1.10 | (N/A) | 0.00 |
| 101.70 | 1.14 | (N/A) | 0.00 |
| 101.80 | 1.18 | (N/A) | 0.00 |
| 101.90 | 1.21 | (N/A) | 0.00 |
| 102.00 | 1.25 | (N/A) | 0.00 |
| 102.10 | 1.29 | (N/A) | 0.00 |
| 102.20 | 1.32 | (N/A) | 0.00 |
| 102.30 | 1.35 | (N/A) | 0.00 |
| 102.40 | 1.39 | (N/A) | 0.00 |
| 102.50 | 1.42 | (N/A) | 0.00 |
| 102.60 | 1.45 | (N/A) | 0.00 |
| 102.70 | 1.48 | (N/A) | 0.00 |
| 102.80 | 1.51 | (N/A) | 0.00 |
| 102.90 | 1.54 | (N/A) | 0.00 |
| 103.00 | 1.57 | (N/A) | 0.00 |

| Contributing Structures |
|---|
| None Contributing |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |

Subsection: Composite Rating Curve
Label: Composite Outlet Structure - 1

Scenario: Base

Composite Outflow Summary

| Contributing Structures |
|---|
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
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| Orifice - 1 |
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| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |

| | |
|---|---|
| Peak Discharge | 1.48 ft³/s |
| Time to Peak | 19.350 hours |
| Hydrograph Volume | 0.377 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 0.02 | 0.07 | 0.07 | 0.08 |
| 0.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.250 | 0.08 | 0.08 | 0.08 | 0.09 | 0.09 |
| 8.500 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.750 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.000 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.250 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.500 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |

Subsection: Diverted Hydrograph
Scenario: Base
Label: Outlet-2

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 9.750 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 10.000 | 0.09 | 0.11 | 0.13 | 0.13 | 0.13 |
| 10.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.250 | 0.13 | 0.13 | 0.15 | 0.17 | 0.18 |
| 13.500 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.000 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.250 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.500 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 15.000 | 0.18 | 0.21 | 0.26 | 0.26 | 0.26 |
| 15.250 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.500 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.750 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.000 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.250 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.500 | 0.26 | 0.26 | 0.26 | 0.26 | 0.30 |
| 16.750 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.000 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.250 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.500 | 0.34 | 0.40 | 0.45 | 0.45 | 0.45 |
| 17.750 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.000 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.250 | 0.45 | 0.45 | 0.52 | 0.60 | 0.62 |
| 18.500 | 0.63 | 0.68 | 0.75 | 0.78 | 0.80 |
| 18.750 | 0.83 | 0.84 | 0.84 | 0.85 | 0.84 |
| 19.000 | 0.84 | 0.84 | 0.86 | 0.92 | 1.07 |
| 19.250 | 1.25 | 1.39 | 1.48 | 1.45 | 1.31 |
| 19.500 | 1.14 | 0.99 | 0.83 | 0.68 | 0.56 |
| 19.750 | 0.48 | 0.43 | 0.40 | 0.38 | 0.36 |
| 20.000 | 0.33 | 0.32 | 0.31 | 0.31 | 0.31 |
| 20.250 | 0.31 | 0.30 | 0.30 | 0.30 | 0.29 |
| 20.500 | 0.26 | 0.23 | 0.21 | 0.19 | 0.18 |

Subsection: Diverted Hydrograph
Scenario: Base
Label: Outlet-2

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 20.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.17 |
| 21.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 21.250 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 |
| 21.500 | 0.16 | 0.16 | 0.16 | 0.15 | 0.15 |
| 21.750 | 0.15 | 0.15 | 0.13 | 0.11 | 0.11 |
| 22.000 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.250 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.500 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 22.750 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.000 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.250 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.500 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.750 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 24.000 | 0.09 | (N/A) | (N/A) | (N/A) | (N/A) |

Subsection: Elevation-Volume-Flow Table (Pond) Scenario: Base
Label: PO-1

| Infiltration | |
|---|---|
| Infiltration Method (Computed) | No Infiltration |

| Initial Conditions | |
|---|---|
| Elevation (Water Surface, Initial) | 100.00 ft |
| Volume (Initial) | 0.000 ac-ft |
| Flow (Initial Outlet) | 0.00 ft³/s |
| Flow (Initial Infiltration) | 0.00 ft³/s |
| Flow (Initial, Total) | 0.00 ft³/s |
| Time Increment | 0.050 hours |

| Elevation (ft) | Outflow (ft³/s) | Storage (ac-ft) | Area (acres) | Infiltration (ft³/s) | Flow (Total) (ft³/s) | 2S/t + O (ft³/s) |
|---|---|---|---|---|---|---|
| 100.00 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 |
| 100.10 | 0.02 | 0.000 | 0.000 | 0.00 | 0.02 | 0.08 |
| 100.20 | 0.09 | 0.000 | 0.000 | 0.00 | 0.09 | 0.23 |
| 100.30 | 0.19 | 0.001 | 0.000 | 0.00 | 0.19 | 0.45 |
| 100.40 | 0.31 | 0.001 | 0.000 | 0.00 | 0.31 | 0.72 |
| 100.50 | 0.47 | 0.001 | 0.000 | 0.00 | 0.47 | 1.03 |
| 100.60 | 0.56 | 0.002 | 0.000 | 0.00 | 0.56 | 1.29 |
| 100.70 | 0.63 | 0.002 | 0.000 | 0.00 | 0.63 | 1.54 |
| 100.80 | 0.70 | 0.002 | 0.000 | 0.00 | 0.70 | 1.79 |
| 100.90 | 0.76 | 0.003 | 0.000 | 0.00 | 0.76 | 2.05 |
| 101.00 | 0.82 | 0.003 | 0.000 | 0.00 | 0.82 | 2.31 |
| 101.10 | 0.87 | 0.004 | 0.000 | 0.00 | 0.87 | 2.57 |
| 101.20 | 0.92 | 0.004 | 0.000 | 0.00 | 0.92 | 2.83 |
| 101.30 | 0.97 | 0.004 | 0.000 | 0.00 | 0.97 | 3.09 |
| 101.40 | 1.01 | 0.005 | 0.000 | 0.00 | 1.01 | 3.35 |
| 101.50 | 1.06 | 0.005 | 0.000 | 0.00 | 1.06 | 3.61 |
| 101.60 | 1.10 | 0.006 | 0.000 | 0.00 | 1.10 | 3.87 |
| 101.70 | 1.14 | 0.006 | 0.000 | 0.00 | 1.14 | 4.12 |
| 101.80 | 1.18 | 0.007 | 0.000 | 0.00 | 1.18 | 4.37 |
| 101.90 | 1.21 | 0.007 | 0.000 | 0.00 | 1.21 | 4.62 |
| 102.00 | 1.25 | 0.007 | 0.000 | 0.00 | 1.25 | 4.87 |
| 102.10 | 1.29 | 0.008 | 0.000 | 0.00 | 1.29 | 5.10 |
| 102.20 | 1.32 | 0.008 | 0.000 | 0.00 | 1.32 | 5.33 |
| 102.30 | 1.35 | 0.009 | 0.000 | 0.00 | 1.35 | 5.55 |
| 102.40 | 1.39 | 0.009 | 0.000 | 0.00 | 1.39 | 5.76 |
| 102.50 | 1.42 | 0.009 | 0.000 | 0.00 | 1.42 | 5.96 |
| 102.60 | 1.45 | 0.010 | 0.000 | 0.00 | 1.45 | 6.15 |
| 102.70 | 1.48 | 0.010 | 0.000 | 0.00 | 1.48 | 6.32 |
| 102.80 | 1.51 | 0.010 | 0.000 | 0.00 | 1.51 | 6.47 |
| 102.90 | 1.54 | 0.010 | 0.000 | 0.00 | 1.54 | 6.59 |
| 103.00 | 1.57 | 0.011 | 0.000 | 0.00 | 1.57 | 6.67 |

Subsection: Level Pool Pond Routing Summary
Label: PO-1 (IN)

Scenario: Base

| Infiltration | |
|---|---|
| Infiltration Method (Computed) | No Infiltration |

| Initial Conditions | |
|---|---|
| Elevation (Water Surface, Initial) | 100.00 ft |
| Volume (Initial) | 0.000 ac-ft |
| Flow (Initial Outlet) | 0.00 ft³/s |
| Flow (Initial Infiltration) | 0.00 ft³/s |
| Flow (Initial, Total) | 0.00 ft³/s |
| Time Increment | 0.050 hours |

| Inflow/Outflow Hydrograph Summary | | | |
|---|---|---|---|
| Flow (Peak In) | 1.74 ft³/s | Time to Peak (Flow, In) | 19.250 hours |
| Flow (Peak Outlet) | 1.48 ft³/s | Time to Peak (Flow, Outlet) | 19.350 hours |

| | |
|---|---|
| Elevation (Water Surface, Peak) | 102.70 ft |
| Volume (Peak) | 0.010 ac-ft |

| Mass Balance (ac-ft) | |
|---|---|
| Volume (Initial) | 0.000 ac-ft |
| Volume (Total Inflow) | 0.377 ac-ft |
| Volume (Total Infiltration) | 0.000 ac-ft |
| Volume (Total Outlet Outflow) | 0.377 ac-ft |
| Volume (Retained) | 0.000 ac-ft |
| Volume (Unrouted) | 0.000 ac-ft |
| Error (Mass Balance) | 0.1 % |

| | |
|---|---|
| Peak Discharge | 1.48 ft³/s |
| Time to Peak | 19.350 hours |
| Hydrograph Volume | 0.377 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 0.02 | 0.07 | 0.07 | 0.08 |
| 0.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 0.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 1.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 3.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 4.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 5.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 6.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.250 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.500 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 7.750 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.000 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 8.250 | 0.08 | 0.08 | 0.08 | 0.09 | 0.09 |
| 8.500 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 8.750 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.000 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.250 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 9.500 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |

Subsection: Pond Routed Hydrograph (total out) Scenario: Base
Label: PO-1 (OUT)

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 9.750 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 10.000 | 0.09 | 0.11 | 0.13 | 0.13 | 0.13 |
| 10.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 10.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 11.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.250 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.500 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12.750 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.000 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 13.250 | 0.13 | 0.13 | 0.15 | 0.17 | 0.18 |
| 13.500 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 13.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.000 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.250 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.500 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 14.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| 15.000 | 0.18 | 0.21 | 0.26 | 0.26 | 0.26 |
| 15.250 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.500 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 15.750 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.000 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.250 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| 16.500 | 0.26 | 0.26 | 0.26 | 0.26 | 0.30 |
| 16.750 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.000 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.250 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| 17.500 | 0.34 | 0.40 | 0.45 | 0.45 | 0.45 |
| 17.750 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.000 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 18.250 | 0.45 | 0.45 | 0.52 | 0.60 | 0.62 |
| 18.500 | 0.63 | 0.68 | 0.75 | 0.78 | 0.80 |
| 18.750 | 0.83 | 0.84 | 0.84 | 0.85 | 0.84 |
| 19.000 | 0.84 | 0.84 | 0.86 | 0.92 | 1.07 |
| 19.250 | 1.25 | 1.39 | 1.48 | 1.45 | 1.31 |
| 19.500 | 1.14 | 0.99 | 0.83 | 0.68 | 0.56 |
| 19.750 | 0.48 | 0.43 | 0.40 | 0.38 | 0.36 |
| 20.000 | 0.33 | 0.32 | 0.31 | 0.31 | 0.31 |
| 20.250 | 0.31 | 0.30 | 0.30 | 0.30 | 0.29 |
| 20.500 | 0.26 | 0.23 | 0.21 | 0.19 | 0.18 |

Subsection: Pond Routed Hydrograph (total out) Scenario: Base
Label: PO-1 (OUT)

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 20.750 | 0.18 | 0.18 | 0.18 | 0.18 | 0.17 |
| 21.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 21.250 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 |
| 21.500 | 0.16 | 0.16 | 0.16 | 0.15 | 0.15 |
| 21.750 | 0.15 | 0.15 | 0.13 | 0.11 | 0.11 |
| 22.000 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.250 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 22.500 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 22.750 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.000 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.250 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.500 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 23.750 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| 24.000 | 0.09 | (N/A) | (N/A) | (N/A) | (N/A) |

## Summary for Hydrograph Addition at 'PO-1'

| Upstream Link | Upstream Node |
|---|---|
| <Catchment to Outflow Node> | CM-1 |

## Node Inflows

| Inflow Type | Element | Volume (ac-ft) | Time to Peak (hours) | Flow (Peak) ($ft^3/s$) |
|---|---|---|---|---|
| Flow (From) | CM-1 | 0.385 | 19.233 | 1.74 |
| Flow (In) | PO-1 | 0.377 | 19.250 | 1.74 |

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DESIGN ASSOCIATES INC

# Attachment C-2

West Tributary

| Project Summary | |
|---|---|
| Title | |
| Engineer | |
| Company | |
| Date | 5/28/2019 |

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## Subsection: User Notifications

| | |
|---|---|
| User Notifications? | No user notifications generated. |

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| CM-1 | Base | 0 | 0.825 | 19.267 | 3.35 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow ($ft^3/s$) |
|---|---|---|---|---|---|
| O-1 | Base | 0 | 0.805 | 19.450 | 2.61 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow ($ft^3/s$) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| PO-1 (IN) | Base | 0 | 0.808 | 19.250 | 3.34 | (N/A) | (N/A) |
| PO-1 (OUT) | Base | 0 | 0.805 | 19.450 | 2.61 | 101.88 | 0.041 |

| | |
|---|---|
| Peak Discharge | 3.35 ft³/s |
| Time to Peak | 19.267 hours |
| Hydrograph Volume | 0.825 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.083 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.167 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.250 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.333 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.417 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.500 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.583 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.667 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.750 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.833 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.917 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.000 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.083 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.167 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.250 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.333 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.417 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.500 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.583 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.667 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 |
| 1.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 1.833 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 1.917 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.083 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.167 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.333 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.417 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.583 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.667 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.833 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.917 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.083 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.167 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |

Subsection: Read Hydrograph
Scenario: Base
Label: CM-1

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 3.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.333 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.417 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.583 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.667 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.833 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.917 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.083 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.167 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.333 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.417 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.583 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.667 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.833 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.917 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.083 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.167 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.333 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.417 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.583 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.667 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.833 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.917 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.083 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.167 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.333 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.417 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.583 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.667 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.833 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |

Subsection: Read Hydrograph
Scenario: Base
Label: CM-1

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 6.917 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.083 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.167 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.333 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.417 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.583 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.667 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.833 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.917 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.083 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.167 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.333 | 0.17 | 0.20 | 0.20 | 0.20 | 0.20 |
| 8.417 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 8.500 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 8.583 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 8.667 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 8.750 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 8.833 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 8.917 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.000 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.083 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.167 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.250 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.333 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.417 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.500 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.583 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.667 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.750 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.833 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.917 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 10.000 | 0.20 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.083 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.167 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.250 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.333 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.417 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.500 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |

Subsection: Read Hydrograph
Label: CM-1

Scenario: Base

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 10.583 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.667 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.750 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.833 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.917 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.000 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.083 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.167 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.250 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.333 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.417 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.500 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.583 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.667 | 0.27 | 0.28 | 0.28 | 0.28 | 0.28 |
| 11.750 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 11.833 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 11.917 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.000 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.083 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.167 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.250 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.333 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.417 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.500 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.583 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.667 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.750 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.833 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.917 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.000 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.083 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.167 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.250 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.333 | 0.28 | 0.38 | 0.38 | 0.38 | 0.38 |
| 13.417 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 13.500 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 13.583 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 13.667 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 13.750 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 13.833 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 13.917 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.000 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.083 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.167 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |

Subsection: Read Hydrograph
Label: CM-1

Scenario: Base

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 14.250 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.333 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.417 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.500 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.583 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.667 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.750 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.833 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.917 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 15.000 | 0.38 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.083 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.167 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.250 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.333 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.417 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.500 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.583 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.667 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.750 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.833 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.917 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.000 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.083 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.167 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.250 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.333 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.417 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.500 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.583 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.667 | 0.55 | 0.72 | 0.72 | 0.72 | 0.72 |
| 16.750 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 16.833 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 16.917 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.000 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.083 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.167 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.250 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.333 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.417 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.500 | 0.72 | 0.96 | 0.96 | 0.96 | 0.96 |
| 17.583 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 17.667 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 17.750 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 17.833 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |

Subsection: Read Hydrograph
Label: CM-1

Scenario: Base

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 17.917 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 18.000 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 18.083 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 18.167 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 18.250 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 18.333 | 0.96 | 1.29 | 1.29 | 1.29 | 1.29 |
| 18.417 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 |
| 18.500 | 1.29 | 1.69 | 1.69 | 1.69 | 1.69 |
| 18.583 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 |
| 18.667 | 1.69 | 1.82 | 1.82 | 1.82 | 1.82 |
| 18.750 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 |
| 18.833 | 1.82 | 1.81 | 1.81 | 1.80 | 1.80 |
| 18.917 | 1.80 | 1.79 | 1.79 | 1.79 | 1.79 |
| 19.000 | 1.78 | 1.79 | 1.80 | 1.81 | 1.82 |
| 19.083 | 1.87 | 1.92 | 1.98 | 2.04 | 2.27 |
| 19.167 | 2.53 | 2.76 | 3.02 | 3.25 | 3.34 |
| 19.250 | 3.34 | 3.35 | 3.34 | 3.33 | 3.32 |
| 19.333 | 3.32 | 3.27 | 3.22 | 3.18 | 3.12 |
| 19.417 | 2.86 | 2.56 | 2.29 | 1.98 | 1.69 |
| 19.500 | 1.56 | 1.52 | 1.46 | 1.43 | 1.37 |
| 19.583 | 1.33 | 1.27 | 1.21 | 1.14 | 1.09 |
| 19.667 | 1.03 | 1.02 | 1.00 | 0.99 | 0.98 |
| 19.750 | 0.96 | 0.95 | 0.94 | 0.92 | 0.90 |
| 19.833 | 0.88 | 0.85 | 0.83 | 0.82 | 0.80 |
| 19.917 | 0.79 | 0.78 | 0.77 | 0.75 | 0.74 |
| 20.000 | 0.73 | 0.72 | 0.71 | 0.69 | 0.68 |
| 20.083 | 0.68 | 0.68 | 0.67 | 0.67 | 0.67 |
| 20.167 | 0.67 | 0.66 | 0.66 | 0.66 | 0.66 |
| 20.250 | 0.66 | 0.66 | 0.65 | 0.65 | 0.65 |
| 20.333 | 0.65 | 0.65 | 0.64 | 0.64 | 0.64 |
| 20.417 | 0.63 | 0.61 | 0.59 | 0.58 | 0.57 |
| 20.500 | 0.55 | 0.54 | 0.52 | 0.50 | 0.49 |
| 20.583 | 0.48 | 0.46 | 0.44 | 0.43 | 0.41 |
| 20.667 | 0.40 | 0.40 | 0.39 | 0.39 | 0.39 |
| 20.750 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 |
| 20.833 | 0.39 | 0.38 | 0.38 | 0.38 | 0.38 |
| 20.917 | 0.38 | 0.38 | 0.37 | 0.38 | 0.38 |
| 21.000 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| 21.083 | 0.37 | 0.37 | 0.36 | 0.37 | 0.37 |
| 21.167 | 0.37 | 0.36 | 0.36 | 0.36 | 0.36 |
| 21.250 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 |
| 21.333 | 0.36 | 0.35 | 0.35 | 0.36 | 0.35 |
| 21.417 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 |
| 21.500 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 |

Subsection: Read Hydrograph
Label: CM-1

Scenario: Base

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.017 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 21.583 | 0.35 | 0.34 | 0.34 | 0.33 | 0.32 |
| 21.667 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 |
| 21.750 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 |
| 21.833 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| 21.917 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| 22.000 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| 22.083 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| 22.167 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| 22.250 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| 22.333 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| 22.417 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| 22.500 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 22.583 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 22.667 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 22.750 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 22.833 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 22.917 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 23.000 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 23.083 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 23.167 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.250 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.333 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.417 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.500 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.583 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.667 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 23.750 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 23.833 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 23.917 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.000 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.083 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.167 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.250 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.333 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.417 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.500 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.583 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.667 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.750 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.833 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24.917 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 25.000 | 0.19 | (N/A) | (N/A) | (N/A) | (N/A) |

## Summary for Hydrograph Addition at 'O-1'

| Upstream Link | Upstream Node |
|---|---|
| Outlet-2 | PO-1 |

## Node Inflows

| Inflow Type | Element | Volume (ac-ft) | Time to Peak (hours) | Flow (Peak) ($ft^3/s$) |
|---|---|---|---|---|
| Flow (From) | Outlet-2 | 0.805 | 19.450 | 2.61 |
| Flow (In) | O-1 | 0.805 | 19.450 | 2.61 |

Subsection: Time vs. Elevation
Label: PO-1 (OUT)

Scenario: Base

## Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) |
|---|---|---|---|---|---|
| 0.000 | 100.00 | 100.05 | 100.12 | 100.15 | 100.18 |
| 0.250 | 100.20 | 100.21 | 100.22 | 100.23 | 100.23 |
| 0.500 | 100.23 | 100.23 | 100.24 | 100.24 | 100.24 |
| 0.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 1.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 1.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 1.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 1.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 2.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 2.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 2.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 2.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 3.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 3.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 3.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 3.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 4.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 4.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 4.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 4.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 5.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 5.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 5.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 5.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 6.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 6.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 6.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 6.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 7.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 7.250 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 7.500 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 7.750 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 8.000 | 100.24 | 100.24 | 100.24 | 100.24 | 100.24 |
| 8.250 | 100.24 | 100.24 | 100.25 | 100.25 | 100.26 |
| 8.500 | 100.26 | 100.26 | 100.26 | 100.26 | 100.26 |
| 8.750 | 100.26 | 100.26 | 100.26 | 100.26 | 100.26 |
| 9.000 | 100.26 | 100.26 | 100.26 | 100.26 | 100.26 |
| 9.250 | 100.26 | 100.26 | 100.26 | 100.26 | 100.26 |
| 9.500 | 100.26 | 100.26 | 100.26 | 100.26 | 100.26 |
| 9.750 | 100.26 | 100.26 | 100.26 | 100.26 | 100.26 |
| 10.000 | 100.26 | 100.27 | 100.29 | 100.30 | 100.30 |
| 10.250 | 100.31 | 100.31 | 100.31 | 100.31 | 100.31 |
| 10.500 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |

Subsection: Time vs. Elevation
Label: PO-1 (OUT)

Scenario: Base

## Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) |
|---|---|---|---|---|---|
| 10.750 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 11.000 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 11.250 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 11.500 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 11.750 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 12.000 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 12.250 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 12.500 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 12.750 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 13.000 | 100.32 | 100.32 | 100.32 | 100.32 | 100.32 |
| 13.250 | 100.32 | 100.32 | 100.33 | 100.35 | 100.36 |
| 13.500 | 100.36 | 100.37 | 100.37 | 100.37 | 100.37 |
| 13.750 | 100.37 | 100.37 | 100.37 | 100.38 | 100.38 |
| 14.000 | 100.38 | 100.38 | 100.38 | 100.38 | 100.38 |
| 14.250 | 100.38 | 100.38 | 100.38 | 100.38 | 100.38 |
| 14.500 | 100.38 | 100.38 | 100.38 | 100.38 | 100.38 |
| 14.750 | 100.38 | 100.38 | 100.38 | 100.38 | 100.38 |
| 15.000 | 100.38 | 100.39 | 100.42 | 100.43 | 100.44 |
| 15.250 | 100.45 | 100.46 | 100.46 | 100.46 | 100.46 |
| 15.500 | 100.46 | 100.46 | 100.46 | 100.46 | 100.46 |
| 15.750 | 100.46 | 100.46 | 100.46 | 100.46 | 100.46 |
| 16.000 | 100.46 | 100.46 | 100.46 | 100.46 | 100.46 |
| 16.250 | 100.46 | 100.46 | 100.46 | 100.46 | 100.46 |
| 16.500 | 100.46 | 100.46 | 100.46 | 100.46 | 100.48 |
| 16.750 | 100.50 | 100.52 | 100.52 | 100.53 | 100.53 |
| 17.000 | 100.54 | 100.54 | 100.54 | 100.54 | 100.54 |
| 17.250 | 100.54 | 100.54 | 100.54 | 100.54 | 100.54 |
| 17.500 | 100.54 | 100.56 | 100.59 | 100.61 | 100.62 |
| 17.750 | 100.63 | 100.63 | 100.63 | 100.64 | 100.64 |
| 18.000 | 100.64 | 100.64 | 100.64 | 100.64 | 100.64 |
| 18.250 | 100.64 | 100.64 | 100.66 | 100.70 | 100.72 |
| 18.500 | 100.74 | 100.78 | 100.83 | 100.87 | 100.91 |
| 18.750 | 100.95 | 100.98 | 101.00 | 101.02 | 101.03 |
| 19.000 | 101.04 | 101.05 | 101.07 | 101.12 | 101.23 |
| 19.250 | 101.41 | 101.59 | 101.74 | 101.86 | 101.88 |
| 19.500 | 101.76 | 101.60 | 101.45 | 101.30 | 101.15 |
| 19.750 | 101.02 | 100.91 | 100.81 | 100.73 | 100.67 |
| 20.000 | 100.62 | 100.59 | 100.57 | 100.55 | 100.54 |
| 20.250 | 100.53 | 100.52 | 100.52 | 100.51 | 100.51 |
| 20.500 | 100.49 | 100.48 | 100.46 | 100.44 | 100.42 |
| 20.750 | 100.41 | 100.40 | 100.39 | 100.39 | 100.38 |
| 21.000 | 100.38 | 100.38 | 100.38 | 100.37 | 100.37 |
| 21.250 | 100.37 | 100.37 | 100.37 | 100.36 | 100.36 |

## Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) | Elevation (ft) |
|---|---|---|---|---|---|
| 21.500 | 100.36 | 100.36 | 100.36 | 100.36 | 100.35 |
| 21.750 | 100.35 | 100.35 | 100.34 | 100.33 | 100.32 |
| 22.000 | 100.31 | 100.31 | 100.30 | 100.30 | 100.30 |
| 22.250 | 100.30 | 100.29 | 100.29 | 100.29 | 100.29 |
| 22.500 | 100.29 | 100.29 | 100.29 | 100.28 | 100.28 |
| 22.750 | 100.28 | 100.28 | 100.28 | 100.28 | 100.28 |
| 23.000 | 100.28 | 100.28 | 100.28 | 100.28 | 100.28 |
| 23.250 | 100.28 | 100.28 | 100.28 | 100.27 | 100.27 |
| 23.500 | 100.27 | 100.27 | 100.27 | 100.27 | 100.27 |
| 23.750 | 100.27 | 100.27 | 100.27 | 100.27 | 100.27 |
| 24.000 | 100.27 | (N/A) | (N/A) | (N/A) | (N/A) |

## Time vs. Volume (ac-ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) |
|---|---|---|---|---|---|
| 0.000 | 0.000 | 0.000 | 0.001 | 0.001 | 0.002 |
| 0.250 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| 0.500 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| 0.750 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 |
| 1.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 1.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 1.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 1.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 2.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 2.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 2.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 2.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 3.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 3.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 3.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 3.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 4.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 4.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 4.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 4.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 5.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 5.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 5.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 5.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 6.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 6.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 6.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 6.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 7.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 7.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 7.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 7.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 8.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 8.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 8.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 8.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 9.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 9.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 9.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 9.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 10.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 |
| 10.250 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 10.500 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |

## Time vs. Volume (ac-ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) |
|---|---|---|---|---|---|
| 10.750 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 11.000 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 11.250 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 11.500 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 11.750 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 12.000 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 12.250 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 12.500 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 12.750 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 13.000 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 13.250 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 13.500 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 13.750 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 14.000 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 14.250 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 14.500 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 14.750 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 15.000 | 0.005 | 0.005 | 0.006 | 0.006 | 0.006 |
| 15.250 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 |
| 15.500 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 |
| 15.750 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 |
| 16.000 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 |
| 16.250 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 |
| 16.500 | 0.006 | 0.006 | 0.006 | 0.006 | 0.007 |
| 16.750 | 0.007 | 0.008 | 0.008 | 0.008 | 0.008 |
| 17.000 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| 17.250 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| 17.500 | 0.008 | 0.008 | 0.009 | 0.010 | 0.010 |
| 17.750 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 |
| 18.000 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 |
| 18.250 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 |
| 18.500 | 0.013 | 0.013 | 0.015 | 0.016 | 0.017 |
| 18.750 | 0.018 | 0.018 | 0.019 | 0.019 | 0.020 |
| 19.000 | 0.020 | 0.020 | 0.021 | 0.022 | 0.025 |
| 19.250 | 0.030 | 0.034 | 0.038 | 0.040 | 0.041 |
| 19.500 | 0.038 | 0.034 | 0.031 | 0.027 | 0.023 |
| 19.750 | 0.019 | 0.017 | 0.014 | 0.012 | 0.011 |
| 20.000 | 0.010 | 0.009 | 0.009 | 0.008 | 0.008 |
| 20.250 | 0.008 | 0.008 | 0.008 | 0.007 | 0.007 |
| 20.500 | 0.007 | 0.007 | 0.006 | 0.006 | 0.006 |
| 20.750 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 21.000 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 21.250 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |

## Time vs. Volume (ac-ft)

**Output Time increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) | Volume (ac-ft) |
|---|---|---|---|---|---|
| 21.500 | 0.005 | 0.005 | 0.005 | 0.004 | 0.004 |
| 21.750 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| 22.000 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 |
| 22.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 22.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 22.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 23.000 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 23.250 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 23.500 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 23.750 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 24.000 | 0.003 | (N/A) | (N/A) | (N/A) | (N/A) |

Subsection: Pipe Volume
Label: PO-1

Scenario: Base

| Volume Results (Pipe) | |
|---|---|
| Pipe Storage Upstream Invert | 100.00 ft |
| Pipe Storage Downstream Invert | 100.00 ft |
| Pipe Storage Length | 450.00 ft |
| Pipe Storage Diameter | 30.0 in |
| Pipe Storage Number of Barrels | 1 |
| Pipe Storage Slice Width | 10.00 ft |
| Pipe Storage Vertical Increment | 0.10 ft |

| Elevation (ft) | Perpendicular Downstream Depth (ft) | Perpendicular Downstream Area (ft²) | Wetted Length (ft) | Filled Length (ft) | Perpendicular Upstream Depth (ft) | Perpendicular Upstream Area (ft²) | Total Volume (ac-ft) |
|---|---|---|---|---|---|---|---|
| 100.00 | 0.00 | 0.0 | 450.00 | 0.00 | 0.00 | 0.0 | 0.000 |
| 100.10 | 0.10 | 0.1 | 450.00 | 0.00 | 0.10 | 0.1 | 0.001 |
| 100.20 | 0.20 | 0.2 | 450.00 | 0.00 | 0.20 | 0.2 | 0.002 |
| 100.30 | 0.30 | 0.3 | 450.00 | 0.00 | 0.30 | 0.3 | 0.003 |
| 100.40 | 0.40 | 0.5 | 450.00 | 0.00 | 0.40 | 0.5 | 0.005 |
| 100.50 | 0.50 | 0.7 | 450.00 | 0.00 | 0.50 | 0.7 | 0.007 |
| 100.60 | 0.60 | 0.9 | 450.00 | 0.00 | 0.60 | 0.9 | 0.009 |
| 100.70 | 0.70 | 1.1 | 450.00 | 0.00 | 0.70 | 1.1 | 0.012 |
| 100.80 | 0.80 | 1.4 | 450.00 | 0.00 | 0.80 | 1.4 | 0.014 |
| 100.90 | 0.90 | 1.6 | 450.00 | 0.00 | 0.90 | 1.6 | 0.016 |
| 101.00 | 1.00 | 1.8 | 450.00 | 0.00 | 1.00 | 1.8 | 0.019 |
| 101.10 | 1.10 | 2.1 | 450.00 | 0.00 | 1.10 | 2.1 | 0.021 |
| 101.20 | 1.20 | 2.3 | 450.00 | 0.00 | 1.20 | 2.3 | 0.024 |
| 101.30 | 1.30 | 2.6 | 450.00 | 0.00 | 1.30 | 2.6 | 0.027 |
| 101.40 | 1.40 | 2.8 | 450.00 | 0.00 | 1.40 | 2.8 | 0.029 |
| 101.50 | 1.50 | 3.1 | 450.00 | 0.00 | 1.50 | 3.1 | 0.032 |
| 101.60 | 1.60 | 3.3 | 450.00 | 0.00 | 1.60 | 3.3 | 0.034 |
| 101.70 | 1.70 | 3.6 | 450.00 | 0.00 | 1.70 | 3.6 | 0.037 |
| 101.80 | 1.80 | 3.8 | 450.00 | 0.00 | 1.80 | 3.8 | 0.039 |
| 101.90 | 1.90 | 4.0 | 450.00 | 0.00 | 1.90 | 4.0 | 0.041 |
| 102.00 | 2.00 | 4.2 | 450.00 | 0.00 | 2.00 | 4.2 | 0.043 |
| 102.10 | 2.10 | 4.4 | 450.00 | 0.00 | 2.10 | 4.4 | 0.045 |
| 102.20 | 2.20 | 4.6 | 450.00 | 0.00 | 2.20 | 4.6 | 0.047 |
| 102.30 | 2.30 | 4.7 | 450.00 | 0.00 | 2.30 | 4.7 | 0.049 |
| 102.40 | 2.40 | 4.8 | 450.00 | 0.00 | 2.40 | 4.8 | 0.050 |
| 102.50 | 2.50 | 4.9 | 450.00 | 450.00 | 2.50 | 4.9 | 0.051 |
| 102.50 | 2.50 | 4.9 | 450.00 | 450.00 | 2.50 | 4.9 | 0.051 |

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 100.00 ft |
| Increment (Headwater) | 0.10 ft |
| Maximum (Headwater) | 102.50 ft |

## Outlet Connectivity

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Orifice-Circular | Orifice - 1 | Forward | TW | 100.00 | 102.50 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |

| Structure ID: Orifice - 1<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 100.00 ft |
| Orifice Diameter | 9.0 in |
| Orifice Coefficient | 0.600 |

| Structure ID: TW<br>Structure Type: TW Setup, DS Channel | |
|---|---|
| Tailwater Type | Free Outfall |

| Convergence Tolerances | |
|---|---|
| Maximum Iterations | 30 |
| Tailwater Tolerance (Minimum) | 0.01 ft |
| Tailwater Tolerance (Maximum) | 0.50 ft |
| Headwater Tolerance (Minimum) | 0.01 ft |
| Headwater Tolerance (Maximum) | 0.50 ft |
| Flow Tolerance (Minimum) | 0.001 ft³/s |
| Flow Tolerance (Maximum) | 10.000 ft³/s |

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = ()
---
Upstream ID =
Downstream ID =

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| Contributing Structures | | | |

Subsection: Composite Rating Curve
Label: Composite Outlet Structure - 1

Scenario: Base

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 100.00 | 0.00 | (N/A) | 0.00 |
| 100.10 | 0.03 | (N/A) | 0.00 |
| 100.20 | 0.11 | (N/A) | 0.00 |
| 100.30 | 0.24 | (N/A) | 0.00 |
| 100.40 | 0.42 | (N/A) | 0.00 |
| 100.50 | 0.63 | (N/A) | 0.00 |
| 100.60 | 0.86 | (N/A) | 0.00 |
| 100.70 | 1.12 | (N/A) | 0.00 |
| 100.80 | 1.39 | (N/A) | 0.00 |
| 100.90 | 1.54 | (N/A) | 0.00 |
| 101.00 | 1.68 | (N/A) | 0.00 |
| 101.10 | 1.81 | (N/A) | 0.00 |
| 101.20 | 1.93 | (N/A) | 0.00 |
| 101.30 | 2.05 | (N/A) | 0.00 |
| 101.40 | 2.15 | (N/A) | 0.00 |
| 101.50 | 2.26 | (N/A) | 0.00 |
| 101.60 | 2.35 | (N/A) | 0.00 |
| 101.70 | 2.45 | (N/A) | 0.00 |
| 101.80 | 2.54 | (N/A) | 0.00 |
| 101.90 | 2.63 | (N/A) | 0.00 |
| 102.00 | 2.71 | (N/A) | 0.00 |
| 102.10 | 2.79 | (N/A) | 0.00 |
| 102.20 | 2.87 | (N/A) | 0.00 |
| 102.30 | 2.95 | (N/A) | 0.00 |
| 102.40 | 3.03 | (N/A) | 0.00 |
| 102.50 | 3.10 | (N/A) | 0.00 |

| Contributing Structures |
|---|
| None Contributing |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
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| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |

Composite Outflow Summary

| Contributing Structures |
|---|
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |

| | |
|---|---|
| Peak Discharge | 2.61 ft³/s |
| Time to Peak | 19.450 hours |
| Hydrograph Volume | 0.805 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 0.01 | 0.04 | 0.07 | 0.09 |
| 0.250 | 0.11 | 0.13 | 0.14 | 0.15 | 0.15 |
| 0.500 | 0.15 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.750 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.000 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.250 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.500 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.750 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 |
| 2.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.250 | 0.17 | 0.17 | 0.17 | 0.18 | 0.18 |
| 8.500 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
| 8.750 | 0.19 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.000 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.250 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.500 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |

Subsection: Diverted Hydrograph
Label: Outlet-2

Scenario: Base

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 9.750 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 10.000 | 0.20 | 0.21 | 0.23 | 0.24 | 0.25 |
| 10.250 | 0.26 | 0.26 | 0.27 | 0.27 | 0.27 |
| 10.500 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.750 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.000 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.250 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.500 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.750 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.000 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.250 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.500 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.750 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.000 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.250 | 0.28 | 0.28 | 0.30 | 0.32 | 0.34 |
| 13.500 | 0.35 | 0.36 | 0.37 | 0.37 | 0.37 |
| 13.750 | 0.37 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.000 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.250 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.500 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.750 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 15.000 | 0.38 | 0.41 | 0.46 | 0.49 | 0.51 |
| 15.250 | 0.53 | 0.54 | 0.54 | 0.55 | 0.55 |
| 15.500 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.750 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.000 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.250 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.500 | 0.55 | 0.55 | 0.55 | 0.55 | 0.58 |
| 16.750 | 0.63 | 0.67 | 0.69 | 0.70 | 0.71 |
| 17.000 | 0.71 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.250 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.500 | 0.72 | 0.77 | 0.84 | 0.89 | 0.92 |
| 17.750 | 0.93 | 0.95 | 0.95 | 0.96 | 0.96 |
| 18.000 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 18.250 | 0.96 | 0.96 | 1.03 | 1.13 | 1.19 |
| 18.500 | 1.22 | 1.32 | 1.43 | 1.49 | 1.55 |
| 18.750 | 1.61 | 1.65 | 1.68 | 1.71 | 1.72 |
| 19.000 | 1.73 | 1.75 | 1.77 | 1.83 | 1.97 |
| 19.250 | 2.17 | 2.34 | 2.48 | 2.59 | 2.61 |
| 19.500 | 2.51 | 2.36 | 2.21 | 2.04 | 1.87 |
| 19.750 | 1.71 | 1.55 | 1.40 | 1.19 | 1.04 |
| 20.000 | 0.93 | 0.84 | 0.78 | 0.74 | 0.71 |
| 20.250 | 0.69 | 0.68 | 0.67 | 0.66 | 0.64 |
| 20.500 | 0.62 | 0.58 | 0.55 | 0.51 | 0.47 |

Subsection: Diverted Hydrograph
Scenario: Base
Label: Outlet-2

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 20.750 | 0.44 | 0.42 | 0.41 | 0.40 | 0.39 |
| 21.000 | 0.39 | 0.38 | 0.38 | 0.37 | 0.37 |
| 21.250 | 0.37 | 0.36 | 0.36 | 0.36 | 0.36 |
| 21.500 | 0.35 | 0.35 | 0.35 | 0.34 | 0.34 |
| 21.750 | 0.33 | 0.33 | 0.31 | 0.29 | 0.28 |
| 22.000 | 0.27 | 0.26 | 0.25 | 0.24 | 0.24 |
| 22.250 | 0.24 | 0.24 | 0.23 | 0.23 | 0.23 |
| 22.500 | 0.23 | 0.23 | 0.23 | 0.22 | 0.22 |
| 22.750 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 23.000 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 23.250 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.500 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.750 | 0.21 | 0.21 | 0.20 | 0.20 | 0.20 |
| 24.000 | 0.20 | (N/A) | (N/A) | (N/A) | (N/A) |

Subsection: Elevation-Volume-Flow Table (Pond) Scenario: Base
Label: PO-1

| Infiltration | |
|---|---|
| Infiltration Method (Computed) | No Infiltration |

| Initial Conditions | |
|---|---|
| Elevation (Water Surface, Initial) | 100.00 ft |
| Volume (Initial) | 0.000 ac-ft |
| Flow (Initial Outlet) | 0.00 ft³/s |
| Flow (Initial Infiltration) | 0.00 ft³/s |
| Flow (Initial, Total) | 0.00 ft³/s |
| Time Increment | 0.050 hours |

| Elevation (ft) | Outflow (ft³/s) | Storage (ac-ft) | Area (acres) | Infiltration (ft³/s) | Flow (Total) (ft³/s) | 2S/t + O (ft³/s) |
|---|---|---|---|---|---|---|
| 100.00 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 |
| 100.10 | 0.03 | 0.001 | 0.000 | 0.00 | 0.03 | 0.36 |
| 100.20 | 0.11 | 0.002 | 0.000 | 0.00 | 0.11 | 1.03 |
| 100.30 | 0.24 | 0.003 | 0.000 | 0.00 | 0.24 | 1.91 |
| 100.40 | 0.42 | 0.005 | 0.000 | 0.00 | 0.42 | 2.95 |
| 100.50 | 0.63 | 0.007 | 0.000 | 0.00 | 0.63 | 4.13 |
| 100.60 | 0.86 | 0.009 | 0.000 | 0.00 | 0.86 | 5.39 |
| 100.70 | 1.12 | 0.012 | 0.000 | 0.00 | 1.12 | 6.75 |
| 100.80 | 1.39 | 0.014 | 0.000 | 0.00 | 1.39 | 8.16 |
| 100.90 | 1.54 | 0.016 | 0.000 | 0.00 | 1.54 | 9.50 |
| 101.00 | 1.68 | 0.019 | 0.000 | 0.00 | 1.68 | 10.85 |
| 101.10 | 1.81 | 0.021 | 0.000 | 0.00 | 1.81 | 12.21 |
| 101.20 | 1.93 | 0.024 | 0.000 | 0.00 | 1.93 | 13.58 |
| 101.30 | 2.05 | 0.027 | 0.000 | 0.00 | 2.05 | 14.94 |
| 101.40 | 2.15 | 0.029 | 0.000 | 0.00 | 2.15 | 16.30 |
| 101.50 | 2.26 | 0.032 | 0.000 | 0.00 | 2.26 | 17.63 |
| 101.60 | 2.35 | 0.034 | 0.000 | 0.00 | 2.35 | 18.94 |
| 101.70 | 2.45 | 0.037 | 0.000 | 0.00 | 2.45 | 20.22 |
| 101.80 | 2.54 | 0.039 | 0.000 | 0.00 | 2.54 | 21.46 |
| 101.90 | 2.63 | 0.041 | 0.000 | 0.00 | 2.63 | 22.64 |
| 102.00 | 2.71 | 0.043 | 0.000 | 0.00 | 2.71 | 23.76 |
| 102.10 | 2.79 | 0.045 | 0.000 | 0.00 | 2.79 | 24.80 |
| 102.20 | 2.87 | 0.047 | 0.000 | 0.00 | 2.87 | 25.75 |
| 102.30 | 2.95 | 0.049 | 0.000 | 0.00 | 2.95 | 26.57 |
| 102.40 | 3.03 | 0.050 | 0.000 | 0.00 | 3.03 | 27.24 |
| 102.50 | 3.10 | 0.051 | 0.000 | 0.00 | 3.10 | 27.64 |

Subsection: Level Pool Pond Routing Summary
Label: PO-1 (IN)

Scenario: Base

| Infiltration | |
|---|---|
| Infiltration Method (Computed) | No Infiltration |

| Initial Conditions | |
|---|---|
| Elevation (Water Surface, Initial) | 100.00 ft |
| Volume (Initial) | 0.000 ac-ft |
| Flow (Initial Outlet) | 0.00 ft³/s |
| Flow (Initial Infiltration) | 0.00 ft³/s |
| Flow (Initial, Total) | 0.00 ft³/s |
| Time Increment | 0.050 hours |

| Inflow/Outflow Hydrograph Summary | | | |
|---|---|---|---|
| Flow (Peak In) | 3.34 ft³/s | Time to Peak (Flow, In) | 19.250 hours |
| Flow (Peak Outlet) | 2.61 ft³/s | Time to Peak (Flow, Outlet) | 19.450 hours |

| | |
|---|---|
| Elevation (Water Surface, Peak) | 101.88 ft |
| Volume (Peak) | 0.041 ac-ft |

| Mass Balance (ac-ft) | |
|---|---|
| Volume (Initial) | 0.000 ac-ft |
| Volume (Total Inflow) | 0.808 ac-ft |
| Volume (Total Infiltration) | 0.000 ac-ft |
| Volume (Total Outlet Outflow) | 0.805 ac-ft |
| Volume (Retained) | 0.002 ac-ft |
| Volume (Unrouted) | -0.001 ac-ft |
| Error (Mass Balance) | 0.1 % |

| | |
|---|---|
| Peak Discharge | 2.61 ft³/s |
| Time to Peak | 19.450 hours |
| Hydrograph Volume | 0.805 ac-ft |

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 0.000 | 0.00 | 0.01 | 0.04 | 0.07 | 0.09 |
| 0.250 | 0.11 | 0.13 | 0.14 | 0.15 | 0.15 |
| 0.500 | 0.15 | 0.16 | 0.16 | 0.16 | 0.16 |
| 0.750 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.000 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.250 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.500 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 1.750 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 |
| 2.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 2.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 3.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 4.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 5.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 6.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.250 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.500 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 7.750 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.000 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| 8.250 | 0.17 | 0.17 | 0.17 | 0.18 | 0.18 |
| 8.500 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
| 8.750 | 0.19 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.000 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.250 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 9.500 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |

Subsection: Pond Routed Hydrograph (total out) Scenario: Base
Label: PO-1 (OUT)

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 9.750 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 10.000 | 0.20 | 0.21 | 0.23 | 0.24 | 0.25 |
| 10.250 | 0.26 | 0.26 | 0.27 | 0.27 | 0.27 |
| 10.500 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 10.750 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.000 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.250 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.500 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| 11.750 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.000 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.250 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.500 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 12.750 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.000 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 13.250 | 0.28 | 0.28 | 0.30 | 0.32 | 0.34 |
| 13.500 | 0.35 | 0.36 | 0.37 | 0.37 | 0.37 |
| 13.750 | 0.37 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.000 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.250 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.500 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 14.750 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| 15.000 | 0.38 | 0.41 | 0.46 | 0.49 | 0.51 |
| 15.250 | 0.53 | 0.54 | 0.54 | 0.55 | 0.55 |
| 15.500 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 15.750 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.000 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.250 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| 16.500 | 0.55 | 0.55 | 0.55 | 0.55 | 0.58 |
| 16.750 | 0.63 | 0.67 | 0.69 | 0.70 | 0.71 |
| 17.000 | 0.71 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.250 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17.500 | 0.72 | 0.77 | 0.84 | 0.89 | 0.92 |
| 17.750 | 0.93 | 0.95 | 0.95 | 0.96 | 0.96 |
| 18.000 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 18.250 | 0.96 | 0.96 | 1.03 | 1.13 | 1.19 |
| 18.500 | 1.22 | 1.32 | 1.43 | 1.49 | 1.55 |
| 18.750 | 1.61 | 1.65 | 1.68 | 1.71 | 1.72 |
| 19.000 | 1.73 | 1.75 | 1.77 | 1.83 | 1.97 |
| 19.250 | 2.17 | 2.34 | 2.48 | 2.59 | 2.61 |
| 19.500 | 2.51 | 2.36 | 2.21 | 2.04 | 1.87 |
| 19.750 | 1.71 | 1.55 | 1.40 | 1.19 | 1.04 |
| 20.000 | 0.93 | 0.84 | 0.78 | 0.74 | 0.71 |
| 20.250 | 0.69 | 0.68 | 0.67 | 0.66 | 0.64 |
| 20.500 | 0.62 | 0.58 | 0.55 | 0.51 | 0.47 |

Subsection: Pond Routed Hydrograph (total out) Scenario: Base
Label: PO-1 (OUT)

**HYDROGRAPH ORDINATES (ft³/s)**
**Output Time Increment = 0.050 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) | Flow (ft³/s) |
|---|---|---|---|---|---|
| 20.750 | 0.44 | 0.42 | 0.41 | 0.40 | 0.39 |
| 21.000 | 0.39 | 0.38 | 0.38 | 0.37 | 0.37 |
| 21.250 | 0.37 | 0.36 | 0.36 | 0.36 | 0.36 |
| 21.500 | 0.35 | 0.35 | 0.35 | 0.34 | 0.34 |
| 21.750 | 0.33 | 0.33 | 0.31 | 0.29 | 0.28 |
| 22.000 | 0.27 | 0.26 | 0.25 | 0.24 | 0.24 |
| 22.250 | 0.24 | 0.24 | 0.23 | 0.23 | 0.23 |
| 22.500 | 0.23 | 0.23 | 0.23 | 0.22 | 0.22 |
| 22.750 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 23.000 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| 23.250 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.500 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 23.750 | 0.21 | 0.21 | 0.20 | 0.20 | 0.20 |
| 24.000 | 0.20 | (N/A) | (N/A) | (N/A) | (N/A) |

## Summary for Hydrograph Addition at 'PO-1'

| Upstream Link | Upstream Node |
|---|---|
| <Catchment to Outflow Node> | CM-1 |

## Node Inflows

| Inflow Type | Element | Volume (ac-ft) | Time to Peak (hours) | Flow (Peak) ($ft^3/s$) |
|---|---|---|---|---|
| Flow (From) | CM-1 | 0.825 | 19.267 | 3.35 |
| Flow (In) | PO-1 | 0.808 | 19.250 | 3.34 |

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DESIGN ASSOCIATES INC

# Attachment D

Stormwater Quality Treatment Calculations

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Building A**

| | | | |
|---|---|---|---|
| **Step 1: Determine water quality design volume** | | | |
| 1-1. Enter Project area (acres), *Aproject* | Aproject = | 0.10 | acres |
| 1-2. Enter the maximum allowable percent of the Project area that may be effective impervious area (%) (refer to permit), ranges from 5-30%, *%allowable* | %allowable = | 5 | % |
| 1-3. Determine the maximum allowable effective impervious area (acres), *EIAallowable = (Aproject)*(%allowable)* | EIAallowable = | **0.005** | acres |
| 1-4. Enter Project impervious fraction, *Imp* (e.g. 60% = 0.60) | Imp = | 0.95 | |
| 1-5. Determine the Project Total Impervious area (acres), *TIA=Aproject*Imp* | TIA = | **0.095** | acres |
| 1-6. Determine the total area from which runoff must be retained (acres), *Aretain=TIA-EIAallowable* | Aretain = | **0.09** | acres |
| 1-7. Determine pervious runoff coefficient using Table E-1, *Cp* | Cp = | 0.05 | |
| 1-8. Calculate runoff coefficient, *C = 0.95*imp + Cp (1-imp)* | C = | **0.905** | |
| 1-9. Enter design rainfall depth of the storm (in), *Pi* | Pi = | 0.75 | in |
| 1-10. Calculate rainfall depth (ft), *P = Pi/12* | P = | **0.0625** | ft |
| 1-11. Calculate water quality design volume ($ft^3$), *SQDV = 43560×C*P*Aretain* | **SQDV =** | **222** | **$ft^3$** |
| **Step 2: Determine the design percolation rate** | | | |
| 2-1. Enter the design saturated hydraulic conductivity of the amended filter media (in/hr, 2.5 recommended), Kdesign | Kdesign = | 2.50 | in/hr |
| **Step 3: Calculate the surface area** | | | |
| 3-1. Enter water quality design volume ($ft^3$), *SQDV* | SQDV = | **222** | $ft^3$ |
| 3-2. Enter design saturated hydraulic conductivity (in/hr), *Kdesign* | Kdesign = | **2.50** | in/hr |
| 3-3. Enter the ponding depth (max 1.5 ft for Bioretention, 1.0 ft for Planter Box) above area, *dp* | dp = | 1 | ft |
| 3-4. Calculate the drawdown time for the ponded water to filter through media (hours), *t ponding = (dp / Kdesign) * 12* | t ponding = | **4.8** | hrs |
| 3-5. Enter the storm duration for routing calculations (use 3 hours), *Trouting* | Trouting = | 3 | hrs |

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Building A**

| | | | |
|---|---|---|---|
| 3-6. Calculate depth of water (ft) filtered by using the min. of the following two equations:<br>d filtered,1 = (Kdesign * Trouting) / 12 | d filtered,1 = | 0.63 | ft |
| d filtered,2 = dp / 2 | d filtered,2 = | 0.50 | ft |
| 3-7. Enter the resultant depth (the minimum of the two calculated above), *d filtered* | d filtered = | | ft |
| 3-8. Calculate the infiltrating surface area as follows ($ft^2$):<br>Areq = SQDV / (dp + d filtered) | **Areq =** | 221.75 | $ft^2$ |
| Infiltration will be met through a proprietary device, therefore, neither the infiltration basin design or the infiltration trench design apply to this application. | | | |

*Taken from the Technical Guidance Manual for Stormwater Quality Control Measures 2011

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Building B1**

| | | | |
|---|---|---|---|
| **Step 1: Determine water quality design volume** | | | |
| 1-1. Enter Project area (acres), *Aproject* | Aproject = | 0.17 | acres |
| 1-2. Enter the maximum allowable percent of the Project area that may be effective impervious area (%) (refer to permit), ranges from 5-30%, *%allowable* | %allowable = | 5 | % |
| 1-3. Determine the maximum allowable effective impervious area (acres), *EIAallowable = (Aproject)*(%allowable)* | EIAallowable = | **0.0085** | acres |
| 1-4. Enter Project impervious fraction, *Imp* (e.g. 60% = 0.60) | Imp = | 0.95 | |
| 1-5. Determine the Project Total Impervious area (acres), *TIA=Aproject*Imp* | TIA = | **0.1615** | acres |
| 1-6. Determine the total area from which runoff must be retained (acres), *Aretain=TIA-EIAallowable* | Aretain = | **0.153** | acres |
| 1-7. Determine pervious runoff coefficient using Table E-1, *Cp* | Cp = | 0.05 | |
| 1-8. Calculate runoff coefficient, *C = 0.95*imp + Cp (1-imp)* | C = | **0.905** | |
| 1-9. Enter design rainfall depth of the storm (in), *Pi* | Pi = | 0.75 | in |
| 1-10. Calculate rainfall depth (ft), *P = Pi/12* | P = | **0.0625** | ft |
| 1-11. Calculate water quality design volume ($ft^3$), *SQDV = 43560×C*P*Aretain* | **SQDV =** | **377** | **$ft^3$** |
| **Step 2: Determine the design percolation rate** | | | |
| 2-1. Enter the design saturated hydraulic conductivity of the amended filter media (in/hr, 2.5 recommended), Kdesign | Kdesign = | 2.50 | in/hr |
| **Step 3: Calculate the surface area** | | | |
| 3-1. Enter water quality design volume ($ft^3$), *SQDV* | SQDV = | **377** | $ft^3$ |
| 3-2. Enter design saturated hydraulic conductivity (in/hr), *Kdesign* | Kdesign = | **2.50** | in/hr |
| 3-3. Enter the ponding depth (max 1.5 ft for Bioretention, 1.0 ft for Planter Box) above area, *dp* | dp = | 1 | ft |
| 3-4. Calculate the drawdown time for the ponded water to filter through media (hours), *t ponding = (dp / Kdesign) * 12* | t ponding = | **4.8** | hrs |
| 3-5. Enter the storm duration for routing calculations (use 3 hours), *Trouting* | Trouting = | 3 | hrs |

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Building B1**

| | | | |
|---|---|---|---|
| 3-6. Calculate depth of water (ft) filtered by using the min. of the following two equations:<br>d filtered,1 = (Kdesign * Trouting) / 12 | d filtered,1 = | 0.63 | ft |
| d filtered,2 = dp / 2 | d filtered,2 = | 0.50 | ft |
| 3-7. Enter the resultant depth (the minimum of the two calculated above), *d filtered* | d filtered = | | ft |
| 3-8. Calculate the infiltrating surface area as follows ($ft^2$):<br>Areq = SQDV / (dp + d filtered) | **Areq =** | 376.97 | $ft^2$ |
| Infiltration will be met through a proprietary device, therefore, neither the infiltration basin design or the infiltration trench design apply to this application. | | | |

*Taken from the Technical Guidance Manual for Stormwater Quality Control Measures 2011

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Building B2**

| | | | |
|---|---|---|---|
| **Step 1: Determine water quality design volume** | | | |
| 1-1. Enter Project area (acres), *Aproject* | Aproject = | 0.11 | acres |
| 1-2. Enter the maximum allowable percent of the Project area that may be effective impervious area (%) (refer to permit), ranges from 5-30%, *%allowable* | %allowable = | 5 | % |
| 1-3. Determine the maximum allowable effective impervious area (acres), *EIAallowable = (Aproject)*(%allowable)* | EIAallowable = | **0.0055** | acres |
| 1-4. Enter Project impervious fraction, *Imp* (e.g. 60% = 0.60) | Imp = | 0.95 | |
| 1-5. Determine the Project Total Impervious area (acres), *TIA=Aproject*Imp* | TIA = | **0.1045** | acres |
| 1-6. Determine the total area from which runoff must be retained (acres), *Aretain=TIA-EIAallowable* | Aretain = | **0.099** | acres |
| 1-7. Determine pervious runoff coefficient using Table E-1, *Cp* | Cp = | 0.05 | |
| 1-8. Calculate runoff coefficient, *C = 0.95*imp + Cp (1-imp)* | C = | **0.905** | |
| 1-9. Enter design rainfall depth of the storm (in), *Pi* | Pi = | 0.75 | in |
| 1-10. Calculate rainfall depth (ft), *P = Pi/12* | P = | **0.0625** | ft |
| 1-11. Calculate water quality design volume ($ft^3$), *SQDV = 43560×C*P*Aretain* | **SQDV =** | **244** | **$ft^3$** |
| **Step 2: Determine the design percolation rate** | | | |
| 2-1. Enter the design saturated hydraulic conductivity of the amended filter media (in/hr, 2.5 recommended), Kdesign | Kdesign = | 2.50 | in/hr |
| **Step 3: Calculate the surface area** | | | |
| 3-1. Enter water quality design volume ($ft^3$), *SQDV* | SQDV = | **244** | $ft^3$ |
| 3-2. Enter design saturated hydraulic conductivity (in/hr), *Kdesign* | Kdesign = | **2.50** | in/hr |
| 3-3. Enter the ponding depth (max 1.5 ft for Bioretention, 1.0 ft for Planter Box) above area, *dp* | dp = | 1 | ft |
| 3-4. Calculate the drawdown time for the ponded water to filter through media (hours), *t ponding = (dp / Kdesign) * 12* | t ponding = | **4.8** | hrs |
| 3-5. Enter the storm duration for routing calculations (use 3 hours), *Trouting* | Trouting = | 3 | hrs |

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Building B2**

| | | | |
|---|---|---|---|
| 3-6. Calculate depth of water (ft) filtered by using the min. of the following two equations:<br>d filtered,1 = (Kdesign * Trouting) / 12 | d filtered,1 = | 0.63 | ft |
| d filtered,2 = dp / 2 | d filtered,2 = | 0.50 | ft |
| 3-7. Enter the resultant depth (the minimum of the two calculated above), *d filtered* | d filtered = | | ft |
| 3-8. Calculate the infiltrating surface area as follows ($ft^2$):<br>Areq = SQDV / (dp + d filtered) | **Areq =** | 243.92 | $ft^2$ |
| Infiltration will be met through a proprietary device, therefore, neither the infiltration basin design or the infiltration trench design apply to this application. | | | |

*Taken from the Technical Guidance Manual for Stormwater Quality Control Measures 2011

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Building F**

| | | | |
|---|---|---|---|
| **Step 1: Determine water quality design volume** | | | |
| 1-1. Enter Project area (acres), *Aproject* | Aproject = | 0.11 | acres |
| 1-2. Enter the maximum allowable percent of the Project area that may be effective impervious area (%) (refer to permit), ranges from 5-30%, *%allowable* | %allowable = | 5 | % |
| 1-3. Determine the maximum allowable effective impervious area (acres), *EIAallowable = (Aproject)*(%allowable)* | EIAallowable = | **0.0055** | acres |
| 1-4. Enter Project impervious fraction, *Imp* (e.g. 60% = 0.60) | Imp = | 0.95 | |
| 1-5. Determine the Project Total Impervious area (acres), *TIA=Aproject*Imp* | TIA = | **0.1045** | acres |
| 1-6. Determine the total area from which runoff must be retained (acres), *Aretain=TIA-EIAallowable* | Aretain = | **0.099** | acres |
| 1-7. Determine pervious runoff coefficient using Table E-1, *Cp* | Cp = | 0.05 | |
| 1-8. Calculate runoff coefficient, *C = 0.95*imp + Cp (1-imp)* | C = | **0.905** | |
| 1-9. Enter design rainfall depth of the storm (in), *Pi* | Pi = | 0.75 | in |
| 1-10. Calculate rainfall depth (ft), *P = Pi/12* | P = | **0.0625** | ft |
| 1-11. Calculate water quality design volume ($ft^3$), *SQDV = 43560×C*P*Aretain* | **SQDV =** | **244** | **$ft^3$** |
| **Step 2: Determine the design percolation rate** | | | |
| 2-1. Enter the design saturated hydraulic conductivity of the amended filter media (in/hr, 2.5 recommended), Kdesign | Kdesign = | 2.50 | in/hr |
| **Step 3: Calculate the surface area** | | | |
| 3-1. Enter water quality design volume ($ft^3$), *SQDV* | SQDV = | **244** | $ft^3$ |
| 3-2. Enter design saturated hydraulic conductivity (in/hr), *Kdesign* | Kdesign = | **2.50** | in/hr |
| 3-3. Enter the ponding depth (max 1.5 ft for Bioretention, 1.0 ft for Planter Box) above area, *dp* | dp = | 1 | ft |
| 3-4. Calculate the drawdown time for the ponded water to filter through media (hours), *t ponding = (dp / Kdesign) * 12* | t ponding = | **4.8** | hrs |
| 3-5. Enter the storm duration for routing calculations (use 3 hours), *Trouting* | Trouting = | 3 | hrs |

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Building F**

| | | | |
|---|---|---|---|
| 3-6. Calculate depth of water (ft) filtered by using the min. of the following two equations:<br>d filtered,1 = (Kdesign * Trouting) / 12 | d filtered,1 = | 0.63 | ft |
| d filtered,2 = dp / 2 | d filtered,2 = | 0.50 | ft |
| 3-7. Enter the resultant depth (the minimum of the two calculated above), *d filtered* | d filtered = | | ft |
| 3-8. Calculate the infiltrating surface area as follows ($ft^2$):<br>Areq = SQDV / (dp + d filtered) | **Areq =** | 243.92 | $ft^2$ |
| Infiltration will be met through a proprietary device, therefore, neither the infiltration basin design or the infiltration trench design apply to this application. | | | |

*Taken from the Technical Guidance Manual for Stormwater Quality Control Measures 2011

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Commercial 1**

| | | | |
|---|---|---|---|
| **Step 1: Determine water quality design volume** | | | |
| 1-1. Enter Project area (acres), *Aproject* | Aproject = | 0.03 | acres |
| 1-2. Enter the maximum allowable percent of the Project area that may be effective impervious area (%) (refer to permit), ranges from 5-30%, *%allowable* | %allowable = | 5 | % |
| 1-3. Determine the maximum allowable effective impervious area (acres), *EIAallowable = (Aproject)*(%allowable)* | EIAallowable = | **0.0015** | acres |
| 1-4. Enter Project impervious fraction, *Imp* (e.g. 60% = 0.60) | Imp = | 0.95 | |
| 1-5. Determine the Project Total Impervious area (acres), *TIA=Aproject*Imp* | TIA = | **0.0285** | acres |
| 1-6. Determine the total area from which runoff must be retained (acres), *Aretain=TIA-EIAallowable* | Aretain = | **0.027** | acres |
| 1-7. Determine pervious runoff coefficient using Table E-1, *Cp* | Cp = | 0.05 | |
| 1-8. Calculate runoff coefficient, *C = 0.95*imp + Cp (1-imp)* | C = | **0.905** | |
| 1-9. Enter design rainfall depth of the storm (in), *Pi* | Pi = | 0.75 | in |
| 1-10. Calculate rainfall depth (ft), *P = Pi/12* | P = | **0.0625** | ft |
| 1-11. Calculate water quality design volume ($ft^3$), *SQDV = 43560×C*P*Aretain* | **SQDV =** | **67** | **$ft^3$** |
| **Step 2: Determine the design percolation rate** | | | |
| 2-1. Enter the design saturated hydraulic conductivity of the amended filter media (in/hr, 2.5 recommended), Kdesign | Kdesign = | 2.50 | in/hr |
| **Step 3: Calculate the surface area** | | | |
| 3-1. Enter water quality design volume ($ft^3$), *SQDV* | SQDV = | **67** | $ft^3$ |
| 3-2. Enter design saturated hydraulic conductivity (in/hr), *Kdesign* | Kdesign = | **2.50** | in/hr |
| 3-3. Enter the ponding depth (max 1.5 ft for Bioretention, 1.0 ft for Planter Box) above area, *dp* | dp = | 1 | ft |
| 3-4. Calculate the drawdown time for the ponded water to filter through media (hours), *t ponding = (dp / Kdesign) * 12* | t ponding = | **4.8** | hrs |
| 3-5. Enter the storm duration for routing calculations (use 3 hours), *Trouting* | Trouting = | 3 | hrs |

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Commercial 1**

| | | | |
|---|---|---|---|
| 3-6. Calculate depth of water (ft) filtered by using the min. of the following two equations:<br>d filtered,1 = (Kdesign * Trouting) / 12 | d filtered,1 = | 0.63 | ft |
| d filtered,2 = dp / 2 | d filtered,2 = | 0.50 | ft |
| 3-7. Enter the resultant depth (the minimum of the two calculated above), *d filtered* | d filtered = | | ft |
| 3-8. Calculate the infiltrating surface area as follows ($ft^2$):<br>Areq = SQDV / (dp + d filtered) | **Areq =** | 66.52 | $ft^2$ |
| Infiltration will be met through a proprietary device, therefore, neither the infiltration basin design or the infiltration trench design apply to this application. | | | |

*Taken from the Technical Guidance Manual for Stormwater Quality Control Measures 2011

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Commercial 2**

| | | | |
|---|---|---|---|
| **Step 1: Determine water quality design volume** | | | |
| 1-1. Enter Project area (acres), *Aproject* | Aproject = | 0.09 | acres |
| 1-2. Enter the maximum allowable percent of the Project area that may be effective impervious area (%) (refer to permit), ranges from 5-30%, *%allowable* | %allowable = | 5 | % |
| 1-3. Determine the maximum allowable effective impervious area (acres), *EIAallowable = (Aproject)*(%allowable)* | EIAallowable = | **0.0045** | acres |
| 1-4. Enter Project impervious fraction, *Imp* (e.g. 60% = 0.60) | Imp = | 0.95 | |
| 1-5. Determine the Project Total Impervious area (acres), *TIA=Aproject*Imp* | TIA = | **0.0855** | acres |
| 1-6. Determine the total area from which runoff must be retained (acres), *Aretain=TIA-EIAallowable* | Aretain = | **0.081** | acres |
| 1-7. Determine pervious runoff coefficient using Table E-1, *Cp* | Cp = | 0.05 | |
| 1-8. Calculate runoff coefficient, *C = 0.95*imp + Cp (1-imp)* | C = | **0.905** | |
| 1-9. Enter design rainfall depth of the storm (in), *Pi* | Pi = | 0.75 | in |
| 1-10. Calculate rainfall depth (ft), *P = Pi/12* | P = | **0.0625** | ft |
| 1-11. Calculate water quality design volume ($ft^3$), *SQDV = 43560×C*P*Aretain* | **SQDV =** | **200** | **$ft^3$** |
| **Step 2: Determine the design percolation rate** | | | |
| 2-1. Enter the design saturated hydraulic conductivity of the amended filter media (in/hr, 2.5 recommended), Kdesign | Kdesign = | 2.50 | in/hr |
| **Step 3: Calculate the surface area** | | | |
| 3-1. Enter water quality design volume ($ft^3$), *SQDV* | SQDV = | **200** | $ft^3$ |
| 3-2. Enter design saturated hydraulic conductivity (in/hr), *Kdesign* | Kdesign = | **2.50** | in/hr |
| 3-3. Enter the ponding depth (max 1.5 ft for Bioretention, 1.0 ft for Planter Box) above area, *dp* | dp = | 1 | ft |
| 3-4. Calculate the drawdown time for the ponded water to filter through media (hours), *t ponding = (dp / Kdesign) * 12* | t ponding = | **4.8** | hrs |
| 3-5. Enter the storm duration for routing calculations (use 3 hours), *Trouting* | Trouting = | 3 | hrs |

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Commercial 2**

| | | | |
|---|---|---|---|
| 3-6. Calculate depth of water (ft) filtered by using the min. of the following two equations:<br>d filtered,1 = (Kdesign * Trouting) / 12 | d filtered,1 = | 0.63 | ft |
| d filtered,2 = dp / 2 | d filtered,2 = | 0.50 | ft |
| 3-7. Enter the resultant depth (the minimum of the two calculated above), *d filtered* | d filtered = | | ft |
| 3-8. Calculate the infiltrating surface area as follows ($ft^2$):<br>Areq = SQDV / (dp + d filtered) | **Areq =** | 199.57 | $ft^2$ |
| Infiltration will be met through a proprietary device, therefore, neither the infiltration basin design or the infiltration trench design apply to this application. | | | |

*Taken from the Technical Guidance Manual for Stormwater Quality Control Measures 2011

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Commercial 3**

| | | | |
|---|---|---|---|
| **Step 1: Determine water quality design volume** | | | |
| 1-1. Enter Project area (acres), *Aproject* | Aproject = | 0.02 | acres |
| 1-2. Enter the maximum allowable percent of the Project area that may be effective impervious area (%) (refer to permit), ranges from 5-30%, *%allowable* | %allowable = | 5 | % |
| 1-3. Determine the maximum allowable effective impervious area (acres), *EIAallowable = (Aproject)*(%allowable)* | EIAallowable = | **0.001** | acres |
| 1-4. Enter Project impervious fraction, *Imp* (e.g. 60% = 0.60) | Imp = | 0.95 | |
| 1-5. Determine the Project Total Impervious area (acres), *TIA=Aproject*Imp* | TIA = | **0.019** | acres |
| 1-6. Determine the total area from which runoff must be retained (acres), *Aretain=TIA-EIAallowable* | Aretain = | **0.018** | acres |
| 1-7. Determine pervious runoff coefficient using Table E-1, *Cp* | Cp = | 0.05 | |
| 1-8. Calculate runoff coefficient, *C = 0.95*imp + Cp (1-imp)* | C = | **0.905** | |
| 1-9. Enter design rainfall depth of the storm (in), *Pi* | Pi = | 0.75 | in |
| 1-10. Calculate rainfall depth (ft), *P = Pi/12* | P = | **0.0625** | ft |
| 1-11. Calculate water quality design volume ($ft^3$), *SQDV = 43560×C*P*Aretain* | **SQDV =** | **44** | **$ft^3$** |
| **Step 2: Determine the design percolation rate** | | | |
| 2-1. Enter the design saturated hydraulic conductivity of the amended filter media (in/hr, 2.5 recommended), Kdesign | Kdesign = | 2.50 | in/hr |
| **Step 3: Calculate the surface area** | | | |
| 3-1. Enter water quality design volume ($ft^3$), *SQDV* | SQDV = | **44** | $ft^3$ |
| 3-2. Enter design saturated hydraulic conductivity (in/hr), *Kdesign* | Kdesign = | **2.50** | in/hr |
| 3-3. Enter the ponding depth (max 1.5 ft for Bioretention, 1.0 ft for Planter Box) above area, *dp* | dp = | 1 | ft |
| 3-4. Calculate the drawdown time for the ponded water to filter through media (hours), *t ponding = (dp / Kdesign) * 12* | t ponding = | **4.8** | hrs |
| 3-5. Enter the storm duration for routing calculations (use 3 hours), *Trouting* | Trouting = | 3 | hrs |

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Commercial 3**

| | | | |
|---|---|---|---|
| 3-6. Calculate depth of water (ft) filtered by using the min. of the following two equations:<br>d filtered,1 = (Kdesign * Trouting) / 12 | d filtered,1 = | 0.63 | ft |
| d filtered,2 = dp / 2 | d filtered,2 = | 0.50 | ft |
| 3-7. Enter the resultant depth (the minimum of the two calculated above), *d filtered* | d filtered = | | ft |
| 3-8. Calculate the infiltrating surface area as follows ($ft^2$):<br>Areq = SQDV / (dp + d filtered) | **Areq =** | 44.35 | $ft^2$ |
| Infiltration will be met through a proprietary device, therefore, neither the infiltration basin design or the infiltration trench design apply to this application. | | | |

*Taken from the Technical Guidance Manual for Stormwater Quality Control Measures 2011

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Parking**

| | | | |
|---|---|---|---|
| **Step 1: Determine water quality design volume** | | | |
| 1-1. Enter Project area (acres), *Aproject* | Aproject = | 0.67 | acres |
| 1-2. Enter the maximum allowable percent of the Project area that may be effective impervious area (%) (refer to permit), ranges from 5-30%, *%allowable* | %allowable = | 5 | % |
| 1-3. Determine the maximum allowable effective impervious area (acres), *EIAallowable = (Aproject)*(%allowable)* | EIAallowable = | **0.0335** | acres |
| 1-4. Enter Project impervious fraction, *Imp* (e.g. 60% = 0.60) | Imp = | 0.95 | |
| 1-5. Determine the Project Total Impervious area (acres), *TIA=Aproject*Imp* | TIA = | **0.6365** | acres |
| 1-6. Determine the total area from which runoff must be retained (acres), *Aretain=TIA-EIAallowable* | Aretain = | **0.603** | acres |
| 1-7. Determine pervious runoff coefficient using Table E-1, *Cp* | Cp = | 0.05 | |
| 1-8. Calculate runoff coefficient, *C = 0.95*imp + Cp (1-imp)* | C = | **0.905** | |
| 1-9. Enter design rainfall depth of the storm (in), *Pi* | Pi = | 0.75 | in |
| 1-10. Calculate rainfall depth (ft), *P = Pi/12* | P = | **0.0625** | ft |
| 1-11. Calculate water quality design volume ($ft^3$), *SQDV = 43560×C*P*Aretain* | **SQDV =** | **1486** | **$ft^3$** |
| **Step 2: Determine the design percolation rate** | | | |
| 2-1. Enter the design saturated hydraulic conductivity of the amended filter media (in/hr, 2.5 recommended), Kdesign | Kdesign = | 2.50 | in/hr |
| **Step 3: Calculate the surface area** | | | |
| 3-1. Enter water quality design volume ($ft^3$), *SQDV* | SQDV = | **1486** | $ft^3$ |
| 3-2. Enter design saturated hydraulic conductivity (in/hr), *Kdesign* | Kdesign = | **2.50** | in/hr |
| 3-3. Enter the ponding depth (max 1.5 ft for Bioretention, 1.0 ft for Planter Box) above area, *dp* | dp = | 1 | ft |
| 3-4. Calculate the drawdown time for the ponded water to filter through media (hours), *t ponding = (dp / Kdesign) * 12* | t ponding = | **4.8** | hrs |
| 3-5. Enter the storm duration for routing calculations (use 3 hours), *Trouting* | Trouting = | 3 | hrs |

**BMP Sizing Worksheet**
**BIO-2 Planter Box - Parking**

| | | | |
|---|---|---|---|
| 3-6. Calculate depth of water (ft) filtered by using the min. of the following two equations:<br>d filtered,1 = (Kdesign * Trouting) / 12 | d filtered,1 = | 0.63 | ft |
| d filtered,2 = dp / 2 | d filtered,2 = | 0.50 | ft |
| 3-7. Enter the resultant depth (the minimum of the two calculated above), *d filtered* | d filtered = | | ft |
| 3-8. Calculate the infiltrating surface area as follows ($ft^2$):<br>Areq = SQDV / (dp + d filtered) | **Areq =** | 1485.71 | $ft^2$ |
| Infiltration will be met through a proprietary device, therefore, neither the infiltration basin design or the infiltration trench design apply to this application. | | | |

*Taken from the Technical Guidance Manual for Stormwater Quality Control Measures 2011

DESIGN ASSOCIATES INC

# Attachment E

BMP Specification Sheets

## BIO-1: Bioretention with Underdrain

Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, and plantings. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants. Bioretention with an underdrain is a treatment control measures that can be used for areas with low permeability native soils or steep slopes. Bioretention may be designed without an underdrain to serve as a retention BMP in areas of high soil permeability (see INF-3 Bioretention) or partial retention/ partial biofiltration BMP (see INF-7: Bioinfiltration).





**Bioretention in Parking Lots**

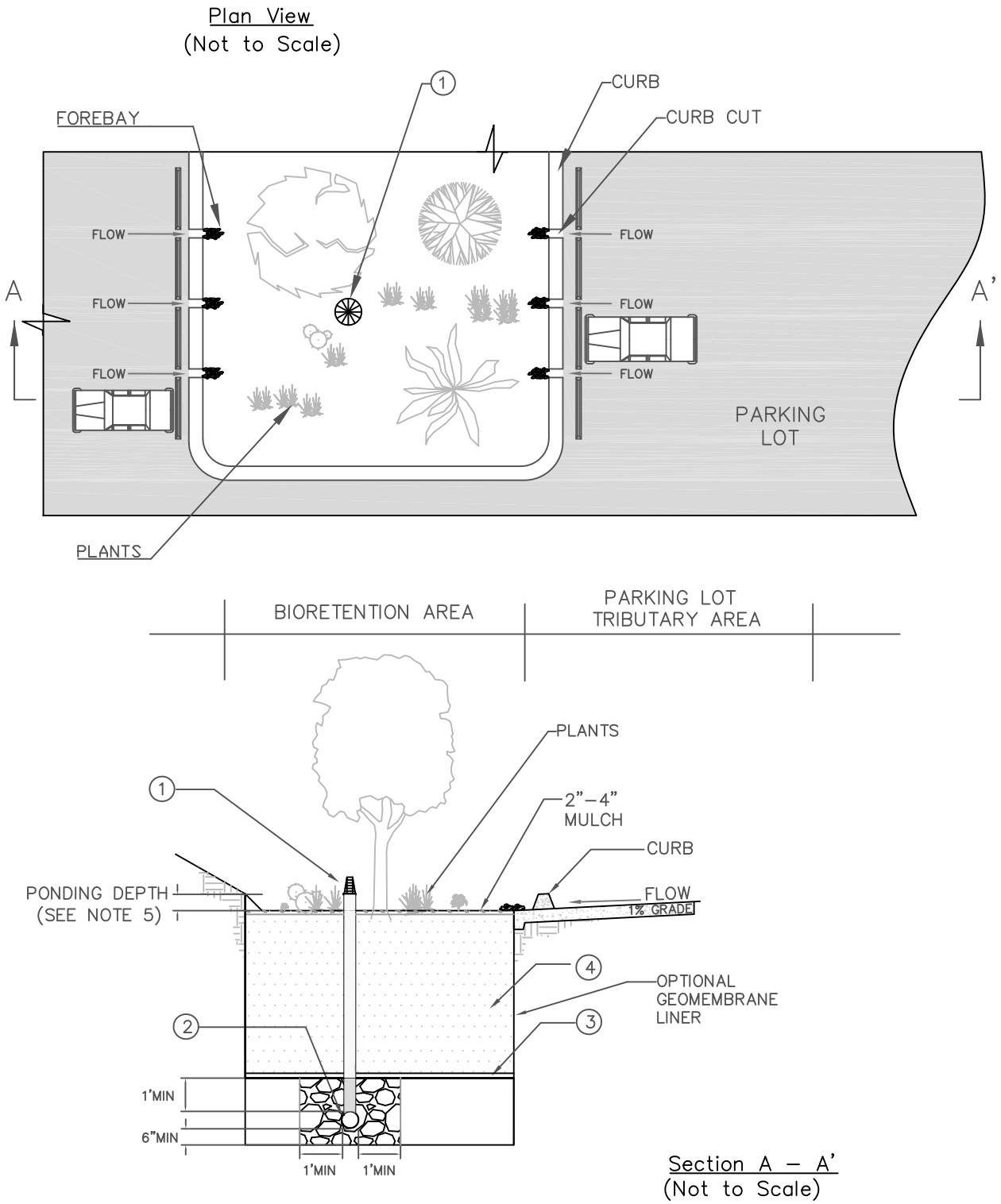
*Photo Credits: Geosyntec Consultants*

### Application

- Parking lots
- Roadway parkways and medians
- School entrances, courtyards, and walkways
- Playgrounds and sports fields

### Preventative Maintenance

- Repair small eroded areas
- Remove trash and debris and rake surface soils
- Remove accumulated fine sediments, dead leaves, and trash
- Remove weeds and prune back excess plant growth
- Remove sediment and debris accumulation near inlet and outlet structures
- Periodically observe function under wet weather conditions




NOTES:

① OVERFLOW DEVICE: VERTICAL RISER OR EQUIVALENT.
② PERFORATED 6" MIN PVC PIPE UNDERDRAIN.
③ OPTIONAL CHOKING GRAVEL LAYER.
④ 2' MIN PLANTING MIX; 3' PREFERRED.
⑤ PONDING DEPTH 18" WITH FENCE; 6" WITHOUT FENCE.

Geosyntec consultants

Figure 6-10: Bioretention with Underdrain

## BIO-2: Planter Box

Planter boxes are bioretention treatment control measures that are completely contained within an impermeable structure with an underdrain (they do not infiltrate). These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, plantings, and an underdrain within the planter box. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants. Planter boxes are comprised of a variety of materials, usually chosen to be the same material as the adjacent building or sidewalk.

Planter boxes may be placed adjacent to or near buildings, other structures, or sidewalks. Planter boxes can be used directly adjacent to buildings beneath downspouts as long as the boxes are properly lined on the building side and the overflow outlet discharges away from the building to ensure water does not percolate into footings or foundations. They can also be placed further away from buildings by conveying roof runoff in shallow engineered open conveyances, shallow pipes, or other innovative drainage structures.



**Planter boxes extending along a building wall**

*Photo Credit: Geosyntec Consultants*

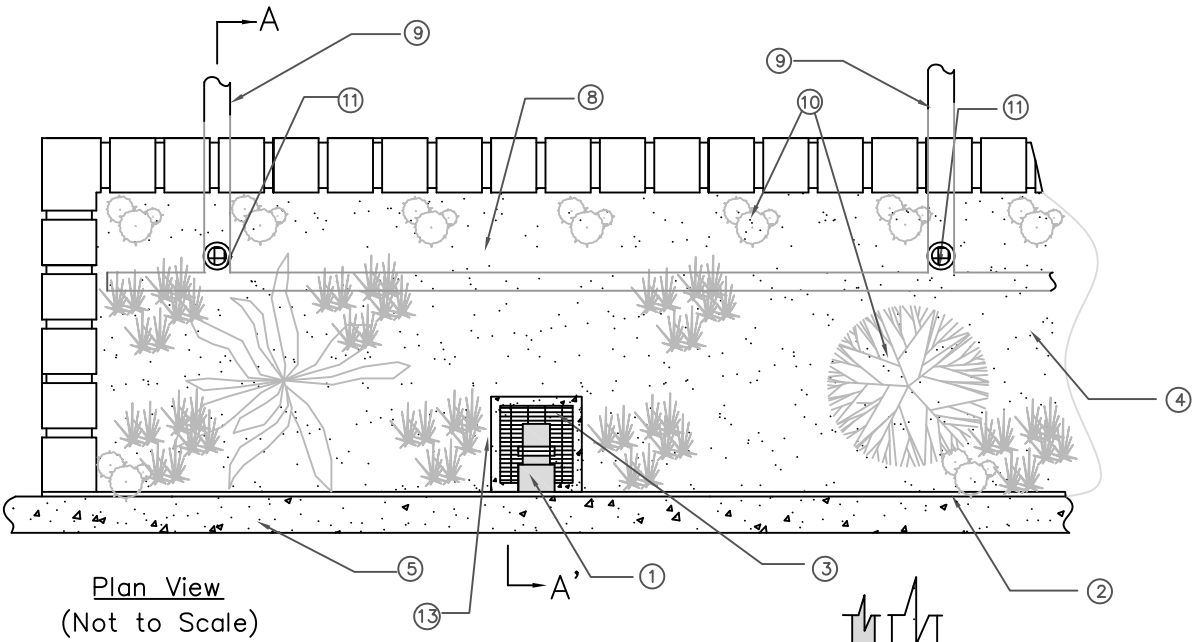
### Application

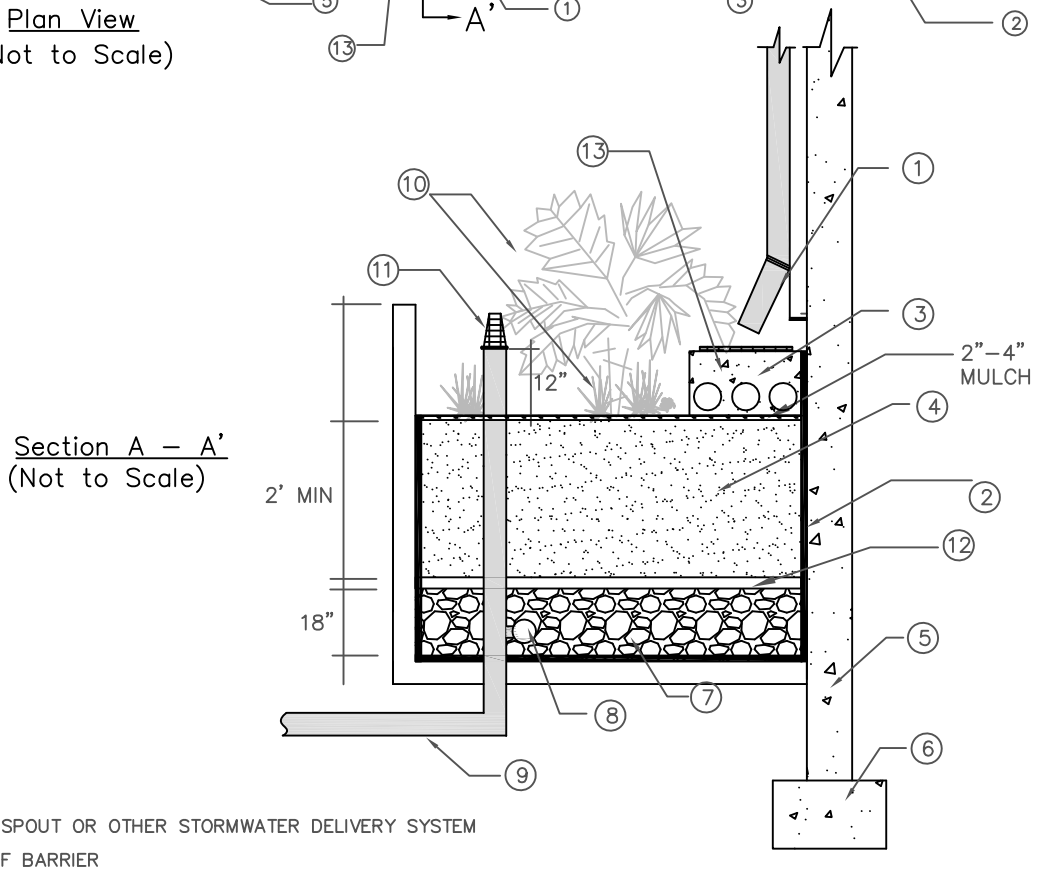
- Areas adjacent to buildings and sidewalks
- Building entrances, courtyards, and walkways

### Preventative Maintenance

- Repair small eroded areas
- Remove trash and debris and rake surface soils
- Remove accumulated fine sediments, dead leaves, and trash
- Remove weeds and prune back excess plant growth
- Remove sediment and debris accumulation near inlet and outlet structures

  Periodically observe function under wet weather conditions




NOTES:

1. ROOF DOWNSPOUT OR OTHER STORMWATER DELIVERY SYSTEM
2. WATERPROOF BARRIER
3. SHALLOW ENERGY DISSIPATOR BASIN DISPERSES FLOW AT SOIL SURFACE
4. SOIL MIX (SEE PLANTING MEDIA SECTION)
5. BUILDING
6. FOUNDATION. INSTALL FOUNDATION DRAINS AS NEEDED
7. GRAVEL BEDDING (SEE UNDERDRAIN)
8. PERFORATED PIPE SHALL RUN ENTIRE LENGTH OF PLANTER
9. CONNECTION TO DOWNSTREAM CONVEYANCE SYSTEM
10. PLANTS
11. SET OVERFLOW 2" BELOW THE TOP OF THE PLANTER
12. OPTIONAL CHOKING GRAVEL LAYER

Geosyntec consultants

Figure 6-11: Planter Box



A nature-based stormwater treatment system integrating a bioretention system and our own soil media that provides filtration, adsorption, and biochemical processing of pollutants. Its modular linear design easily adapts to a wide range of site constraints – it fits virtually anywhere!

Maintenance is simple with annual sediment inspections (and removal as necessary) in the pretreatment device. The vegetated bioretention system self-maintains soil permeability within the biofilter by breaking down organic solids to gases and constantly creating macropore structure.

**Dimensions and Capacity:**

Length – 24 feet

Width – 4 feet (at lands surface)

Depth – 4 feet

Overall Footprint Installed – 432 square feet (including subsurface pretreatment and storage)

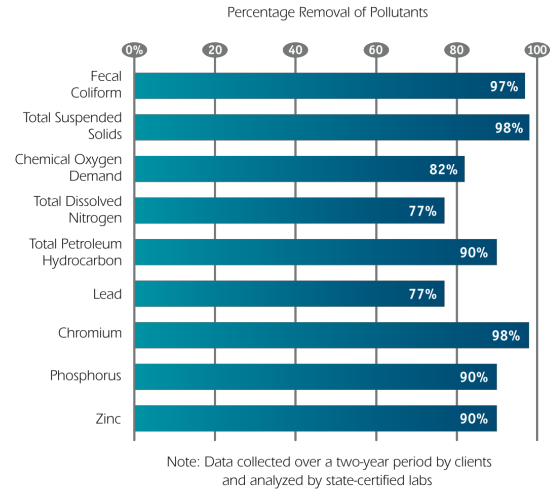
Water Quality Volume Treated: 907 cubic feet (6800 gallons)

**Installation and Assembly:**

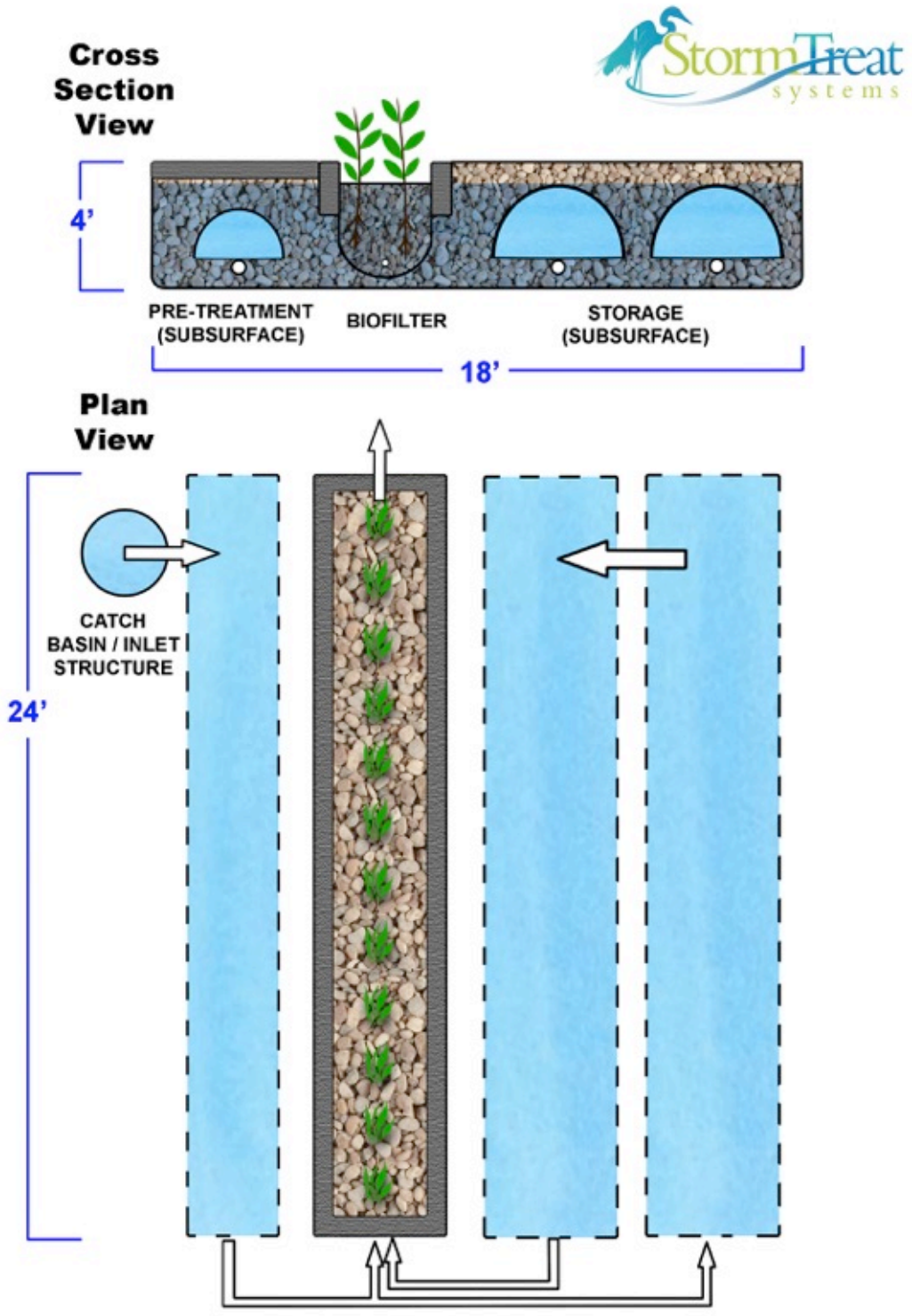
The StormTreat System is shipped to the construction site as modular components along with our own soil media mix and plants. A StormTreat representative will assist with installation and planting. The site contractor will provide excavation services and approximately 6.5 yards of clean, washed 3/8-inch diameter stone for each StormTreat System unit.

## Performance Data

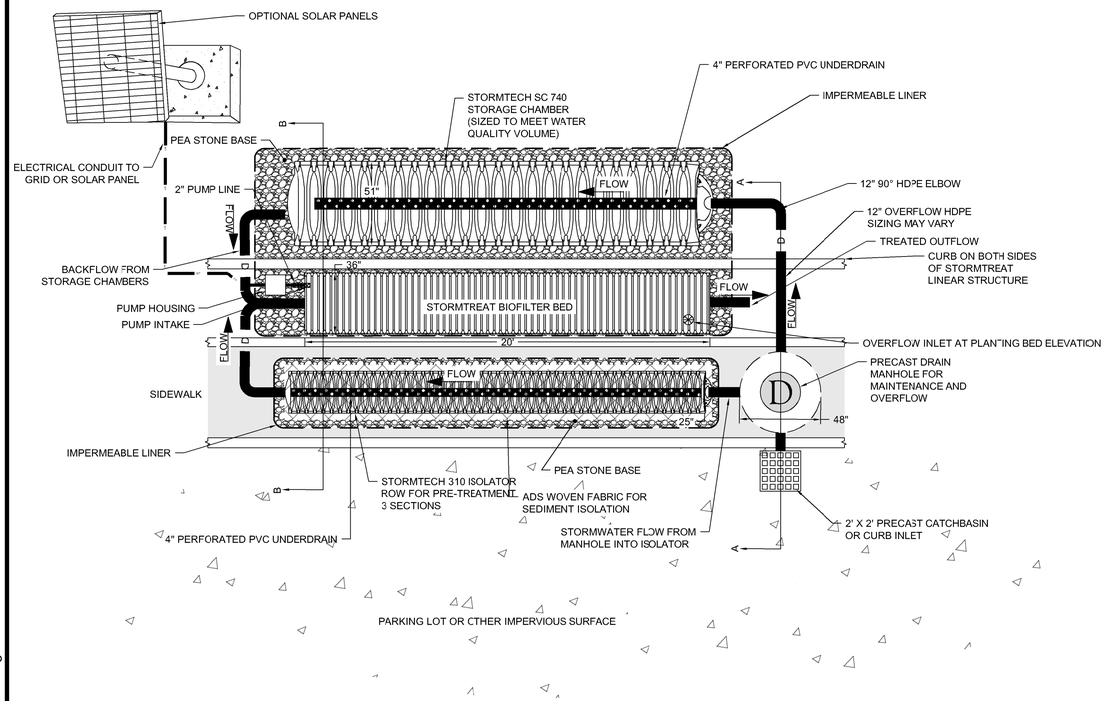
Verified by the Massachusetts Stategic Envirotechnology Partnership (STEP)



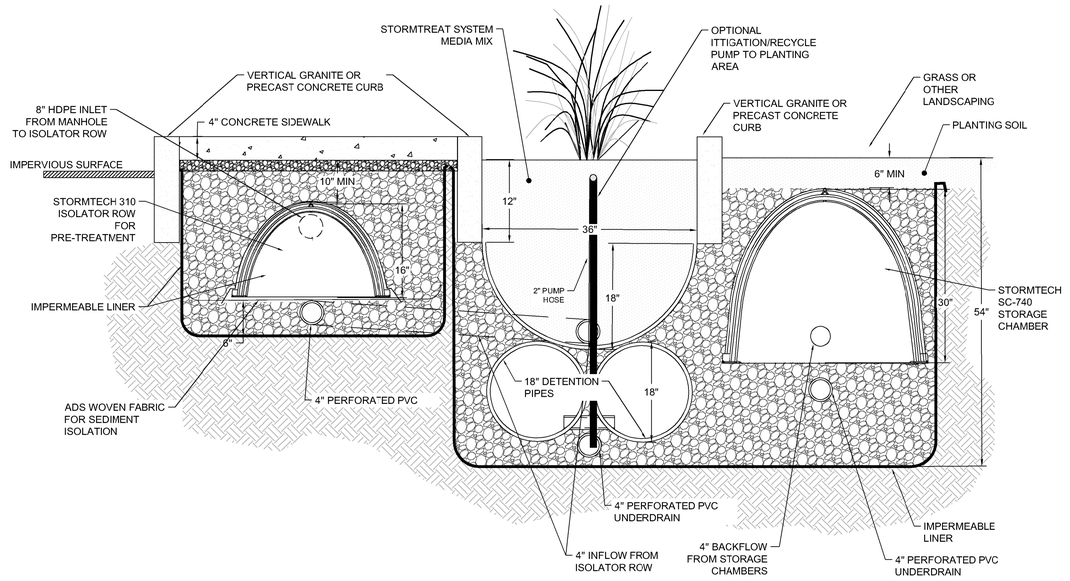

Note: Data collected over a two-year period by clients and analyzed by state-certified labs



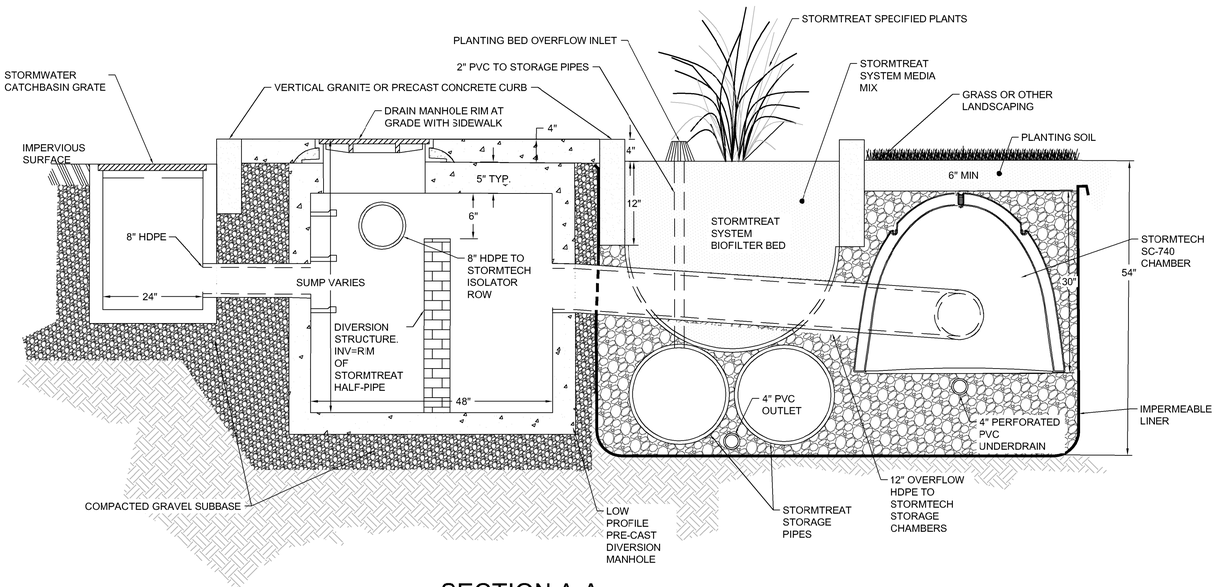

**Contact Information: Scott Horsley 508-364-7818 scott@stormtreat.com**



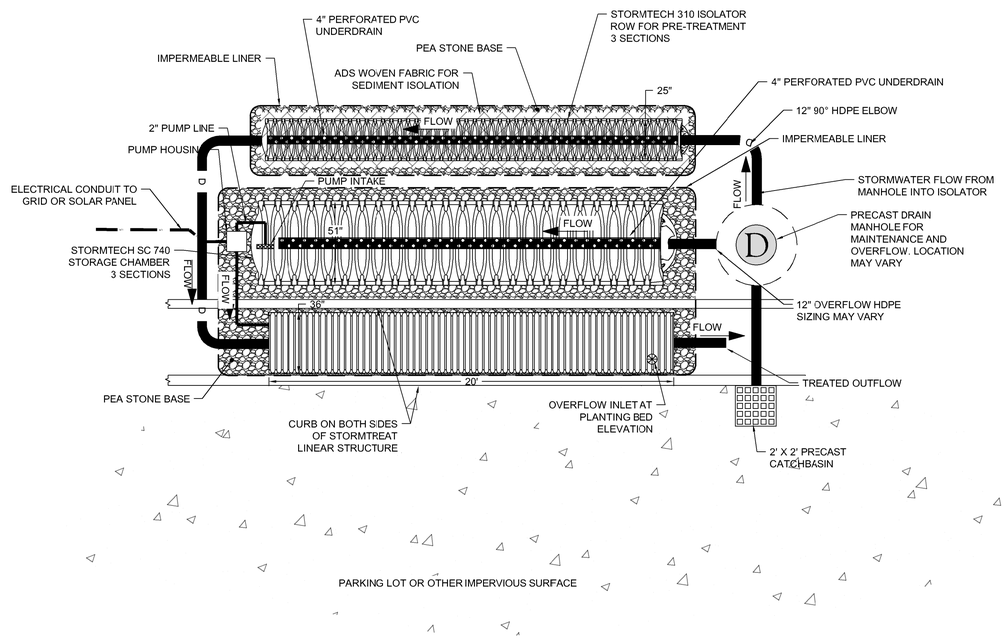

## PLAN VIEW
NOT TO SCALE




## SECTION B-B
NOT TO SCALE




## SECTION A-A
NOT TO SCALE




## PLAN VIEW - NO SIDEWALK
NOT TO SCALE

Revisions

| Rev. | Date | By | Appr | Description |
|---|---|---|---|---|


**Horsley Witten Group, Inc.**
*Sustainable Environmental Solutions*
*www.horsleywitten.com*
*90 Route 6A*
*Sandwich, MA 02563*
*508-833-6600 voice*
*508-833-3150 fax*


Checked By: Walter
Drawn By: Vasia
Designed By: Vasia
Date: January, 2018

Plan Set: STORMTREAT LINEAR STORMWATER TREATMENT

Plan Title: DETAIL DRAWINGS

Prepared For:
StormTreat Systems
Scott Horsley
Cotuit, MA
Phone: (508) 833-1033

Prepared By:
Horsley Witten Group
90 Route 6A
Sandwich, MA 02563
Phone: (508) 833-6600
Fax: (508) 833-3150
Dated: February, 2006

Registration:

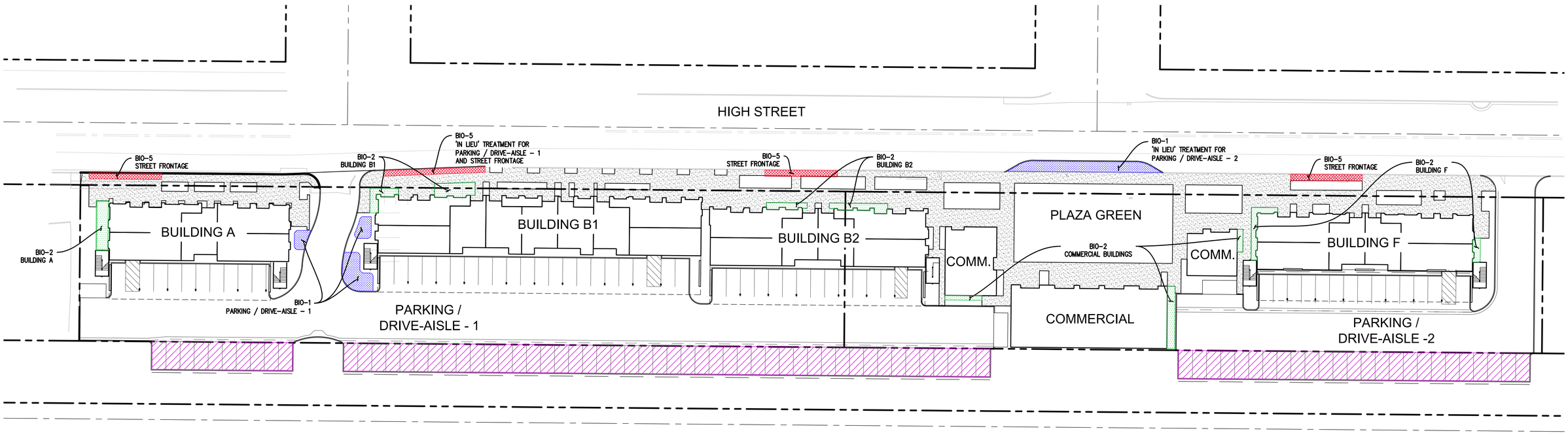
DRAFT
NOT FOR CONSTRUCTION

Project Number: ---

Sheet : 1 of 1

Sheet Number: C - 1


last modified: 01/31/18 printed: 01/31/18 by bk H:\Projects\2018\18003 StormTreat BMP Drawings\Drawings\STORMTREAT SYSTEMS DE.dwg




## STORMWATER TREATMENT LEGEND

- BIO-1: BIORETENTION WITH UNDERDRAIN
- BIO-2: PLANTER BOX
- BIO-5: PROPRIETARY BIOTREATMENT W/ DETENTION (STORMTREAT LINEAR STORMWATER TREATMENT OR APPROVED EQUAL)
- PERVIOUS PAVEMENT

0 15 30 60 90

Scale 1" = 30'

| | | | | |
|---|---|---|---|---|
| 6 | | | | |
| 5 | | | | |
| 4 | | | | |
| 3 | | | | |
| 2 | | | | |
| 1 | | | | |
| △ | DESCRIPTION OF REVISION | R.C.E. | APP'D | DATE |

REGISTERED PROFESSIONAL ENGINEER — RANDY CHAPMAN — No. 69814 EXP. 6/30/20 — CIVIL — STATE OF CALIFORNIA


PREPARED BY:
CCE DESIGN ASSOCIATES, INC.
711 E. DAILY DRIVE, SUITE 107
CAMARILLO, CA 93010
805.738.5434
www.ccedesignassociates.com

RANDY CHAPMAN R.C.E. NO. EXP. DATE DATE:


DESIGNED BY: RC/BB
DRAWN BY: RC/BB
CHECKED BY:
APPROVED BY:

ENGINEERING REVIEWED BY:

CITY ENGINEER DATE
SEAN CORIGAN, PE C39479
EXPIRATION DATE 12-31-17

# CITY OF MOORPARK

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

GRADING PERMIT NO.

ENGINEERING PROJECT NO.

## HIGH STREET DEPOT

HIGH STREET

## STORMWATER TREATMENT PLAN

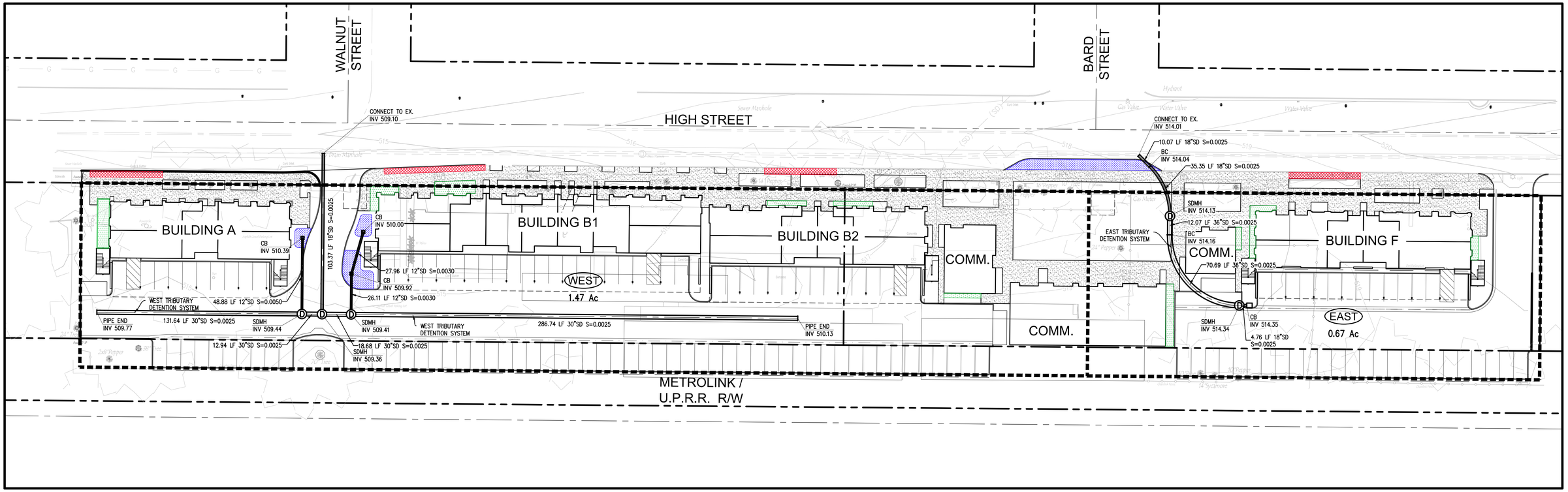
SHEET 1 OF 1

DRAWING NO.

DESIGN ASSOCIATES INC

# Attachment F

Hydrology Map




## HYDROLOGY AND HYDRAULICS NOTES AND LEGEND

1A
1424 SF

HYDROLOGY TRIBUTARY AREA IDENTIFICATION

AREA OF TRIBUTARY AREA

STORM DRAIN LINE

CATCH BASIN

TRIBUTARY AREA BOUNDARY

## HYDROLOGY SUMMARY TABLE

| AREA ID | AREA (Ac) | Q100 (cfs) |
|---|---|---|
| EXISTING | 2.15 | 4.62 |
| | | |
| EAST (PROPOSED) | 0.68 | 1.74 |
| WEST (PROPOSED) | 1.47 | 3.34 |
| TOTAL (PROPOSED) | 2.15 | 3.34 |
| | | |
| EAST (DETAINED) | 0.68 | 1.48 |
| WEST (DETAINED) | 1.47 | 2.61 |
| TOTAL (PROPOSED) | 2.15 | 4.09 |

0 15 30 60 90

Scale 1" = 30'

| | | | | | |
|---|---|---|---|---|---|
| 6 | | | | | |
| 5 | | | | | |
| 4 | | | | | |
| 3 | | | | | |
| 2 | | | | | |
| 1 | | | | | |
| △ | DESCRIPTION OF REVISION | R.C.E. | APP'D | DATE | |

REGISTERED PROFESSIONAL ENGINEER RANDY CHAPMAN No. 69814 EXP. 6/30/20 CIVIL STATE OF CALIFORNIA


PREPARED BY:
CCE DESIGN ASSOCIATES, INC.
450 ROSEWOOD AVENUE, SUITE 202
CAMARILLO, CA 93010
805.738.5434
www.ccedesignassociates.com

RANDY CHAPMAN R.C.E. NO. EXP. DATE DATE:


DESIGNED BY: RC/BB
DRAWN BY: RC/BB
CHECKED BY:
APPROVED BY:

ENGINEERING REVIEWED BY:

CITY ENGINEER DATE
SEAN CORIGAN, PE C39479
EXPIRATION DATE 12-31-17

# CITY OF MOORPARK

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

GRADING PERMIT NO.

ENGINEERING PROJECT NO.

## HIGH STREET DEPOT

HIGH STREET

## PRELIMINARY HYDROLOGY MAP

SHEET 1
OF 1
DRAWING NO.

# Appendix C

Air Quality and Greenhouse Gas Modeling

# High Street Station - 2021

**Ventura County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 8.87 | 1000sqft | 0.20 | 8,870.00 | 0 |
| Parking Lot | 139.00 | Space | 0.71 | 30,927.60 | 0 |
| City Park | 0.17 | Acre | 0.17 | 7,187.00 | 0 |
| High Turnover (Sit Down Restaurant) | 3.82 | 1000sqft | 0.09 | 3,824.00 | 0 |
| High Turnover (Sit Down Restaurant) | 2.79 | 1000sqft | 0.06 | 2,794.00 | 0 |
| Apartments Mid Rise | 91.00 | Dwelling Unit | 0.92 | 69,834.00 | 302 |
| Strip Mall | 8.40 | 1000sqft | 0.00 | 8,400.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2022 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 353.65 | **CH4 Intensity (lb/MWhr)** | 0.015 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted for 2030 RPS.

Land Use - Based on client info and CDOF population numbers.
City park proxy for plaza.
Conservative assumption that all ground-floor commercial space is retail.

Construction Phase - Extended AC phase to last half of BC phase.

Trips and VMT -

Demolition - Based on Google Earth approximations.

Architectural Coating - VCAPCD Rule 74.2

Vehicle Trips - City park used as proxy for landscaping and plaza.
Based on trip generation rates from traffic study.

Area Coating - VCAPCD 74.2

Energy Use - Commercial electricity energy reduced by 30% for 2019 Standards.

Water And Wastewater - Reduced indoor water use by 20% to account for CALGreen compliance.

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Energy Mitigation - Solar PV system required for low-rise residential buildings.

Stationary Sources - Process Boilers -

Stationary Sources - Process Boilers EF -

Area Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Parking | 250.00 | 100.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 250 | 100 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 250 | 100 |
| tblConstructionPhase | NumDays | 10.00 | 129.00 |
| tblEnergyUse | T24E | 8.71 | 6.10 |
| tblEnergyUse | T24E | 2.93 | 2.05 |

| | | | |
|---|---|---|---|
| tblLandUse | LandUseSquareFeet | 55,600.00 | 30,927.60 |
| tblLandUse | LandUseSquareFeet | 7,405.20 | 7,187.00 |
| tblLandUse | LandUseSquareFeet | 3,820.00 | 3,824.00 |
| tblLandUse | LandUseSquareFeet | 2,790.00 | 2,794.00 |
| tblLandUse | LandUseSquareFeet | 91,000.00 | 69,834.00 |
| tblLandUse | LotAcreage | 1.25 | 0.71 |
| tblLandUse | LotAcreage | 2.39 | 0.92 |
| tblLandUse | LotAcreage | 0.19 | 0.00 |
| tblLandUse | Population | 278.00 | 302.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.015 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 353.65 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblVehicleTrips | ST_TR | 22.75 | 0.00 |
| tblVehicleTrips | SU_TR | 16.74 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65 | 7.32 |
| tblVehicleTrips | WD_TR | 1.89 | 0.00 |
| tblVehicleTrips | WD_TR | 127.15 | 112.18 |
| tblVehicleTrips | WD_TR | 44.32 | 37.75 |
| tblWater | IndoorWaterUseRate | 5,929,016.33 | 4,743,213.06 |
| tblWater | IndoorWaterUseRate | 2,006,357.84 | 1,605,086.27 |
| tblWater | IndoorWaterUseRate | 622,209.18 | 497,767.34 |

## 2.0 Emissions Summary

## 2.1 Overall Construction

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.1100 | 0.9036 | 0.7294 | 1.4900e-003 | 0.0616 | 0.0442 | 0.1059 | 0.0196 | 0.0420 | 0.0616 | 0.0000 | 129.3990 | 129.3990 | 0.0228 | 0.0000 | 129.9683 |
| 2021 | 0.6497 | 1.6181 | 1.6016 | 3.3400e-003 | 0.0798 | 0.0757 | 0.1555 | 0.0214 | 0.0727 | 0.0941 | 0.0000 | 288.5822 | 288.5822 | 0.0411 | 0.0000 | 289.6095 |
| **Maximum** | **0.6497** | **1.6181** | **1.6016** | **3.3400e-003** | **0.0798** | **0.0757** | **0.1555** | **0.0214** | **0.0727** | **0.0941** | **0.0000** | **288.5822** | **288.5822** | **0.0411** | **0.0000** | **289.6095** |

### Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.1100 | 0.9036 | 0.7294 | 1.4900e-003 | 0.0616 | 0.0442 | 0.1059 | 0.0196 | 0.0420 | 0.0616 | 0.0000 | 129.3989 | 129.3989 | 0.0228 | 0.0000 | 129.9682 |
| 2021 | 0.6497 | 1.6181 | 1.6016 | 3.3400e-003 | 0.0798 | 0.0757 | 0.1555 | 0.0214 | 0.0727 | 0.0941 | 0.0000 | 288.5820 | 288.5820 | 0.0411 | 0.0000 | 289.6093 |
| **Maximum** | **0.6497** | **1.6181** | **1.6016** | **3.3400e-003** | **0.0798** | **0.0757** | **0.1555** | **0.0214** | **0.0727** | **0.0941** | **0.0000** | **288.5820** | **288.5820** | **0.0411** | **0.0000** | **289.6093** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| 1 | 9-1-2020 | 11-30-2020 | 0.7549 | 0.7549 |
| 2 | 12-1-2020 | 2-28-2021 | 0.6842 | 0.6842 |
| 3 | 3-1-2021 | 5-31-2021 | 0.8919 | 0.8919 |
| 4 | 6-1-2021 | 8-31-2021 | 0.8829 | 0.8829 |
| 5 | 9-1-2021 | 9-30-2021 | 0.0486 | 0.0486 |
| | | Highest | 0.8919 | 0.8919 |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.3985 | 7.8100e-003 | 0.6779 | 4.0000e-005 | | 3.7400e-003 | 3.7400e-003 | | 3.7400e-003 | 3.7400e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0700e-003 | 0.0000 | 1.1335 |
| Energy | 0.0150 | 0.1329 | 0.0918 | 8.2000e-004 | | 0.0103 | 0.0103 | | 0.0103 | 0.0103 | 0.0000 | 257.9218 | 257.9218 | 7.5000e-003 | 3.6500e-003 | 259.1956 |
| Mobile | 0.3772 | 1.4527 | 4.0075 | 0.0130 | 1.1920 | 0.0113 | 1.2033 | 0.3188 | 0.0105 | 0.3294 | 0.0000 | 1,194.1181 | 1,194.1181 | 0.0526 | 0.0000 | 1,195.4325 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 26.2569 | 0.0000 | 26.2569 | 1.5517 | 0.0000 | 65.0503 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.1719 | 22.2301 | 24.4020 | 0.2240 | 5.4600e-003 | 31.6284 |
| **Total** | **0.7906** | **1.5934** | **4.7771** | **0.0139** | **1.1920** | **0.0254** | **1.2174** | **0.3188** | **0.0246** | **0.3434** | **28.4288** | **1,475.3766** | **1,503.8054** | **1.8369** | **9.1100e-003** | **1,552.4404** |

## 2.2 Overall Operational

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.3985 | 7.8100e-003 | 0.6779 | 4.0000e-005 | | 3.7400e-003 | 3.7400e-003 | | 3.7400e-003 | 3.7400e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0700e-003 | 0.0000 | 1.1335 |
| Energy | 0.0150 | 0.1329 | 0.0918 | 8.2000e-004 | | 0.0103 | 0.0103 | | 0.0103 | 0.0103 | 0.0000 | 219.4259 | 219.4259 | 5.8700e-003 | 3.3200e-003 | 220.5616 |
| Mobile | 0.3484 | 1.2458 | 3.1904 | 9.3900e-003 | 0.8344 | 8.5300e-003 | 0.8429 | 0.2232 | 7.9500e-003 | 0.2311 | 0.0000 | 863.3190 | 863.3190 | 0.0416 | 0.0000 | 864.3583 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 26.2569 | 0.0000 | 26.2569 | 1.5517 | 0.0000 | 65.0503 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.1719 | 22.2301 | 24.4020 | 0.2240 | 5.4600e-003 | 31.6284 |
| **Total** | **0.7618** | **1.3865** | **3.9600** | **0.0103** | **0.8344** | **0.0226** | **0.8570** | **0.2232** | **0.0220** | **0.2452** | **28.4288** | **1,106.0816** | **1,134.5104** | **1.8243** | **8.7800e-003** | **1,182.7321** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **3.65** | **12.99** | **17.10** | **25.99** | **30.00** | **10.92** | **29.60** | **30.00** | **10.49** | **28.60** | **0.00** | **25.03** | **24.56** | **0.69** | **3.62** | **23.81** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 9/1/2020 | 9/28/2020 | 5 | 20 | |
| 2 | Site Preparation | Site Preparation | 9/29/2020 | 10/1/2020 | 5 | 3 | |
| 3 | Grading | Grading | 10/2/2020 | 10/9/2020 | 5 | 6 | |
| 4 | Building Construction | Building Construction | 10/10/2020 | 8/13/2021 | 5 | 220 | |
| 5 | Architectural Coating | Architectural Coating | 3/22/2021 | 9/16/2021 | 5 | 129 | |
| 6 | Paving | Paving | 8/14/2021 | 8/27/2021 | 5 | 10 | |

**Acres of Grading (Site Preparation Phase): 4.5**

**Acres of Grading (Grading Phase): 3**

**Acres of Paving: 0.91**

**Residential Indoor: 141,414; Residential Outdoor: 47,138; Non-Residential Indoor: 22,527; Non-Residential Outdoor: 7,509; Striped Parking Area: 2,388 (Architectural Coating – sqft)**

**OffRoad Equipment**

High Street Station - 2021 - Ventura County, Annual

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Demolition | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Scrapers | 1 | 8.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 2 | 7.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 7.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Building Construction | Welders | 3 | 8.00 | 46 | 0.45 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Paving | Cement and Mortar Mixers | 1 | 8.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 5 | 13.00 | 0.00 | 107.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 3 | 8.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 4 | 10.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 8 | 91.00 | 20.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 18.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0117 | 0.0000 | 0.0117 | 1.7800e-003 | 0.0000 | 1.7800e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0213 | 0.2095 | 0.1466 | 2.4000e-004 | | 0.0115 | 0.0115 | | 0.0108 | 0.0108 | 0.0000 | 21.0677 | 21.0677 | 5.4200e-003 | 0.0000 | 21.2031 |
| **Total** | **0.0213** | **0.2095** | **0.1466** | **2.4000e-004** | **0.0117** | **0.0115** | **0.0232** | **1.7800e-003** | **0.0108** | **0.0125** | **0.0000** | **21.0677** | **21.0677** | **5.4200e-003** | **0.0000** | **21.2031** |

## 3.2 Demolition - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 3.9000e-004 | 0.0148 | 3.2100e-003 | 4.0000e-005 | 9.2000e-004 | 6.0000e-005 | 9.8000e-004 | 2.5000e-004 | 6.0000e-005 | 3.1000e-004 | 0.0000 | 3.9857 | 3.9857 | 3.8000e-004 | 0.0000 | 3.9952 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.8000e-004 | 3.2000e-004 | 3.4700e-003 | 1.0000e-005 | 1.0500e-003 | 1.0000e-005 | 1.0600e-003 | 2.8000e-004 | 1.0000e-005 | 2.9000e-004 | 0.0000 | 0.8981 | 0.8981 | 2.0000e-005 | 0.0000 | 0.8987 |
| **Total** | **8.7000e-004** | **0.0151** | **6.6800e-003** | **5.0000e-005** | **1.9700e-003** | **7.0000e-005** | **2.0400e-003** | **5.3000e-004** | **7.0000e-005** | **6.0000e-004** | **0.0000** | **4.8838** | **4.8838** | **4.0000e-004** | **0.0000** | **4.8939** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0117 | 0.0000 | 0.0117 | 1.7800e-003 | 0.0000 | 1.7800e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0213 | 0.2095 | 0.1466 | 2.4000e-004 | | 0.0115 | 0.0115 | | 0.0108 | 0.0108 | 0.0000 | 21.0676 | 21.0676 | 5.4200e-003 | 0.0000 | 21.2030 |
| **Total** | **0.0213** | **0.2095** | **0.1466** | **2.4000e-004** | **0.0117** | **0.0115** | **0.0232** | **1.7800e-003** | **0.0108** | **0.0125** | **0.0000** | **21.0676** | **21.0676** | **5.4200e-003** | **0.0000** | **21.2030** |

## 3.2 Demolition - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 3.9000e-004 | 0.0148 | 3.2100e-003 | 4.0000e-005 | 9.2000e-004 | 6.0000e-005 | 9.8000e-004 | 2.5000e-004 | 6.0000e-005 | 3.1000e-004 | 0.0000 | 3.9857 | 3.9857 | 3.8000e-004 | 0.0000 | 3.9952 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.8000e-004 | 3.2000e-004 | 3.4700e-003 | 1.0000e-005 | 1.0500e-003 | 1.0000e-005 | 1.0600e-003 | 2.8000e-004 | 1.0000e-005 | 2.9000e-004 | 0.0000 | 0.8981 | 0.8981 | 2.0000e-005 | 0.0000 | 0.8987 |
| **Total** | **8.7000e-004** | **0.0151** | **6.6800e-003** | **5.0000e-005** | **1.9700e-003** | **7.0000e-005** | **2.0400e-003** | **5.3000e-004** | **7.0000e-005** | **6.0000e-004** | **0.0000** | **4.8838** | **4.8838** | **4.0000e-004** | **0.0000** | **4.8939** |

## 3.3 Site Preparation - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 2.3900e-003 | 0.0000 | 2.3900e-003 | 2.6000e-004 | 0.0000 | 2.6000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.4800e-003 | 0.0299 | 0.0169 | 4.0000e-005 | | 1.1700e-003 | 1.1700e-003 | | 1.0700e-003 | 1.0700e-003 | 0.0000 | 3.2290 | 3.2290 | 1.0400e-003 | 0.0000 | 3.2551 |
| **Total** | **2.4800e-003** | **0.0299** | **0.0169** | **4.0000e-005** | **2.3900e-003** | **1.1700e-003** | **3.5600e-003** | **2.6000e-004** | **1.0700e-003** | **1.3300e-003** | **0.0000** | **3.2290** | **3.2290** | **1.0400e-003** | **0.0000** | **3.2551** |

## 3.3 Site Preparation - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.0000e-005 | 3.0000e-005 | 3.2000e-004 | 0.0000 | 1.0000e-004 | 0.0000 | 1.0000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.0829 | 0.0829 | 0.0000 | 0.0000 | 0.0830 |
| **Total** | **4.0000e-005** | **3.0000e-005** | **3.2000e-004** | **0.0000** | **1.0000e-004** | **0.0000** | **1.0000e-004** | **3.0000e-005** | **0.0000** | **3.0000e-005** | **0.0000** | **0.0829** | **0.0829** | **0.0000** | **0.0000** | **0.0830** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 2.3900e-003 | 0.0000 | 2.3900e-003 | 2.6000e-004 | 0.0000 | 2.6000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.4800e-003 | 0.0299 | 0.0169 | 4.0000e-005 | | 1.1700e-003 | 1.1700e-003 | | 1.0700e-003 | 1.0700e-003 | 0.0000 | 3.2290 | 3.2290 | 1.0400e-003 | 0.0000 | 3.2551 |
| **Total** | **2.4800e-003** | **0.0299** | **0.0169** | **4.0000e-005** | **2.3900e-003** | **1.1700e-003** | **3.5600e-003** | **2.6000e-004** | **1.0700e-003** | **1.3300e-003** | **0.0000** | **3.2290** | **3.2290** | **1.0400e-003** | **0.0000** | **3.2551** |

## 3.3 Site Preparation - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.0000e-005 | 3.0000e-005 | 3.2000e-004 | 0.0000 | 1.0000e-004 | 0.0000 | 1.0000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.0829 | 0.0829 | 0.0000 | 0.0000 | 0.0830 |
| **Total** | **4.0000e-005** | **3.0000e-005** | **3.2000e-004** | **0.0000** | **1.0000e-004** | **0.0000** | **1.0000e-004** | **3.0000e-005** | **0.0000** | **3.0000e-005** | **0.0000** | **0.0829** | **0.0829** | **0.0000** | **0.0000** | **0.0830** |

## 3.4 Grading - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0197 | 0.0000 | 0.0197 | 0.0101 | 0.0000 | 0.0101 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 5.7700e-003 | 0.0640 | 0.0298 | 6.0000e-005 | | 2.9700e-003 | 2.9700e-003 | | 2.7300e-003 | 2.7300e-003 | 0.0000 | 5.4333 | 5.4333 | 1.7600e-003 | 0.0000 | 5.4773 |
| **Total** | **5.7700e-003** | **0.0640** | **0.0298** | **6.0000e-005** | **0.0197** | **2.9700e-003** | **0.0226** | **0.0101** | **2.7300e-003** | **0.0128** | **0.0000** | **5.4333** | **5.4333** | **1.7600e-003** | **0.0000** | **5.4773** |

## 3.4 Grading - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.1000e-004 | 7.0000e-005 | 8.0000e-004 | 0.0000 | 2.4000e-004 | 0.0000 | 2.4000e-004 | 6.0000e-005 | 0.0000 | 7.0000e-005 | 0.0000 | 0.2073 | 0.2073 | 1.0000e-005 | 0.0000 | 0.2074 |
| **Total** | **1.1000e-004** | **7.0000e-005** | **8.0000e-004** | **0.0000** | **2.4000e-004** | **0.0000** | **2.4000e-004** | **6.0000e-005** | **0.0000** | **7.0000e-005** | **0.0000** | **0.2073** | **0.2073** | **1.0000e-005** | **0.0000** | **0.2074** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0197 | 0.0000 | 0.0197 | 0.0101 | 0.0000 | 0.0101 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 5.7700e-003 | 0.0640 | 0.0298 | 6.0000e-005 | | 2.9700e-003 | 2.9700e-003 | | 2.7300e-003 | 2.7300e-003 | 0.0000 | 5.4333 | 5.4333 | 1.7600e-003 | 0.0000 | 5.4773 |
| **Total** | **5.7700e-003** | **0.0640** | **0.0298** | **6.0000e-005** | **0.0197** | **2.9700e-003** | **0.0226** | **0.0101** | **2.7300e-003** | **0.0128** | **0.0000** | **5.4333** | **5.4333** | **1.7600e-003** | **0.0000** | **5.4773** |

## 3.4 Grading - 2020

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.1000e-004 | 7.0000e-005 | 8.0000e-004 | 0.0000 | 2.4000e-004 | 0.0000 | 2.4000e-004 | 6.0000e-005 | 0.0000 | 7.0000e-005 | 0.0000 | 0.2073 | 0.2073 | 1.0000e-005 | 0.0000 | 0.2074 |
| **Total** | **1.1000e-004** | **7.0000e-005** | **8.0000e-004** | **0.0000** | **2.4000e-004** | **0.0000** | **2.4000e-004** | **6.0000e-005** | **0.0000** | **7.0000e-005** | **0.0000** | **0.2073** | **0.2073** | **1.0000e-005** | **0.0000** | **0.2074** |

## 3.5 Building Construction - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0675 | 0.5143 | 0.4395 | 7.4000e-004 | | 0.0280 | 0.0280 | | 0.0268 | 0.0268 | 0.0000 | 61.2551 | 61.2551 | 0.0124 | 0.0000 | 61.5659 |
| **Total** | **0.0675** | **0.5143** | **0.4395** | **7.4000e-004** | | **0.0280** | **0.0280** | | **0.0268** | **0.0268** | **0.0000** | **61.2551** | **61.2551** | **0.0124** | **0.0000** | **61.5659** |

## 3.5 Building Construction - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.0200e-003 | 0.0641 | 0.0171 | 1.5000e-004 | 3.9300e-003 | 3.8000e-004 | 4.3100e-003 | 1.1300e-003 | 3.7000e-004 | 1.5000e-003 | 0.0000 | 14.6950 | 14.6950 | 1.2100e-003 | 0.0000 | 14.7252 |
| Worker | 9.9000e-003 | 6.6700e-003 | 0.0717 | 2.1000e-004 | 0.0217 | 1.6000e-004 | 0.0218 | 5.7500e-003 | 1.4000e-004 | 5.8900e-003 | 0.0000 | 18.5451 | 18.5451 | 5.0000e-004 | 0.0000 | 18.5576 |
| **Total** | **0.0119** | **0.0707** | **0.0888** | **3.6000e-004** | **0.0256** | **5.4000e-004** | **0.0261** | **6.8800e-003** | **5.1000e-004** | **7.3900e-003** | **0.0000** | **33.2400** | **33.2400** | **1.7100e-003** | **0.0000** | **33.2828** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0675 | 0.5143 | 0.4395 | 7.4000e-004 | | 0.0280 | 0.0280 | | 0.0268 | 0.0268 | 0.0000 | 61.2550 | 61.2550 | 0.0124 | 0.0000 | 61.5658 |
| **Total** | **0.0675** | **0.5143** | **0.4395** | **7.4000e-004** | | **0.0280** | **0.0280** | | **0.0268** | **0.0268** | **0.0000** | **61.2550** | **61.2550** | **0.0124** | **0.0000** | **61.5658** |

## 3.5 Building Construction - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.0200e-003 | 0.0641 | 0.0171 | 1.5000e-004 | 3.9300e-003 | 3.8000e-004 | 4.3100e-003 | 1.1300e-003 | 3.7000e-004 | 1.5000e-003 | 0.0000 | 14.6950 | 14.6950 | 1.2100e-003 | 0.0000 | 14.7252 |
| Worker | 9.9000e-003 | 6.6700e-003 | 0.0717 | 2.1000e-004 | 0.0217 | 1.6000e-004 | 0.0218 | 5.7500e-003 | 1.4000e-004 | 5.8900e-003 | 0.0000 | 18.5451 | 18.5451 | 5.0000e-004 | 0.0000 | 18.5576 |
| **Total** | **0.0119** | **0.0707** | **0.0888** | **3.6000e-004** | **0.0256** | **5.4000e-004** | **0.0261** | **6.8800e-003** | **5.1000e-004** | **7.3900e-003** | **0.0000** | **33.2400** | **33.2400** | **1.7100e-003** | **0.0000** | **33.2828** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1646 | 1.2902 | 1.1723 | 2.0100e-003 | | 0.0658 | 0.0658 | | 0.0630 | 0.0630 | 0.0000 | 167.1572 | 167.1572 | 0.0329 | 0.0000 | 167.9794 |
| **Total** | **0.1646** | **1.2902** | **1.1723** | **2.0100e-003** | | **0.0658** | **0.0658** | | **0.0630** | **0.0630** | **0.0000** | **167.1572** | **167.1572** | **0.0329** | **0.0000** | **167.9794** |

## 3.5 Building Construction - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 4.6400e-003 | 0.1570 | 0.0423 | 4.1000e-004 | 0.0107 | 4.4000e-004 | 0.0112 | 3.0900e-003 | 4.2000e-004 | 3.5100e-003 | 0.0000 | 39.8363 | 39.8363 | 3.1700e-003 | 0.0000 | 39.9155 |
| Worker | 0.0253 | 0.0164 | 0.1805 | 5.4000e-004 | 0.0591 | 4.2000e-004 | 0.0595 | 0.0157 | 3.8000e-004 | 0.0161 | 0.0000 | 49.0857 | 49.0857 | 1.2400e-003 | 0.0000 | 49.1168 |
| **Total** | **0.0300** | **0.1734** | **0.2227** | **9.5000e-004** | **0.0698** | **8.6000e-004** | **0.0706** | **0.0188** | **8.0000e-004** | **0.0196** | **0.0000** | **88.9221** | **88.9221** | **4.4100e-003** | **0.0000** | **89.0323** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1646 | 1.2902 | 1.1723 | 2.0100e-003 | | 0.0658 | 0.0658 | | 0.0630 | 0.0630 | 0.0000 | 167.1570 | 167.1570 | 0.0329 | 0.0000 | 167.9792 |
| **Total** | **0.1646** | **1.2902** | **1.1723** | **2.0100e-003** | | **0.0658** | **0.0658** | | **0.0630** | **0.0630** | **0.0000** | **167.1570** | **167.1570** | **0.0329** | **0.0000** | **167.9792** |

## 3.5 Building Construction - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 4.6400e-003 | 0.1570 | 0.0423 | 4.1000e-004 | 0.0107 | 4.4000e-004 | 0.0112 | 3.0900e-003 | 4.2000e-004 | 3.5100e-003 | 0.0000 | 39.8363 | 39.8363 | 3.1700e-003 | 0.0000 | 39.9155 |
| Worker | 0.0253 | 0.0164 | 0.1805 | 5.4000e-004 | 0.0591 | 4.2000e-004 | 0.0595 | 0.0157 | 3.8000e-004 | 0.0161 | 0.0000 | 49.0857 | 49.0857 | 1.2400e-003 | 0.0000 | 49.1168 |
| **Total** | **0.0300** | **0.1734** | **0.2227** | **9.5000e-004** | **0.0698** | **8.6000e-004** | **0.0706** | **0.0188** | **8.0000e-004** | **0.0196** | **0.0000** | **88.9221** | **88.9221** | **4.4100e-003** | **0.0000** | **89.0323** |

## 3.6 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.4302 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0141 | 0.0985 | 0.1172 | 1.9000e-004 | | 6.0700e-003 | 6.0700e-003 | | 6.0700e-003 | 6.0700e-003 | 0.0000 | 16.4685 | 16.4685 | 1.1300e-003 | 0.0000 | 16.4967 |
| **Total** | **0.4443** | **0.0985** | **0.1172** | **1.9000e-004** | | **6.0700e-003** | **6.0700e-003** | | **6.0700e-003** | **6.0700e-003** | **0.0000** | **16.4685** | **16.4685** | **1.1300e-003** | **0.0000** | **16.4967** |

## 3.6 Architectural Coating - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.0200e-003 | 2.6000e-003 | 0.0286 | 9.0000e-005 | 9.3600e-003 | 7.0000e-005 | 9.4300e-003 | 2.4900e-003 | 6.0000e-005 | 2.5500e-003 | 0.0000 | 7.7795 | 7.7795 | 2.0000e-004 | 0.0000 | 7.7844 |
| **Total** | **4.0200e-003** | **2.6000e-003** | **0.0286** | **9.0000e-005** | **9.3600e-003** | **7.0000e-005** | **9.4300e-003** | **2.4900e-003** | **6.0000e-005** | **2.5500e-003** | **0.0000** | **7.7795** | **7.7795** | **2.0000e-004** | **0.0000** | **7.7844** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.4302 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0141 | 0.0985 | 0.1172 | 1.9000e-004 | | 6.0700e-003 | 6.0700e-003 | | 6.0700e-003 | 6.0700e-003 | 0.0000 | 16.4685 | 16.4685 | 1.1300e-003 | 0.0000 | 16.4967 |
| **Total** | **0.4443** | **0.0985** | **0.1172** | **1.9000e-004** | | **6.0700e-003** | **6.0700e-003** | | **6.0700e-003** | **6.0700e-003** | **0.0000** | **16.4685** | **16.4685** | **1.1300e-003** | **0.0000** | **16.4967** |

## 3.6 Architectural Coating - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.0200e-003 | 2.6000e-003 | 0.0286 | 9.0000e-005 | 9.3600e-003 | 7.0000e-005 | 9.4300e-003 | 2.4900e-003 | 6.0000e-005 | 2.5500e-003 | 0.0000 | 7.7795 | 7.7795 | 2.0000e-004 | 0.0000 | 7.7844 |
| **Total** | **4.0200e-003** | **2.6000e-003** | **0.0286** | **9.0000e-005** | **9.3600e-003** | **7.0000e-005** | **9.4300e-003** | **2.4900e-003** | **6.0000e-005** | **2.5500e-003** | **0.0000** | **7.7795** | **7.7795** | **2.0000e-004** | **0.0000** | **7.7844** |

## 3.7 Paving - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 5.3200e-003 | 0.0532 | 0.0589 | 9.0000e-005 | | 2.9100e-003 | 2.9100e-003 | | 2.6900e-003 | 2.6900e-003 | 0.0000 | 7.7524 | 7.7524 | 2.4600e-003 | 0.0000 | 7.8138 |
| Paving | 1.1900e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **6.5100e-003** | **0.0532** | **0.0589** | **9.0000e-005** | | **2.9100e-003** | **2.9100e-003** | | **2.6900e-003** | **2.6900e-003** | **0.0000** | **7.7524** | **7.7524** | **2.4600e-003** | **0.0000** | **7.8138** |

## 3.7 Paving - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.6000e-004 | 1.7000e-004 | 1.8500e-003 | 1.0000e-005 | 6.0000e-004 | 0.0000 | 6.1000e-004 | 1.6000e-004 | 0.0000 | 1.6000e-004 | 0.0000 | 0.5026 | 0.5026 | 1.0000e-005 | 0.0000 | 0.5029 |
| **Total** | **2.6000e-004** | **1.7000e-004** | **1.8500e-003** | **1.0000e-005** | **6.0000e-004** | **0.0000** | **6.1000e-004** | **1.6000e-004** | **0.0000** | **1.6000e-004** | **0.0000** | **0.5026** | **0.5026** | **1.0000e-005** | **0.0000** | **0.5029** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 5.3200e-003 | 0.0532 | 0.0589 | 9.0000e-005 | | 2.9100e-003 | 2.9100e-003 | | 2.6900e-003 | 2.6900e-003 | 0.0000 | 7.7524 | 7.7524 | 2.4600e-003 | 0.0000 | 7.8138 |
| Paving | 1.1900e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **6.5100e-003** | **0.0532** | **0.0589** | **9.0000e-005** | | **2.9100e-003** | **2.9100e-003** | | **2.6900e-003** | **2.6900e-003** | **0.0000** | **7.7524** | **7.7524** | **2.4600e-003** | **0.0000** | **7.8138** |

### 3.7 Paving - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.6000e-004 | 1.7000e-004 | 1.8500e-003 | 1.0000e-005 | 6.0000e-004 | 0.0000 | 6.1000e-004 | 1.6000e-004 | 0.0000 | 1.6000e-004 | 0.0000 | 0.5026 | 0.5026 | 1.0000e-005 | 0.0000 | 0.5029 |
| **Total** | **2.6000e-004** | **1.7000e-004** | **1.8500e-003** | **1.0000e-005** | **6.0000e-004** | **0.0000** | **6.1000e-004** | **1.6000e-004** | **0.0000** | **1.6000e-004** | **0.0000** | **0.5026** | **0.5026** | **1.0000e-005** | **0.0000** | **0.5029** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

Increase Density

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.3484 | 1.2458 | 3.1904 | 9.3900e-003 | 0.8344 | 8.5300e-003 | 0.8429 | 0.2232 | 7.9500e-003 | 0.2311 | 0.0000 | 863.3190 | 863.3190 | 0.0416 | 0.0000 | 864.3583 |
| Unmitigated | 0.3772 | 1.4527 | 4.0075 | 0.0130 | 1.1920 | 0.0113 | 1.2033 | 0.3188 | 0.0105 | 0.3294 | 0.0000 | 1,194.1181 | 1,194.1181 | 0.0526 | 0.0000 | 1,195.4325 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 666.12 | 581.49 | 533.26 | 1,754,689 | 1,228,282 |
| City Park | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 428.53 | 604.97 | 503.63 | 538,900 | 377,230 |
| High Turnover (Sit Down Restaurant) | 312.98 | 441.85 | 367.83 | 393,594 | 275,516 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 317.10 | 353.14 | 171.61 | 464,265 | 324,985 |
| Total | 1,724.73 | 1,981.45 | 1,576.33 | 3,151,448 | 2,206,014 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 10.80 | 7.30 | 7.50 | 32.90 | 18.00 | 49.10 | 86 | 11 | 3 |
| City Park | 9.50 | 7.30 | 7.30 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |
| High Turnover (Sit Down | 9.50 | 7.30 | 7.30 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| High Turnover (Sit Down | 9.50 | 7.30 | 7.30 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Other Asphalt Surfaces | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Parking Lot | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Strip Mall | 9.50 | 7.30 | 7.30 | 16.60 | 64.40 | 19.00 | 45 | 40 | 15 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| City Park | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| High Turnover (Sit Down Restaurant) | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Other Asphalt Surfaces | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Parking Lot | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Strip Mall | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

High Street Station - 2021 - Ventura County, Annual

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 71.4545 | 71.4545 | 3.0300e-003 | 6.1000e-004 | 71.7109 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 109.9504 | 109.9504 | 4.6600e-003 | 9.3000e-004 | 110.3450 |
| NaturalGas Mitigated | 0.0150 | 0.1329 | 0.0918 | 8.2000e-004 | | 0.0103 | 0.0103 | | 0.0103 | 0.0103 | 0.0000 | 147.9714 | 147.9714 | 2.8400e-003 | 2.7100e-003 | 148.8507 |
| NaturalGas Unmitigated | 0.0150 | 0.1329 | 0.0918 | 8.2000e-004 | | 0.0103 | 0.0103 | | 0.0103 | 0.0103 | 0.0000 | 147.9714 | 147.9714 | 2.8400e-003 | 2.7100e-003 | 148.8507 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Apartments Mid Rise | 1.0399e+006 | 5.6100e-003 | 0.0479 | 0.0204 | 3.1000e-004 | | 3.8700e-003 | 3.8700e-003 | | 3.8700e-003 | 3.8700e-003 | 0.0000 | 55.4930 | 55.4930 | 1.0600e-003 | 1.0200e-003 | 55.8227 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 724540 | 3.9100e-003 | 0.0355 | 0.0298 | 2.1000e-004 | | 2.7000e-003 | 2.7000e-003 | | 2.7000e-003 | 2.7000e-003 | 0.0000 | 38.6642 | 38.6642 | 7.4000e-004 | 7.1000e-004 | 38.8940 |
| High Turnover (Sit Down Restaurant) | 991640 | 5.3500e-003 | 0.0486 | 0.0408 | 2.9000e-004 | | 3.6900e-003 | 3.6900e-003 | | 3.6900e-003 | 3.6900e-003 | 0.0000 | 52.9177 | 52.9177 | 1.0100e-003 | 9.7000e-004 | 53.2321 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 16800 | 9.0000e-005 | 8.2000e-004 | 6.9000e-004 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | 0.0000 | 0.8965 | 0.8965 | 2.0000e-005 | 2.0000e-005 | 0.9018 |
| **Total** | | **0.0150** | **0.1329** | **0.0917** | **8.1000e-004** | | **0.0103** | **0.0103** | | **0.0103** | **0.0103** | **0.0000** | **147.9714** | **147.9714** | **2.8300e-003** | **2.7200e-003** | **148.8507** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Apartments Mid Rise | 1.0399e+006 | 5.6100e-003 | 0.0479 | 0.0204 | 3.1000e-004 | | 3.8700e-003 | 3.8700e-003 | | 3.8700e-003 | 3.8700e-003 | 0.0000 | 55.4930 | 55.4930 | 1.0600e-003 | 1.0200e-003 | 55.8227 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 724540 | 3.9100e-003 | 0.0355 | 0.0298 | 2.1000e-004 | | 2.7000e-003 | 2.7000e-003 | | 2.7000e-003 | 2.7000e-003 | 0.0000 | 38.6642 | 38.6642 | 7.4000e-004 | 7.1000e-004 | 38.8940 |
| High Turnover (Sit Down Restaurant) | 991640 | 5.3500e-003 | 0.0486 | 0.0408 | 2.9000e-004 | | 3.6900e-003 | 3.6900e-003 | | 3.6900e-003 | 3.6900e-003 | 0.0000 | 52.9177 | 52.9177 | 1.0100e-003 | 9.7000e-004 | 53.2321 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 16800 | 9.0000e-005 | 8.2000e-004 | 6.9000e-004 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | 0.0000 | 0.8965 | 0.8965 | 2.0000e-005 | 2.0000e-005 | 0.9018 |
| **Total** | | **0.0150** | **0.1329** | **0.0917** | **8.1000e-004** | | **0.0103** | **0.0103** | | **0.0103** | **0.0103** | **0.0000** | **147.9714** | **147.9714** | **2.8300e-003** | **2.7200e-003** | **148.8507** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 361752 | 58.0298 | 2.4600e-003 | 4.9000e-004 | 58.2380 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 129507 | 20.7747 | 8.8000e-004 | 1.8000e-004 | 20.8492 |
| High Turnover (Sit Down Restaurant) | 94624.4 | 15.1790 | 6.4000e-004 | 1.3000e-004 | 15.2334 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 10824.7 | 1.7364 | 7.0000e-005 | 1.0000e-005 | 1.7427 |
| Strip Mall | 88712.4 | 14.2306 | 6.0000e-004 | 1.2000e-004 | 14.2817 |
| **Total** | | **109.9504** | **4.6500e-003** | **9.3000e-004** | **110.3450** |

## 5.3 Energy by Land Use - Electricity

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 327469 | 52.5303 | 2.2300e-003 | 4.5000e-004 | 52.7188 |
| City Park | -34282.9 | -5.4994 | -0.0002 | -0.0001 | -5.5192 |
| High Turnover (Sit Down Restaurant) | 60341.5 | 9.6796 | 4.1000e-004 | 8.0000e-005 | 9.7143 |
| High Turnover (Sit Down Restaurant) | 95224.6 | 15.2753 | 6.5000e-004 | 1.3000e-004 | 15.3301 |
| Other Asphalt Surfaces | -34282.9 | -5.4994 | -0.0002 | -0.0001 | -5.5192 |
| Parking Lot | -23458.2 | -3.7630 | -0.0002 | 0.0000 | -3.7765 |
| Strip Mall | 54429.5 | 8.7312 | 3.7000e-004 | 7.0000e-005 | 8.7625 |
| **Total** | | **71.4545** | **3.0400e-003** | **6.0000e-004** | **71.7109** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.3985 | 7.8100e-003 | 0.6779 | 4.0000e-005 | | 3.7400e-003 | 3.7400e-003 | | 3.7400e-003 | 3.7400e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0700e-003 | 0.0000 | 1.1335 |
| Unmitigated | 0.3985 | 7.8100e-003 | 0.6779 | 4.0000e-005 | | 3.7400e-003 | 3.7400e-003 | | 3.7400e-003 | 3.7400e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0700e-003 | 0.0000 | 1.1335 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0439 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.3340 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0206 | 7.8100e-003 | 0.6779 | 4.0000e-005 | | 3.7400e-003 | 3.7400e-003 | | 3.7400e-003 | 3.7400e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0700e-003 | 0.0000 | 1.1335 |
| **Total** | **0.3985** | **7.8100e-003** | **0.6779** | **4.0000e-005** | | **3.7400e-003** | **3.7400e-003** | | **3.7400e-003** | **3.7400e-003** | **0.0000** | **1.1066** | **1.1066** | **1.0700e-003** | **0.0000** | **1.1335** |

## 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0439 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.3340 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0206 | 7.8100e-003 | 0.6779 | 4.0000e-005 | | 3.7400e-003 | 3.7400e-003 | | 3.7400e-003 | 3.7400e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0700e-003 | 0.0000 | 1.1335 |
| **Total** | **0.3985** | **7.8100e-003** | **0.6779** | **4.0000e-005** | | **3.7400e-003** | **3.7400e-003** | | **3.7400e-003** | **3.7400e-003** | **0.0000** | **1.1066** | **1.1066** | **1.0700e-003** | **0.0000** | **1.1335** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

High Street Station - 2021 - Ventura County, Annual

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 24.4020 | 0.2240 | 5.4600e-003 | 31.6284 |
| Unmitigated | 24.4020 | 0.2240 | 5.4600e-003 | 31.6284 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 4.74321 / 3.73786 | 18.0737 | 0.1553 | 3.7900e-003 | 23.0846 |
| City Park | 0 / 0.202552 | 0.3610 | 2.0000e-005 | 0.0000 | 0.3623 |
| High Turnover (Sit Down Restaurant) | 1.60509 / 0.128065 | 4.0901 | 0.0525 | 1.2700e-003 | 5.7785 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 0.497767 / 0.381354 | 1.8773 | 0.0163 | 4.0000e-004 | 2.4031 |
| **Total** | | **24.4020** | **0.2240** | **5.4600e-003** | **31.6284** |

### 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 4.74321 / 3.73786 | 18.0737 | 0.1553 | 3.7900e-003 | 23.0846 |
| City Park | 0 / 0.202552 | 0.3610 | 2.0000e-005 | 0.0000 | 0.3623 |
| High Turnover (Sit Down Restaurant) | 1.60509 / 0.128065 | 4.0901 | 0.0525 | 1.2700e-003 | 5.7785 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 0.497767 / 0.381354 | 1.8773 | 0.0163 | 4.0000e-004 | 2.4031 |
| **Total** | | **24.4020** | **0.2240** | **5.4600e-003** | **31.6284** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 26.2569 | 1.5517 | 0.0000 | 65.0503 |
| Unmitigated | 26.2569 | 1.5517 | 0.0000 | 65.0503 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 41.86 | 8.4972 | 0.5022 | 0.0000 | 21.0515 |
| City Park | 0.01 | 2.0300e-003 | 1.2000e-004 | 0.0000 | 5.0300e-003 |
| High Turnover (Sit Down Restaurant) | 78.66 | 15.9673 | 0.9436 | 0.0000 | 39.5582 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 8.82 | 1.7904 | 0.1058 | 0.0000 | 4.4356 |
| **Total** | | **26.2569** | **1.5517** | **0.0000** | **65.0503** |

## 8.2 Waste by Land Use

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 41.86 | 8.4972 | 0.5022 | 0.0000 | 21.0515 |
| City Park | 0.01 | 2.0300e-003 | 1.2000e-004 | 0.0000 | 5.0300e-003 |
| High Turnover (Sit Down Restaurant) | 78.66 | 15.9673 | 0.9436 | 0.0000 | 39.5582 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 8.82 | 1.7904 | 0.1058 | 0.0000 | 4.4356 |
| **Total** | | **26.2569** | **1.5517** | **0.0000** | **65.0503** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# High Street Station - 2021

**Ventura County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 8.87 | 1000sqft | 0.20 | 8,870.00 | 0 |
| Parking Lot | 139.00 | Space | 0.71 | 30,927.60 | 0 |
| City Park | 0.17 | Acre | 0.17 | 7,187.00 | 0 |
| High Turnover (Sit Down Restaurant) | 3.82 | 1000sqft | 0.09 | 3,824.00 | 0 |
| High Turnover (Sit Down Restaurant) | 2.79 | 1000sqft | 0.06 | 2,794.00 | 0 |
| Apartments Mid Rise | 91.00 | Dwelling Unit | 0.92 | 69,834.00 | 302 |
| Strip Mall | 8.40 | 1000sqft | 0.00 | 8,400.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2022 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 353.65 | **CH4 Intensity (lb/MWhr)** | 0.015 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

High Street Station - 2021 - Ventura County, Winter

Project Characteristics - Adjusted for 2030 RPS.

Land Use - Based on client info and CDOF population numbers.
City park proxy for plaza.
Conservative assumption that all ground-floor commercial space is retail.

Construction Phase - Extended AC phase to last half of BC phase.

Trips and VMT -

Demolition - Based on Google Earth approximations.

Architectural Coating - VCAPCD Rule 74.2

Vehicle Trips - City park used as proxy for landscaping and plaza.
Based on trip generation rates from traffic study.

Area Coating - VCAPCD 74.2

Energy Use - Commercial electricity energy reduced by 30% for 2019 Standards.

Water And Wastewater - Reduced indoor water use by 20% to account for CALGreen compliance.

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Energy Mitigation - Solar PV system required for low-rise residential buildings.

Stationary Sources - Process Boilers -

Stationary Sources - Process Boilers EF -

Area Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Parking | 250.00 | 100.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 250 | 100 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 250 | 100 |
| tblConstructionPhase | NumDays | 10.00 | 129.00 |
| tblEnergyUse | T24E | 8.71 | 6.10 |
| tblEnergyUse | T24E | 2.93 | 2.05 |

| | | | |
|---|---|---|---|
| tblLandUse | LandUseSquareFeet | 55,600.00 | 30,927.60 |
| tblLandUse | LandUseSquareFeet | 7,405.20 | 7,187.00 |
| tblLandUse | LandUseSquareFeet | 3,820.00 | 3,824.00 |
| tblLandUse | LandUseSquareFeet | 2,790.00 | 2,794.00 |
| tblLandUse | LandUseSquareFeet | 91,000.00 | 69,834.00 |
| tblLandUse | LotAcreage | 1.25 | 0.71 |
| tblLandUse | LotAcreage | 2.39 | 0.92 |
| tblLandUse | LotAcreage | 0.19 | 0.00 |
| tblLandUse | Population | 278.00 | 302.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.015 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 353.65 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblVehicleTrips | ST_TR | 22.75 | 0.00 |
| tblVehicleTrips | SU_TR | 16.74 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65 | 7.32 |
| tblVehicleTrips | WD_TR | 1.89 | 0.00 |
| tblVehicleTrips | WD_TR | 127.15 | 112.18 |
| tblVehicleTrips | WD_TR | 44.32 | 37.75 |
| tblWater | IndoorWaterUseRate | 5,929,016.33 | 4,743,213.06 |
| tblWater | IndoorWaterUseRate | 2,006,357.84 | 1,605,086.27 |
| tblWater | IndoorWaterUseRate | 622,209.18 | 497,767.34 |

## 2.0 Emissions Summary

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 2.7356 | 22.4375 | 17.9702 | 0.0370 | 6.6345 | 1.1594 | 7.6252 | 3.3893 | 1.0827 | 4.3008 | 0.0000 | 3,517.5091 | 3,517.5091 | 0.7691 | 0.0000 | 3,530.7594 |
| 2021 | 9.4167 | 19.7332 | 19.6511 | 0.0410 | 1.0306 | 0.9232 | 1.9539 | 0.2764 | 0.8883 | 1.1647 | 0.0000 | 3,906.6534 | 3,906.6534 | 0.5671 | 0.0000 | 3,920.0239 |
| **Maximum** | **9.4167** | **22.4375** | **19.6511** | **0.0410** | **6.6345** | **1.1594** | **7.6252** | **3.3893** | **1.0827** | **4.3008** | **0.0000** | **3,906.6534** | **3,906.6534** | **0.7691** | **0.0000** | **3,920.0239** |

### Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 2.7356 | 22.4375 | 17.9702 | 0.0370 | 6.6345 | 1.1594 | 7.6252 | 3.3893 | 1.0827 | 4.3008 | 0.0000 | 3,517.5091 | 3,517.5091 | 0.7691 | 0.0000 | 3,530.7594 |
| 2021 | 9.4167 | 19.7332 | 19.6511 | 0.0410 | 1.0306 | 0.9232 | 1.9539 | 0.2764 | 0.8883 | 1.1647 | 0.0000 | 3,906.6534 | 3,906.6534 | 0.5671 | 0.0000 | 3,920.0239 |
| **Maximum** | **9.4167** | **22.4375** | **19.6511** | **0.0410** | **6.6345** | **1.1594** | **7.6252** | **3.3893** | **1.0827** | **4.3008** | **0.0000** | **3,906.6534** | **3,906.6534** | **0.7691** | **0.0000** | **3,920.0239** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 2.2991 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | 0.0000 | 13.5540 | 13.5540 | 0.0131 | 0.0000 | 13.8824 |
| Energy | 0.0819 | 0.7280 | 0.5027 | 4.4700e-003 | | 0.0566 | 0.0566 | | 0.0566 | 0.0566 | | 893.7562 | 893.7562 | 0.0171 | 0.0164 | 899.0674 |
| Mobile | 2.4627 | 9.3077 | 26.2889 | 0.0811 | 7.6183 | 0.0721 | 7.6904 | 2.0346 | 0.0672 | 2.1018 | | 8,215.2212 | 8,215.2212 | 0.3759 | | 8,224.6175 |
| **Total** | **4.8438** | **10.1226** | **34.3240** | **0.0860** | **7.6183** | **0.1703** | **7.7886** | **2.0346** | **0.1654** | **2.2000** | **0.0000** | **9,122.5314** | **9,122.5314** | **0.4061** | **0.0164** | **9,137.5672** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 2.2991 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | 0.0000 | 13.5540 | 13.5540 | 0.0131 | 0.0000 | 13.8824 |
| Energy | 0.0819 | 0.7280 | 0.5027 | 4.4700e-003 | | 0.0566 | 0.0566 | | 0.0566 | 0.0566 | | 893.7562 | 893.7562 | 0.0171 | 0.0164 | 899.0674 |
| Mobile | 2.2816 | 7.9995 | 21.1912 | 0.0586 | 5.3328 | 0.0547 | 5.3875 | 1.4242 | 0.0510 | 1.4752 | | 5,939.4066 | 5,939.4066 | 0.3000 | | 5,946.9056 |
| **Total** | **4.6626** | **8.8143** | **29.2263** | **0.0635** | **5.3328** | **0.1529** | **5.4857** | **1.4242** | **0.1492** | **1.5734** | **0.0000** | **6,846.7167** | **6,846.7167** | **0.3302** | **0.0164** | **6,859.8553** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **3.74** | **12.92** | **14.85** | **26.14** | **30.00** | **10.21** | **29.57** | **30.00** | **9.81** | **28.48** | **0.00** | **24.95** | **24.95** | **18.69** | **0.00** | **24.93** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 9/1/2020 | 9/28/2020 | 5 | 20 | |
| 2 | Site Preparation | Site Preparation | 9/29/2020 | 10/1/2020 | 5 | 3 | |
| 3 | Grading | Grading | 10/2/2020 | 10/9/2020 | 5 | 6 | |
| 4 | Building Construction | Building Construction | 10/10/2020 | 8/13/2021 | 5 | 220 | |
| 5 | Architectural Coating | Architectural Coating | 3/22/2021 | 9/16/2021 | 5 | 129 | |
| 6 | Paving | Paving | 8/14/2021 | 8/27/2021 | 5 | 10 | |

**Acres of Grading (Site Preparation Phase): 4.5**

**Acres of Grading (Grading Phase): 3**

**Acres of Paving: 0.91**

**Residential Indoor: 141,414; Residential Outdoor: 47,138; Non-Residential Indoor: 22,527; Non-Residential Outdoor: 7,509; Striped Parking Area: 2,388 (Architectural Coating – sqft)**

**OffRoad Equipment**

High Street Station - 2021 - Ventura County, Winter

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Demolition | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Scrapers | 1 | 8.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 2 | 7.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 7.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Building Construction | Welders | 3 | 8.00 | 46 | 0.45 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Paving | Cement and Mortar Mixers | 1 | 8.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 5 | 13.00 | 0.00 | 107.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 3 | 8.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 4 | 10.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 8 | 91.00 | 20.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 18.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.1721 | 0.0000 | 1.1721 | 0.1775 | 0.0000 | 0.1775 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.1262 | 20.9463 | 14.6573 | 0.0241 | | 1.1525 | 1.1525 | | 1.0761 | 1.0761 | | 2,322.3127 | 2,322.3127 | 0.5970 | | 2,337.2363 |
| **Total** | **2.1262** | **20.9463** | **14.6573** | **0.0241** | **1.1721** | **1.1525** | **2.3246** | **0.1775** | **1.0761** | **1.2536** | | **2,322.3127** | **2,322.3127** | **0.5970** | | **2,337.2363** |

## 3.2 Demolition - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0397 | 1.4577 | 0.3336 | 3.9800e-003 | 0.0932 | 6.1500e-003 | 0.0993 | 0.0255 | 5.8900e-003 | 0.0314 | | 435.2828 | 435.2828 | 0.0429 | | 436.3548 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0538 | 0.0335 | 0.3508 | 9.9000e-004 | 0.1068 | 7.5000e-004 | 0.1076 | 0.0283 | 6.9000e-004 | 0.0290 | | 98.1989 | 98.1989 | 2.6600e-003 | | 98.2654 |
| **Total** | **0.0935** | **1.4912** | **0.6844** | **4.9700e-003** | **0.2000** | **6.9000e-003** | **0.2069** | **0.0538** | **6.5800e-003** | **0.0604** | | **533.4817** | **533.4817** | **0.0455** | | **534.6202** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.1721 | 0.0000 | 1.1721 | 0.1775 | 0.0000 | 0.1775 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.1262 | 20.9463 | 14.6573 | 0.0241 | | 1.1525 | 1.1525 | | 1.0761 | 1.0761 | 0.0000 | 2,322.3127 | 2,322.3127 | 0.5970 | | 2,337.2363 |
| **Total** | **2.1262** | **20.9463** | **14.6573** | **0.0241** | **1.1721** | **1.1525** | **2.3246** | **0.1775** | **1.0761** | **1.2536** | **0.0000** | **2,322.3127** | **2,322.3127** | **0.5970** | | **2,337.2363** |

## 3.2 Demolition - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0397 | 1.4577 | 0.3336 | 3.9800e-003 | 0.0932 | 6.1500e-003 | 0.0993 | 0.0255 | 5.8900e-003 | 0.0314 | | 435.2828 | 435.2828 | 0.0429 | | 436.3548 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0538 | 0.0335 | 0.3508 | 9.9000e-004 | 0.1068 | 7.5000e-004 | 0.1076 | 0.0283 | 6.9000e-004 | 0.0290 | | 98.1989 | 98.1989 | 2.6600e-003 | | 98.2654 |
| **Total** | **0.0935** | **1.4912** | **0.6844** | **4.9700e-003** | **0.2000** | **6.9000e-003** | **0.2069** | **0.0538** | **6.5800e-003** | **0.0604** | | **533.4817** | **533.4817** | **0.0455** | | **534.6202** |

## 3.3 Site Preparation - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5908 | 0.0000 | 1.5908 | 0.1718 | 0.0000 | 0.1718 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.6521 | 19.9196 | 11.2678 | 0.0245 | | 0.7771 | 0.7771 | | 0.7149 | 0.7149 | | 2,372.9062 | 2,372.9062 | 0.7675 | | 2,392.0924 |
| **Total** | **1.6521** | **19.9196** | **11.2678** | **0.0245** | **1.5908** | **0.7771** | **2.3678** | **0.1718** | **0.7149** | **0.8867** | | **2,372.9062** | **2,372.9062** | **0.7675** | | **2,392.0924** |

## 3.3 Site Preparation - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0331 | 0.0206 | 0.2159 | 6.1000e-004 | 0.0657 | 4.6000e-004 | 0.0662 | 0.0174 | 4.3000e-004 | 0.0179 | | 60.4301 | 60.4301 | 1.6400e-003 | | 60.4710 |
| **Total** | **0.0331** | **0.0206** | **0.2159** | **6.1000e-004** | **0.0657** | **4.6000e-004** | **0.0662** | **0.0174** | **4.3000e-004** | **0.0179** | | **60.4301** | **60.4301** | **1.6400e-003** | | **60.4710** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5908 | 0.0000 | 1.5908 | 0.1718 | 0.0000 | 0.1718 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.6521 | 19.9196 | 11.2678 | 0.0245 | | 0.7771 | 0.7771 | | 0.7149 | 0.7149 | 0.0000 | 2,372.9062 | 2,372.9062 | 0.7675 | | 2,392.0924 |
| **Total** | **1.6521** | **19.9196** | **11.2678** | **0.0245** | **1.5908** | **0.7771** | **2.3678** | **0.1718** | **0.7149** | **0.8867** | **0.0000** | **2,372.9062** | **2,372.9062** | **0.7675** | | **2,392.0924** |

## 3.3 Site Preparation - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0331 | 0.0206 | 0.2159 | 6.1000e-004 | 0.0657 | 4.6000e-004 | 0.0662 | 0.0174 | 4.3000e-004 | 0.0179 | | 60.4301 | 60.4301 | 1.6400e-003 | | 60.4710 |
| **Total** | **0.0331** | **0.0206** | **0.2159** | **6.1000e-004** | **0.0657** | **4.6000e-004** | **0.0662** | **0.0174** | **4.3000e-004** | **0.0179** | | **60.4301** | **60.4301** | **1.6400e-003** | | **60.4710** |

## 3.4 Grading - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.5523 | 0.0000 | 6.5523 | 3.3675 | 0.0000 | 3.3675 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.9219 | 21.3418 | 9.9355 | 0.0206 | | 0.9902 | 0.9902 | | 0.9110 | 0.9110 | | 1,996.4061 | 1,996.4061 | 0.6457 | | 2,012.5480 |
| **Total** | **1.9219** | **21.3418** | **9.9355** | **0.0206** | **6.5523** | **0.9902** | **7.5425** | **3.3675** | **0.9110** | **4.2784** | | **1,996.4061** | **1,996.4061** | **0.6457** | | **2,012.5480** |

## 3.4 Grading - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0414 | 0.0257 | 0.2698 | 7.6000e-004 | 0.0822 | 5.8000e-004 | 0.0827 | 0.0218 | 5.3000e-004 | 0.0223 | | 75.5376 | 75.5376 | 2.0500e-003 | | 75.5888 |
| **Total** | **0.0414** | **0.0257** | **0.2698** | **7.6000e-004** | **0.0822** | **5.8000e-004** | **0.0827** | **0.0218** | **5.3000e-004** | **0.0223** | | **75.5376** | **75.5376** | **2.0500e-003** | | **75.5888** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.5523 | 0.0000 | 6.5523 | 3.3675 | 0.0000 | 3.3675 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.9219 | 21.3418 | 9.9355 | 0.0206 | | 0.9902 | 0.9902 | | 0.9110 | 0.9110 | 0.0000 | 1,996.4061 | 1,996.4061 | 0.6457 | | 2,012.5480 |
| **Total** | **1.9219** | **21.3418** | **9.9355** | **0.0206** | **6.5523** | **0.9902** | **7.5425** | **3.3675** | **0.9110** | **4.2784** | **0.0000** | **1,996.4061** | **1,996.4061** | **0.6457** | | **2,012.5480** |

## 3.4 Grading - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0414 | 0.0257 | 0.2698 | 7.6000e-004 | 0.0822 | 5.8000e-004 | 0.0827 | 0.0218 | 5.3000e-004 | 0.0223 | | 75.5376 | 75.5376 | 2.0500e-003 | | 75.5888 |
| **Total** | **0.0414** | **0.0257** | **0.2698** | **7.6000e-004** | **0.0822** | **5.8000e-004** | **0.0827** | **0.0218** | **5.3000e-004** | **0.0223** | | **75.5376** | **75.5376** | **2.0500e-003** | | **75.5888** |

## 3.5 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.2879 | 17.4336 | 14.8972 | 0.0250 | | 0.9482 | 0.9482 | | 0.9089 | 0.9089 | | 2,288.8877 | 2,288.8877 | 0.4646 | | 2,300.5014 |
| **Total** | **2.2879** | **17.4336** | **14.8972** | **0.0250** | | **0.9482** | **0.9482** | | **0.9089** | **0.9089** | | **2,288.8877** | **2,288.8877** | **0.4646** | | **2,300.5014** |

## 3.5 Building Construction - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0708 | 2.1449 | 0.6175 | 5.0400e-003 | 0.1352 | 0.0132 | 0.1484 | 0.0389 | 0.0126 | 0.0515 | | 541.2291 | 541.2291 | 0.0468 | | 542.4000 |
| Worker | 0.3769 | 0.2341 | 2.4555 | 6.9000e-003 | 0.7475 | 5.2800e-003 | 0.7528 | 0.1983 | 4.8600e-003 | 0.2032 | | 687.3922 | 687.3922 | 0.0186 | | 687.8580 |
| **Total** | **0.4478** | **2.3791** | **3.0730** | **0.0119** | **0.8827** | **0.0185** | **0.9012** | **0.2372** | **0.0175** | **0.2547** | | **1,228.6213** | **1,228.6213** | **0.0655** | | **1,230.2580** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.2879 | 17.4336 | 14.8972 | 0.0250 | | 0.9482 | 0.9482 | | 0.9089 | 0.9089 | 0.0000 | 2,288.8877 | 2,288.8877 | 0.4646 | | 2,300.5014 |
| **Total** | **2.2879** | **17.4336** | **14.8972** | **0.0250** | | **0.9482** | **0.9482** | | **0.9089** | **0.9089** | **0.0000** | **2,288.8877** | **2,288.8877** | **0.4646** | | **2,300.5014** |

## 3.5 Building Construction - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0708 | 2.1449 | 0.6175 | 5.0400e-003 | 0.1352 | 0.0132 | 0.1484 | 0.0389 | 0.0126 | 0.0515 | | 541.2291 | 541.2291 | 0.0468 | | 542.4000 |
| Worker | 0.3769 | 0.2341 | 2.4555 | 6.9000e-003 | 0.7475 | 5.2800e-003 | 0.7528 | 0.1983 | 4.8600e-003 | 0.2032 | | 687.3922 | 687.3922 | 0.0186 | | 687.8580 |
| **Total** | **0.4478** | **2.3791** | **3.0730** | **0.0119** | **0.8827** | **0.0185** | **0.9012** | **0.2372** | **0.0175** | **0.2547** | | **1,228.6213** | **1,228.6213** | **0.0655** | | **1,230.2580** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.0451 | 16.0275 | 14.5629 | 0.0250 | | 0.8173 | 0.8173 | | 0.7831 | 0.7831 | | 2,288.9355 | 2,288.9355 | 0.4503 | | 2,300.1935 |
| **Total** | **2.0451** | **16.0275** | **14.5629** | **0.0250** | | **0.8173** | **0.8173** | | **0.7831** | **0.7831** | | **2,288.9355** | **2,288.9355** | **0.4503** | | **2,300.1935** |

## 3.5 Building Construction - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0597 | 1.9262 | 0.5592 | 5.0000e-003 | 0.1352 | 5.6700e-003 | 0.1409 | 0.0389 | 5.4300e-003 | 0.0443 | | 537.6470 | 537.6470 | 0.0449 | | 538.7691 |
| Worker | 0.3536 | 0.2109 | 2.2636 | 6.6900e-003 | 0.7475 | 5.1800e-003 | 0.7527 | 0.1983 | 4.7700e-003 | 0.2031 | | 666.7401 | 666.7401 | 0.0170 | | 667.1639 |
| **Total** | **0.4133** | **2.1371** | **2.8228** | **0.0117** | **0.8827** | **0.0109** | **0.8936** | **0.2372** | **0.0102** | **0.2474** | | **1,204.3871** | **1,204.3871** | **0.0618** | | **1,205.9330** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.0451 | 16.0275 | 14.5629 | 0.0250 | | 0.8173 | 0.8173 | | 0.7831 | 0.7831 | 0.0000 | 2,288.9355 | 2,288.9355 | 0.4503 | | 2,300.1935 |
| **Total** | **2.0451** | **16.0275** | **14.5629** | **0.0250** | | **0.8173** | **0.8173** | | **0.7831** | **0.7831** | **0.0000** | **2,288.9355** | **2,288.9355** | **0.4503** | | **2,300.1935** |

## 3.5 Building Construction - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0597 | 1.9262 | 0.5592 | 5.0000e-003 | 0.1352 | 5.6700e-003 | 0.1409 | 0.0389 | 5.4300e-003 | 0.0443 | | 537.6470 | 537.6470 | 0.0449 | | 538.7691 |
| Worker | 0.3536 | 0.2109 | 2.2636 | 6.6900e-003 | 0.7475 | 5.1800e-003 | 0.7527 | 0.1983 | 4.7700e-003 | 0.2031 | | 666.7401 | 666.7401 | 0.0170 | | 667.1639 |
| **Total** | **0.4133** | **2.1371** | **2.8228** | **0.0117** | **0.8827** | **0.0109** | **0.8936** | **0.2372** | **0.0102** | **0.2474** | | **1,204.3871** | **1,204.3871** | **0.0618** | | **1,205.9330** |

## 3.6 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 6.6695 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| **Total** | **6.8884** | **1.5268** | **1.8176** | **2.9700e-003** | | **0.0941** | **0.0941** | | **0.0941** | **0.0941** | | **281.4481** | **281.4481** | **0.0193** | | **281.9309** |

## 3.6 Architectural Coating - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0699 | 0.0417 | 0.4478 | 1.3200e-003 | 0.1479 | 1.0200e-003 | 0.1489 | 0.0392 | 9.4000e-004 | 0.0402 | | 131.8827 | 131.8827 | 3.3500e-003 | | 131.9665 |
| **Total** | **0.0699** | **0.0417** | **0.4478** | **1.3200e-003** | **0.1479** | **1.0200e-003** | **0.1489** | **0.0392** | **9.4000e-004** | **0.0402** | | **131.8827** | **131.8827** | **3.3500e-003** | | **131.9665** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 6.6695 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | 0.0000 | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| **Total** | **6.8884** | **1.5268** | **1.8176** | **2.9700e-003** | | **0.0941** | **0.0941** | | **0.0941** | **0.0941** | **0.0000** | **281.4481** | **281.4481** | **0.0193** | | **281.9309** |

## 3.6 Architectural Coating - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0699 | 0.0417 | 0.4478 | 1.3200e-003 | 0.1479 | 1.0200e-003 | 0.1489 | 0.0392 | 9.4000e-004 | 0.0402 | | 131.8827 | 131.8827 | 3.3500e-003 | | 131.9665 |
| **Total** | **0.0699** | **0.0417** | **0.4478** | **1.3200e-003** | **0.1479** | **1.0200e-003** | **0.1489** | **0.0392** | **9.4000e-004** | **0.0402** | | **131.8827** | **131.8827** | **3.3500e-003** | | **131.9665** |

## 3.7 Paving - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0633 | 10.6478 | 11.7756 | 0.0178 | | 0.5826 | 0.5826 | | 0.5371 | 0.5371 | | 1,709.1107 | 1,709.1107 | 0.5417 | | 1,722.6524 |
| Paving | 0.2384 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.3017** | **10.6478** | **11.7756** | **0.0178** | | **0.5826** | **0.5826** | | **0.5371** | **0.5371** | | **1,709.1107** | **1,709.1107** | **0.5417** | | **1,722.6524** |

## 3.7 Paving - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0583 | 0.0348 | 0.3731 | 1.1000e-003 | 0.1232 | 8.5000e-004 | 0.1241 | 0.0327 | 7.9000e-004 | 0.0335 | | 109.9022 | 109.9022 | 2.7900e-003 | | 109.9721 |
| **Total** | **0.0583** | **0.0348** | **0.3731** | **1.1000e-003** | **0.1232** | **8.5000e-004** | **0.1241** | **0.0327** | **7.9000e-004** | **0.0335** | | **109.9022** | **109.9022** | **2.7900e-003** | | **109.9721** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0633 | 10.6478 | 11.7756 | 0.0178 | | 0.5826 | 0.5826 | | 0.5371 | 0.5371 | 0.0000 | 1,709.1107 | 1,709.1107 | 0.5417 | | 1,722.6524 |
| Paving | 0.2384 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.3017** | **10.6478** | **11.7756** | **0.0178** | | **0.5826** | **0.5826** | | **0.5371** | **0.5371** | **0.0000** | **1,709.1107** | **1,709.1107** | **0.5417** | | **1,722.6524** |

### 3.7 Paving - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0583 | 0.0348 | 0.3731 | 1.1000e-003 | 0.1232 | 8.5000e-004 | 0.1241 | 0.0327 | 7.9000e-004 | 0.0335 | | 109.9022 | 109.9022 | 2.7900e-003 | | 109.9721 |
| **Total** | **0.0583** | **0.0348** | **0.3731** | **1.1000e-003** | **0.1232** | **8.5000e-004** | **0.1241** | **0.0327** | **7.9000e-004** | **0.0335** | | **109.9022** | **109.9022** | **2.7900e-003** | | **109.9721** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

Increase Density

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 2.2816 | 7.9995 | 21.1912 | 0.0586 | 5.3328 | 0.0547 | 5.3875 | 1.4242 | 0.0510 | 1.4752 | | 5,939.4066 | 5,939.4066 | 0.3000 | | 5,946.9056 |
| Unmitigated | 2.4627 | 9.3077 | 26.2889 | 0.0811 | 7.6183 | 0.0721 | 7.6904 | 2.0346 | 0.0672 | 2.1018 | | 8,215.2212 | 8,215.2212 | 0.3759 | | 8,224.6175 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 666.12 | 581.49 | 533.26 | 1,754,689 | 1,228,282 |
| City Park | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 428.53 | 604.97 | 503.63 | 538,900 | 377,230 |
| High Turnover (Sit Down Restaurant) | 312.98 | 441.85 | 367.83 | 393,594 | 275,516 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 317.10 | 353.14 | 171.61 | 464,265 | 324,985 |
| Total | 1,724.73 | 1,981.45 | 1,576.33 | 3,151,448 | 2,206,014 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 10.80 | 7.30 | 7.50 | 32.90 | 18.00 | 49.10 | 86 | 11 | 3 |
| City Park | 9.50 | 7.30 | 7.30 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |
| High Turnover (Sit Down | 9.50 | 7.30 | 7.30 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| High Turnover (Sit Down | 9.50 | 7.30 | 7.30 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Other Asphalt Surfaces | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Parking Lot | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Strip Mall | 9.50 | 7.30 | 7.30 | 16.60 | 64.40 | 19.00 | 45 | 40 | 15 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| City Park | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| High Turnover (Sit Down Restaurant) | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Other Asphalt Surfaces | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Parking Lot | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Strip Mall | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

High Street Station - 2021 - Ventura County, Winter

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.0819 | 0.7280 | 0.5027 | 4.4700e-003 | | 0.0566 | 0.0566 | | 0.0566 | 0.0566 | | 893.7562 | 893.7562 | 0.0171 | 0.0164 | 899.0674 |
| NaturalGas Unmitigated | 0.0819 | 0.7280 | 0.5027 | 4.4700e-003 | | 0.0566 | 0.0566 | | 0.0566 | 0.0566 | | 893.7562 | 893.7562 | 0.0171 | 0.0164 | 899.0674 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Mid Rise | 2849.04 | 0.0307 | 0.2626 | 0.1117 | 1.6800e-003 | | 0.0212 | 0.0212 | | 0.0212 | 0.0212 | | 335.1809 | 335.1809 | 6.4200e-003 | 6.1400e-003 | 337.1728 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1985.04 | 0.0214 | 0.1946 | 0.1635 | 1.1700e-003 | | 0.0148 | 0.0148 | | 0.0148 | 0.0148 | | 233.5343 | 233.5343 | 4.4800e-003 | 4.2800e-003 | 234.9221 |
| High Turnover (Sit Down Restaurant) | 2716.82 | 0.0293 | 0.2664 | 0.2237 | 1.6000e-003 | | 0.0202 | 0.0202 | | 0.0202 | 0.0202 | | 319.6260 | 319.6260 | 6.1300e-003 | 5.8600e-003 | 321.5254 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 46.0274 | 5.0000e-004 | 4.5100e-003 | 3.7900e-003 | 3.0000e-005 | | 3.4000e-004 | 3.4000e-004 | | 3.4000e-004 | 3.4000e-004 | | 5.4150 | 5.4150 | 1.0000e-004 | 1.0000e-004 | 5.4472 |
| **Total** | | **0.0819** | **0.7280** | **0.5027** | **4.4800e-003** | | **0.0566** | **0.0566** | | **0.0566** | **0.0566** | | **893.7562** | **893.7562** | **0.0171** | **0.0164** | **899.0674** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Mid Rise | 2.84904 | 0.0307 | 0.2626 | 0.1117 | 1.6800e-003 | | 0.0212 | 0.0212 | | 0.0212 | 0.0212 | | 335.1809 | 335.1809 | 6.4200e-003 | 6.1400e-003 | 337.1728 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.98504 | 0.0214 | 0.1946 | 0.1635 | 1.1700e-003 | | 0.0148 | 0.0148 | | 0.0148 | 0.0148 | | 233.5343 | 233.5343 | 4.4800e-003 | 4.2800e-003 | 234.9221 |
| High Turnover (Sit Down Restaurant) | 2.71682 | 0.0293 | 0.2664 | 0.2237 | 1.6000e-003 | | 0.0202 | 0.0202 | | 0.0202 | 0.0202 | | 319.6260 | 319.6260 | 6.1300e-003 | 5.8600e-003 | 321.5254 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 0.0460274 | 5.0000e-004 | 4.5100e-003 | 3.7900e-003 | 3.0000e-005 | | 3.4000e-004 | 3.4000e-004 | | 3.4000e-004 | 3.4000e-004 | | 5.4150 | 5.4150 | 1.0000e-004 | 1.0000e-004 | 5.4472 |
| **Total** | | **0.0819** | **0.7280** | **0.5027** | **4.4800e-003** | | **0.0566** | **0.0566** | | **0.0566** | **0.0566** | | **893.7562** | **893.7562** | **0.0171** | **0.0164** | **899.0674** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 2.2991 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | 0.0000 | 13.5540 | 13.5540 | 0.0131 | 0.0000 | 13.8824 |
| Unmitigated | 2.2991 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | 0.0000 | 13.5540 | 13.5540 | 0.0131 | 0.0000 | 13.8824 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.2403 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.8303 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.2286 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | | 13.5540 | 13.5540 | 0.0131 | | 13.8824 |
| **Total** | **2.2991** | **0.0868** | **7.5324** | **4.0000e-004** | | **0.0416** | **0.0416** | | **0.0416** | **0.0416** | **0.0000** | **13.5540** | **13.5540** | **0.0131** | **0.0000** | **13.8824** |

### 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.2403 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.8303 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.2286 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | | 13.5540 | 13.5540 | 0.0131 | | 13.8824 |
| **Total** | **2.2991** | **0.0868** | **7.5324** | **4.0000e-004** | | **0.0416** | **0.0416** | | **0.0416** | **0.0416** | **0.0000** | **13.5540** | **13.5540** | **0.0131** | **0.0000** | **13.8824** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# High Street Station - 2021

**Ventura County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 8.87 | 1000sqft | 0.20 | 8,870.00 | 0 |
| Parking Lot | 139.00 | Space | 0.71 | 30,927.60 | 0 |
| City Park | 0.17 | Acre | 0.17 | 7,187.00 | 0 |
| High Turnover (Sit Down Restaurant) | 3.82 | 1000sqft | 0.09 | 3,824.00 | 0 |
| High Turnover (Sit Down Restaurant) | 2.79 | 1000sqft | 0.06 | 2,794.00 | 0 |
| Apartments Mid Rise | 91.00 | Dwelling Unit | 0.92 | 69,834.00 | 302 |
| Strip Mall | 8.40 | 1000sqft | 0.00 | 8,400.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2022 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 353.65 | **CH4 Intensity (lb/MWhr)** | 0.015 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

High Street Station - 2021 - Ventura County, Summer

Project Characteristics - Adjusted for 2030 RPS.

Land Use - Based on client info and CDOF population numbers.
City park proxy for plaza.
Conservative assumption that all ground-floor commercial space is retail.

Construction Phase - Extended AC phase to last half of BC phase.

Trips and VMT -

Demolition - Based on Google Earth approximations.

Architectural Coating - VCAPCD Rule 74.2

Vehicle Trips - City park used as proxy for landscaping and plaza.
Based on trip generation rates from traffic study.

Area Coating - VCAPCD 74.2

Energy Use - Commercial electricity energy reduced by 30% for 2019 Standards.

Water And Wastewater - Reduced indoor water use by 20% to account for CALGreen compliance.

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Energy Mitigation - Solar PV system required for low-rise residential buildings.

Stationary Sources - Process Boilers -

Stationary Sources - Process Boilers EF -

Area Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Parking | 250.00 | 100.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 250 | 100 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 250 | 100 |
| tblConstructionPhase | NumDays | 10.00 | 129.00 |
| tblEnergyUse | T24E | 8.71 | 6.10 |
| tblEnergyUse | T24E | 2.93 | 2.05 |

| | | | |
|---|---|---|---|
| tblLandUse | LandUseSquareFeet | 55,600.00 | 30,927.60 |
| tblLandUse | LandUseSquareFeet | 7,405.20 | 7,187.00 |
| tblLandUse | LandUseSquareFeet | 3,820.00 | 3,824.00 |
| tblLandUse | LandUseSquareFeet | 2,790.00 | 2,794.00 |
| tblLandUse | LandUseSquareFeet | 91,000.00 | 69,834.00 |
| tblLandUse | LotAcreage | 1.25 | 0.71 |
| tblLandUse | LotAcreage | 2.39 | 0.92 |
| tblLandUse | LotAcreage | 0.19 | 0.00 |
| tblLandUse | Population | 278.00 | 302.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.015 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 353.65 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblVehicleTrips | ST_TR | 22.75 | 0.00 |
| tblVehicleTrips | SU_TR | 16.74 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65 | 7.32 |
| tblVehicleTrips | WD_TR | 1.89 | 0.00 |
| tblVehicleTrips | WD_TR | 127.15 | 112.18 |
| tblVehicleTrips | WD_TR | 44.32 | 37.75 |
| tblWater | IndoorWaterUseRate | 5,929,016.33 | 4,743,213.06 |
| tblWater | IndoorWaterUseRate | 2,006,357.84 | 1,605,086.27 |
| tblWater | IndoorWaterUseRate | 622,209.18 | 497,767.34 |

## 2.0 Emissions Summary

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 2.6873 | 22.4155 | 17.9596 | 0.0374 | 6.6345 | 1.1592 | 7.6252 | 3.3893 | 1.0826 | 4.3008 | 0.0000 | 3,566.0570 | 3,566.0570 | 0.7692 | 0.0000 | 3,579.2520 |
| 2021 | 9.3629 | 19.6990 | 19.6586 | 0.0415 | 1.0306 | 0.9229 | 1.9535 | 0.2764 | 0.8880 | 1.1644 | 0.0000 | 3,960.8430 | 3,960.8430 | 0.5674 | 0.0000 | 3,974.1651 |
| **Maximum** | **9.3629** | **22.4155** | **19.6586** | **0.0415** | **6.6345** | **1.1592** | **7.6252** | **3.3893** | **1.0826** | **4.3008** | **0.0000** | **3,960.8430** | **3,960.8430** | **0.7692** | **0.0000** | **3,974.1651** |

### Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 2.6873 | 22.4155 | 17.9596 | 0.0374 | 6.6345 | 1.1592 | 7.6252 | 3.3893 | 1.0826 | 4.3008 | 0.0000 | 3,566.0570 | 3,566.0570 | 0.7692 | 0.0000 | 3,579.2520 |
| 2021 | 9.3629 | 19.6990 | 19.6586 | 0.0415 | 1.0306 | 0.9229 | 1.9535 | 0.2764 | 0.8880 | 1.1644 | 0.0000 | 3,960.8430 | 3,960.8430 | 0.5674 | 0.0000 | 3,974.1651 |
| **Maximum** | **9.3629** | **22.4155** | **19.6586** | **0.0415** | **6.6345** | **1.1592** | **7.6252** | **3.3893** | **1.0826** | **4.3008** | **0.0000** | **3,960.8430** | **3,960.8430** | **0.7692** | **0.0000** | **3,974.1651** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 2.2991 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | 0.0000 | 13.5540 | 13.5540 | 0.0131 | 0.0000 | 13.8824 |
| Energy | 0.0819 | 0.7280 | 0.5027 | 4.4700e-003 | | 0.0566 | 0.0566 | | 0.0566 | 0.0566 | | 893.7562 | 893.7562 | 0.0171 | 0.0164 | 899.0674 |
| Mobile | 2.6155 | 9.0077 | 25.2926 | 0.0847 | 7.6183 | 0.0711 | 7.6894 | 2.0346 | 0.0662 | 2.1008 | | 8,578.8705 | 8,578.8705 | 0.3649 | | 8,587.9933 |
| **Total** | **4.9965** | **9.8226** | **33.3277** | **0.0896** | **7.6183** | **0.1693** | **7.7876** | **2.0346** | **0.1644** | **2.1990** | **0.0000** | **9,486.1807** | **9,486.1807** | **0.3952** | **0.0164** | **9,500.9430** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 2.2991 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | 0.0000 | 13.5540 | 13.5540 | 0.0131 | 0.0000 | 13.8824 |
| Energy | 0.0819 | 0.7280 | 0.5027 | 4.4700e-003 | | 0.0566 | 0.0566 | | 0.0566 | 0.0566 | | 893.7562 | 893.7562 | 0.0171 | 0.0164 | 899.0674 |
| Mobile | 2.4319 | 7.7992 | 19.8091 | 0.0613 | 5.3328 | 0.0537 | 5.3865 | 1.4242 | 0.0500 | 1.4742 | | 6,209.0874 | 6,209.0874 | 0.2870 | | 6,216.2625 |
| **Total** | **4.8129** | **8.6141** | **27.8442** | **0.0661** | **5.3328** | **0.1519** | **5.4847** | **1.4242** | **0.1482** | **1.5724** | **0.0000** | **7,116.3975** | **7,116.3975** | **0.3173** | **0.0164** | **7,129.2122** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **3.67** | **12.30** | **16.45** | **26.16** | **30.00** | **10.28** | **29.57** | **30.00** | **9.87** | **28.49** | **0.00** | **24.98** | **24.98** | **19.72** | **0.00** | **24.96** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 9/1/2020 | 9/28/2020 | 5 | 20 | |
| 2 | Site Preparation | Site Preparation | 9/29/2020 | 10/1/2020 | 5 | 3 | |
| 3 | Grading | Grading | 10/2/2020 | 10/9/2020 | 5 | 6 | |
| 4 | Building Construction | Building Construction | 10/10/2020 | 8/13/2021 | 5 | 220 | |
| 5 | Architectural Coating | Architectural Coating | 3/22/2021 | 9/16/2021 | 5 | 129 | |
| 6 | Paving | Paving | 8/14/2021 | 8/27/2021 | 5 | 10 | |

**Acres of Grading (Site Preparation Phase): 4.5**

**Acres of Grading (Grading Phase): 3**

**Acres of Paving: 0.91**

**Residential Indoor: 141,414; Residential Outdoor: 47,138; Non-Residential Indoor: 22,527; Non-Residential Outdoor: 7,509; Striped Parking Area: 2,388 (Architectural Coating – sqft)**

**OffRoad Equipment**

High Street Station - 2021 - Ventura County, Summer

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Demolition | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Scrapers | 1 | 8.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 2 | 7.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 7.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Building Construction | Welders | 3 | 8.00 | 46 | 0.45 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Paving | Cement and Mortar Mixers | 1 | 8.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 5 | 13.00 | 0.00 | 107.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 3 | 8.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 4 | 10.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 8 | 91.00 | 20.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 18.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.1721 | 0.0000 | 1.1721 | 0.1775 | 0.0000 | 0.1775 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.1262 | 20.9463 | 14.6573 | 0.0241 | | 1.1525 | 1.1525 | | 1.0761 | 1.0761 | | 2,322.3127 | 2,322.3127 | 0.5970 | | 2,337.2363 |
| **Total** | **2.1262** | **20.9463** | **14.6573** | **0.0241** | **1.1721** | **1.1525** | **2.3246** | **0.1775** | **1.0761** | **1.2536** | | **2,322.3127** | **2,322.3127** | **0.5970** | | **2,337.2363** |

## 3.2 Demolition - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0385 | 1.4407 | 0.3109 | 4.0400e-003 | 0.0932 | 5.9900e-003 | 0.0992 | 0.0255 | 5.7300e-003 | 0.0312 | | 442.2890 | 442.2890 | 0.0414 | | 443.3250 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0475 | 0.0285 | 0.3593 | 1.0400e-003 | 0.1068 | 7.5000e-004 | 0.1076 | 0.0283 | 6.9000e-004 | 0.0290 | | 103.1961 | 103.1961 | 2.7500e-003 | | 103.2649 |
| **Total** | **0.0860** | **1.4692** | **0.6702** | **5.0800e-003** | **0.2000** | **6.7400e-003** | **0.2067** | **0.0538** | **6.4200e-003** | **0.0603** | | **545.4851** | **545.4851** | **0.0442** | | **546.5899** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.1721 | 0.0000 | 1.1721 | 0.1775 | 0.0000 | 0.1775 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.1262 | 20.9463 | 14.6573 | 0.0241 | | 1.1525 | 1.1525 | | 1.0761 | 1.0761 | 0.0000 | 2,322.3127 | 2,322.3127 | 0.5970 | | 2,337.2363 |
| **Total** | **2.1262** | **20.9463** | **14.6573** | **0.0241** | **1.1721** | **1.1525** | **2.3246** | **0.1775** | **1.0761** | **1.2536** | **0.0000** | **2,322.3127** | **2,322.3127** | **0.5970** | | **2,337.2363** |

## 3.2 Demolition - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0385 | 1.4407 | 0.3109 | 4.0400e-003 | 0.0932 | 5.9900e-003 | 0.0992 | 0.0255 | 5.7300e-003 | 0.0312 | | 442.2890 | 442.2890 | 0.0414 | | 443.3250 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0475 | 0.0285 | 0.3593 | 1.0400e-003 | 0.1068 | 7.5000e-004 | 0.1076 | 0.0283 | 6.9000e-004 | 0.0290 | | 103.1961 | 103.1961 | 2.7500e-003 | | 103.2649 |
| **Total** | **0.0860** | **1.4692** | **0.6702** | **5.0800e-003** | **0.2000** | **6.7400e-003** | **0.2067** | **0.0538** | **6.4200e-003** | **0.0603** | | **545.4851** | **545.4851** | **0.0442** | | **546.5899** |

## 3.3 Site Preparation - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5908 | 0.0000 | 1.5908 | 0.1718 | 0.0000 | 0.1718 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.6521 | 19.9196 | 11.2678 | 0.0245 | | 0.7771 | 0.7771 | | 0.7149 | 0.7149 | | 2,372.9062 | 2,372.9062 | 0.7675 | | 2,392.0924 |
| **Total** | **1.6521** | **19.9196** | **11.2678** | **0.0245** | **1.5908** | **0.7771** | **2.3678** | **0.1718** | **0.7149** | **0.8867** | | **2,372.9062** | **2,372.9062** | **0.7675** | | **2,392.0924** |

## 3.3 Site Preparation - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0292 | 0.0176 | 0.2211 | 6.4000e-004 | 0.0657 | 4.6000e-004 | 0.0662 | 0.0174 | 4.3000e-004 | 0.0179 | | 63.5053 | 63.5053 | 1.7000e-003 | | 63.5476 |
| **Total** | **0.0292** | **0.0176** | **0.2211** | **6.4000e-004** | **0.0657** | **4.6000e-004** | **0.0662** | **0.0174** | **4.3000e-004** | **0.0179** | | **63.5053** | **63.5053** | **1.7000e-003** | | **63.5476** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5908 | 0.0000 | 1.5908 | 0.1718 | 0.0000 | 0.1718 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.6521 | 19.9196 | 11.2678 | 0.0245 | | 0.7771 | 0.7771 | | 0.7149 | 0.7149 | 0.0000 | 2,372.9062 | 2,372.9062 | 0.7675 | | 2,392.0924 |
| **Total** | **1.6521** | **19.9196** | **11.2678** | **0.0245** | **1.5908** | **0.7771** | **2.3678** | **0.1718** | **0.7149** | **0.8867** | **0.0000** | **2,372.9062** | **2,372.9062** | **0.7675** | | **2,392.0924** |

## 3.3 Site Preparation - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0292 | 0.0176 | 0.2211 | 6.4000e-004 | 0.0657 | 4.6000e-004 | 0.0662 | 0.0174 | 4.3000e-004 | 0.0179 | | 63.5053 | 63.5053 | 1.7000e-003 | | 63.5476 |
| **Total** | **0.0292** | **0.0176** | **0.2211** | **6.4000e-004** | **0.0657** | **4.6000e-004** | **0.0662** | **0.0174** | **4.3000e-004** | **0.0179** | | **63.5053** | **63.5053** | **1.7000e-003** | | **63.5476** |

## 3.4 Grading - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.5523 | 0.0000 | 6.5523 | 3.3675 | 0.0000 | 3.3675 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.9219 | 21.3418 | 9.9355 | 0.0206 | | 0.9902 | 0.9902 | | 0.9110 | 0.9110 | | 1,996.4061 | 1,996.4061 | 0.6457 | | 2,012.5480 |
| **Total** | **1.9219** | **21.3418** | **9.9355** | **0.0206** | **6.5523** | **0.9902** | **7.5425** | **3.3675** | **0.9110** | **4.2784** | | **1,996.4061** | **1,996.4061** | **0.6457** | | **2,012.5480** |

## 3.4 Grading - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0365 | 0.0220 | 0.2764 | 8.0000e-004 | 0.0822 | 5.8000e-004 | 0.0827 | 0.0218 | 5.3000e-004 | 0.0223 | | 79.3816 | 79.3816 | 2.1200e-003 | | 79.4346 |
| **Total** | **0.0365** | **0.0220** | **0.2764** | **8.0000e-004** | **0.0822** | **5.8000e-004** | **0.0827** | **0.0218** | **5.3000e-004** | **0.0223** | | **79.3816** | **79.3816** | **2.1200e-003** | | **79.4346** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.5523 | 0.0000 | 6.5523 | 3.3675 | 0.0000 | 3.3675 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.9219 | 21.3418 | 9.9355 | 0.0206 | | 0.9902 | 0.9902 | | 0.9110 | 0.9110 | 0.0000 | 1,996.4061 | 1,996.4061 | 0.6457 | | 2,012.5480 |
| **Total** | **1.9219** | **21.3418** | **9.9355** | **0.0206** | **6.5523** | **0.9902** | **7.5425** | **3.3675** | **0.9110** | **4.2784** | **0.0000** | **1,996.4061** | **1,996.4061** | **0.6457** | | **2,012.5480** |

## 3.4 Grading - 2020

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0365 | 0.0220 | 0.2764 | 8.0000e-004 | 0.0822 | 5.8000e-004 | 0.0827 | 0.0218 | 5.3000e-004 | 0.0223 | | 79.3816 | 79.3816 | 2.1200e-003 | | 79.4346 |
| **Total** | **0.0365** | **0.0220** | **0.2764** | **8.0000e-004** | **0.0822** | **5.8000e-004** | **0.0827** | **0.0218** | **5.3000e-004** | **0.0223** | | **79.3816** | **79.3816** | **2.1200e-003** | | **79.4346** |

## 3.5 Building Construction - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.2879 | 17.4336 | 14.8972 | 0.0250 | | 0.9482 | 0.9482 | | 0.9089 | 0.9089 | | 2,288.8877 | 2,288.8877 | 0.4646 | | 2,300.5014 |
| **Total** | **2.2879** | **17.4336** | **14.8972** | **0.0250** | | **0.9482** | **0.9482** | | **0.9089** | **0.9089** | | **2,288.8877** | **2,288.8877** | **0.4646** | | **2,300.5014** |

## 3.5 Building Construction - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0670 | 2.1431 | 0.5476 | 5.1600e-003 | 0.1352 | 0.0128 | 0.1480 | 0.0389 | 0.0123 | 0.0512 | | 554.7970 | 554.7970 | 0.0440 | | 555.8962 |
| Worker | 0.3325 | 0.1997 | 2.5148 | 7.2500e-003 | 0.7475 | 5.2800e-003 | 0.7528 | 0.1983 | 4.8600e-003 | 0.2032 | | 722.3723 | 722.3723 | 0.0193 | | 722.8544 |
| **Total** | **0.3995** | **2.3428** | **3.0624** | **0.0124** | **0.8827** | **0.0181** | **0.9008** | **0.2372** | **0.0171** | **0.2543** | | **1,277.1693** | **1,277.1693** | **0.0633** | | **1,278.7506** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.2879 | 17.4336 | 14.8972 | 0.0250 | | 0.9482 | 0.9482 | | 0.9089 | 0.9089 | 0.0000 | 2,288.8877 | 2,288.8877 | 0.4646 | | 2,300.5014 |
| **Total** | **2.2879** | **17.4336** | **14.8972** | **0.0250** | | **0.9482** | **0.9482** | | **0.9089** | **0.9089** | **0.0000** | **2,288.8877** | **2,288.8877** | **0.4646** | | **2,300.5014** |

## 3.5 Building Construction - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0670 | 2.1431 | 0.5476 | 5.1600e-003 | 0.1352 | 0.0128 | 0.1480 | 0.0389 | 0.0123 | 0.0512 | | 554.7970 | 554.7970 | 0.0440 | | 555.8962 |
| Worker | 0.3325 | 0.1997 | 2.5148 | 7.2500e-003 | 0.7475 | 5.2800e-003 | 0.7528 | 0.1983 | 4.8600e-003 | 0.2032 | | 722.3723 | 722.3723 | 0.0193 | | 722.8544 |
| **Total** | **0.3995** | **2.3428** | **3.0624** | **0.0124** | **0.8827** | **0.0181** | **0.9008** | **0.2372** | **0.0171** | **0.2543** | | **1,277.1693** | **1,277.1693** | **0.0633** | | **1,278.7506** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.0451 | 16.0275 | 14.5629 | 0.0250 | | 0.8173 | 0.8173 | | 0.7831 | 0.7831 | | 2,288.9355 | 2,288.9355 | 0.4503 | | 2,300.1935 |
| **Total** | **2.0451** | **16.0275** | **14.5629** | **0.0250** | | **0.8173** | **0.8173** | | **0.7831** | **0.7831** | | **2,288.9355** | **2,288.9355** | **0.4503** | | **2,300.1935** |

## 3.5 Building Construction - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0562 | 1.9292 | 0.4944 | 5.1200e-003 | 0.1352 | 5.3700e-003 | 0.1406 | 0.0389 | 5.1400e-003 | 0.0440 | | 551.1714 | 551.1714 | 0.0422 | | 552.2262 |
| Worker | 0.3117 | 0.1799 | 2.3240 | 7.0300e-003 | 0.7475 | 5.1800e-003 | 0.7527 | 0.1983 | 4.7700e-003 | 0.2031 | | 700.6900 | 700.6900 | 0.0176 | | 701.1295 |
| **Total** | **0.3678** | **2.1091** | **2.8184** | **0.0122** | **0.8827** | **0.0106** | **0.8933** | **0.2372** | **9.9100e-003** | **0.2471** | | **1,251.8614** | **1,251.8614** | **0.0598** | | **1,253.3557** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.0451 | 16.0275 | 14.5629 | 0.0250 | | 0.8173 | 0.8173 | | 0.7831 | 0.7831 | 0.0000 | 2,288.9355 | 2,288.9355 | 0.4503 | | 2,300.1935 |
| **Total** | **2.0451** | **16.0275** | **14.5629** | **0.0250** | | **0.8173** | **0.8173** | | **0.7831** | **0.7831** | **0.0000** | **2,288.9355** | **2,288.9355** | **0.4503** | | **2,300.1935** |

## 3.5 Building Construction - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0562 | 1.9292 | 0.4944 | 5.1200e-003 | 0.1352 | 5.3700e-003 | 0.1406 | 0.0389 | 5.1400e-003 | 0.0440 | | 551.1714 | 551.1714 | 0.0422 | | 552.2262 |
| Worker | 0.3117 | 0.1799 | 2.3240 | 7.0300e-003 | 0.7475 | 5.1800e-003 | 0.7527 | 0.1983 | 4.7700e-003 | 0.2031 | | 700.6900 | 700.6900 | 0.0176 | | 701.1295 |
| **Total** | **0.3678** | **2.1091** | **2.8184** | **0.0122** | **0.8827** | **0.0106** | **0.8933** | **0.2372** | **9.9100e-003** | **0.2471** | | **1,251.8614** | **1,251.8614** | **0.0598** | | **1,253.3557** |

## 3.6 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 6.6695 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| **Total** | **6.8884** | **1.5268** | **1.8176** | **2.9700e-003** | | **0.0941** | **0.0941** | | **0.0941** | **0.0941** | | **281.4481** | **281.4481** | **0.0193** | | **281.9309** |

## 3.6 Architectural Coating - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0617 | 0.0356 | 0.4597 | 1.3900e-003 | 0.1479 | 1.0200e-003 | 0.1489 | 0.0392 | 9.4000e-004 | 0.0402 | | 138.5980 | 138.5980 | 3.4800e-003 | | 138.6850 |
| **Total** | **0.0617** | **0.0356** | **0.4597** | **1.3900e-003** | **0.1479** | **1.0200e-003** | **0.1489** | **0.0392** | **9.4000e-004** | **0.0402** | | **138.5980** | **138.5980** | **3.4800e-003** | | **138.6850** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 6.6695 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | 0.0000 | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| **Total** | **6.8884** | **1.5268** | **1.8176** | **2.9700e-003** | | **0.0941** | **0.0941** | | **0.0941** | **0.0941** | **0.0000** | **281.4481** | **281.4481** | **0.0193** | | **281.9309** |

## 3.6 Architectural Coating - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0617 | 0.0356 | 0.4597 | 1.3900e-003 | 0.1479 | 1.0200e-003 | 0.1489 | 0.0392 | 9.4000e-004 | 0.0402 | | 138.5980 | 138.5980 | 3.4800e-003 | | 138.6850 |
| **Total** | **0.0617** | **0.0356** | **0.4597** | **1.3900e-003** | **0.1479** | **1.0200e-003** | **0.1489** | **0.0392** | **9.4000e-004** | **0.0402** | | **138.5980** | **138.5980** | **3.4800e-003** | | **138.6850** |

## 3.7 Paving - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0633 | 10.6478 | 11.7756 | 0.0178 | | 0.5826 | 0.5826 | | 0.5371 | 0.5371 | | 1,709.1107 | 1,709.1107 | 0.5417 | | 1,722.6524 |
| Paving | 0.2384 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.3017** | **10.6478** | **11.7756** | **0.0178** | | **0.5826** | **0.5826** | | **0.5371** | **0.5371** | | **1,709.1107** | **1,709.1107** | **0.5417** | | **1,722.6524** |

## 3.7 Paving - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0514 | 0.0297 | 0.3831 | 1.1600e-003 | 0.1232 | 8.5000e-004 | 0.1241 | 0.0327 | 7.9000e-004 | 0.0335 | | 115.4984 | 115.4984 | 2.9000e-003 | | 115.5708 |
| **Total** | **0.0514** | **0.0297** | **0.3831** | **1.1600e-003** | **0.1232** | **8.5000e-004** | **0.1241** | **0.0327** | **7.9000e-004** | **0.0335** | | **115.4984** | **115.4984** | **2.9000e-003** | | **115.5708** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0633 | 10.6478 | 11.7756 | 0.0178 | | 0.5826 | 0.5826 | | 0.5371 | 0.5371 | 0.0000 | 1,709.1107 | 1,709.1107 | 0.5417 | | 1,722.6524 |
| Paving | 0.2384 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.3017** | **10.6478** | **11.7756** | **0.0178** | | **0.5826** | **0.5826** | | **0.5371** | **0.5371** | **0.0000** | **1,709.1107** | **1,709.1107** | **0.5417** | | **1,722.6524** |

### 3.7 Paving - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0514 | 0.0297 | 0.3831 | 1.1600e-003 | 0.1232 | 8.5000e-004 | 0.1241 | 0.0327 | 7.9000e-004 | 0.0335 | | 115.4984 | 115.4984 | 2.9000e-003 | | 115.5708 |
| **Total** | **0.0514** | **0.0297** | **0.3831** | **1.1600e-003** | **0.1232** | **8.5000e-004** | **0.1241** | **0.0327** | **7.9000e-004** | **0.0335** | | **115.4984** | **115.4984** | **2.9000e-003** | | **115.5708** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

Increase Density

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 2.4319 | 7.7992 | 19.8091 | 0.0613 | 5.3328 | 0.0537 | 5.3865 | 1.4242 | 0.0500 | 1.4742 | | 6,209.0874 | 6,209.0874 | 0.2870 | | 6,216.2625 |
| Unmitigated | 2.6155 | 9.0077 | 25.2926 | 0.0847 | 7.6183 | 0.0711 | 7.6894 | 2.0346 | 0.0662 | 2.1008 | | 8,578.8705 | 8,578.8705 | 0.3649 | | 8,587.9933 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 666.12 | 581.49 | 533.26 | 1,754,689 | 1,228,282 |
| City Park | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 428.53 | 604.97 | 503.63 | 538,900 | 377,230 |
| High Turnover (Sit Down Restaurant) | 312.98 | 441.85 | 367.83 | 393,594 | 275,516 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 317.10 | 353.14 | 171.61 | 464,265 | 324,985 |
| Total | 1,724.73 | 1,981.45 | 1,576.33 | 3,151,448 | 2,206,014 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 10.80 | 7.30 | 7.50 | 32.90 | 18.00 | 49.10 | 86 | 11 | 3 |
| City Park | 9.50 | 7.30 | 7.30 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |
| High Turnover (Sit Down | 9.50 | 7.30 | 7.30 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| High Turnover (Sit Down | 9.50 | 7.30 | 7.30 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Other Asphalt Surfaces | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Parking Lot | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Strip Mall | 9.50 | 7.30 | 7.30 | 16.60 | 64.40 | 19.00 | 45 | 40 | 15 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| City Park | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| High Turnover (Sit Down Restaurant) | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Other Asphalt Surfaces | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Parking Lot | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |
| Strip Mall | 0.588665 | 0.041515 | 0.188382 | 0.110464 | 0.019030 | 0.006351 | 0.019720 | 0.017925 | 0.001164 | 0.001012 | 0.003904 | 0.000380 | 0.001490 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

High Street Station - 2021 - Ventura County, Summer

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.0819 | 0.7280 | 0.5027 | 4.4700e-003 | | 0.0566 | 0.0566 | | 0.0566 | 0.0566 | | 893.7562 | 893.7562 | 0.0171 | 0.0164 | 899.0674 |
| NaturalGas Unmitigated | 0.0819 | 0.7280 | 0.5027 | 4.4700e-003 | | 0.0566 | 0.0566 | | 0.0566 | 0.0566 | | 893.7562 | 893.7562 | 0.0171 | 0.0164 | 899.0674 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Mid Rise | 2849.04 | 0.0307 | 0.2626 | 0.1117 | 1.6800e-003 | | 0.0212 | 0.0212 | | 0.0212 | 0.0212 | | 335.1809 | 335.1809 | 6.4200e-003 | 6.1400e-003 | 337.1728 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1985.04 | 0.0214 | 0.1946 | 0.1635 | 1.1700e-003 | | 0.0148 | 0.0148 | | 0.0148 | 0.0148 | | 233.5343 | 233.5343 | 4.4800e-003 | 4.2800e-003 | 234.9221 |
| High Turnover (Sit Down Restaurant) | 2716.82 | 0.0293 | 0.2664 | 0.2237 | 1.6000e-003 | | 0.0202 | 0.0202 | | 0.0202 | 0.0202 | | 319.6260 | 319.6260 | 6.1300e-003 | 5.8600e-003 | 321.5254 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 46.0274 | 5.0000e-004 | 4.5100e-003 | 3.7900e-003 | 3.0000e-005 | | 3.4000e-004 | 3.4000e-004 | | 3.4000e-004 | 3.4000e-004 | | 5.4150 | 5.4150 | 1.0000e-004 | 1.0000e-004 | 5.4472 |
| **Total** | | **0.0819** | **0.7280** | **0.5027** | **4.4800e-003** | | **0.0566** | **0.0566** | | **0.0566** | **0.0566** | | **893.7562** | **893.7562** | **0.0171** | **0.0164** | **899.0674** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Mid Rise | 2.84904 | 0.0307 | 0.2626 | 0.1117 | 1.6800e-003 | | 0.0212 | 0.0212 | | 0.0212 | 0.0212 | | 335.1809 | 335.1809 | 6.4200e-003 | 6.1400e-003 | 337.1728 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.98504 | 0.0214 | 0.1946 | 0.1635 | 1.1700e-003 | | 0.0148 | 0.0148 | | 0.0148 | 0.0148 | | 233.5343 | 233.5343 | 4.4800e-003 | 4.2800e-003 | 234.9221 |
| High Turnover (Sit Down Restaurant) | 2.71682 | 0.0293 | 0.2664 | 0.2237 | 1.6000e-003 | | 0.0202 | 0.0202 | | 0.0202 | 0.0202 | | 319.6260 | 319.6260 | 6.1300e-003 | 5.8600e-003 | 321.5254 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 0.0460274 | 5.0000e-004 | 4.5100e-003 | 3.7900e-003 | 3.0000e-005 | | 3.4000e-004 | 3.4000e-004 | | 3.4000e-004 | 3.4000e-004 | | 5.4150 | 5.4150 | 1.0000e-004 | 1.0000e-004 | 5.4472 |
| **Total** | | **0.0819** | **0.7280** | **0.5027** | **4.4800e-003** | | **0.0566** | **0.0566** | | **0.0566** | **0.0566** | | **893.7562** | **893.7562** | **0.0171** | **0.0164** | **899.0674** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 2.2991 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | 0.0000 | 13.5540 | 13.5540 | 0.0131 | 0.0000 | 13.8824 |
| Unmitigated | 2.2991 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | 0.0000 | 13.5540 | 13.5540 | 0.0131 | 0.0000 | 13.8824 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.2403 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.8303 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.2286 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | | 13.5540 | 13.5540 | 0.0131 | | 13.8824 |
| **Total** | **2.2991** | **0.0868** | **7.5324** | **4.0000e-004** | | **0.0416** | **0.0416** | | **0.0416** | **0.0416** | **0.0000** | **13.5540** | **13.5540** | **0.0131** | **0.0000** | **13.8824** |

### 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.2403 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.8303 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.2286 | 0.0868 | 7.5324 | 4.0000e-004 | | 0.0416 | 0.0416 | | 0.0416 | 0.0416 | | 13.5540 | 13.5540 | 0.0131 | | 13.8824 |
| **Total** | **2.2991** | **0.0868** | **7.5324** | **4.0000e-004** | | **0.0416** | **0.0416** | | **0.0416** | **0.0416** | **0.0000** | **13.5540** | **13.5540** | **0.0131** | **0.0000** | **13.8824** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# High Street Station - 2030

**Ventura County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 8.87 | 1000sqft | 0.20 | 8,870.00 | 0 |
| Parking Lot | 139.00 | Space | 0.71 | 30,927.60 | 0 |
| City Park | 0.17 | Acre | 0.17 | 7,187.00 | 0 |
| High Turnover (Sit Down Restaurant) | 3.82 | 1000sqft | 0.09 | 3,824.00 | 0 |
| High Turnover (Sit Down Restaurant) | 2.79 | 1000sqft | 0.06 | 2,794.00 | 0 |
| Apartments Mid Rise | 91.00 | Dwelling Unit | 0.92 | 69,834.00 | 302 |
| Strip Mall | 8.40 | 1000sqft | 0.00 | 8,400.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 353.65 | **CH4 Intensity (lb/MWhr)** | 0.015 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

High Street Station - 2030 - Ventura County, Annual

Project Characteristics - Adjusted for 2030 RPS.

Land Use - Based on client info and CDOF population numbers.
City park proxy for plaza.
Conservative assumption that all ground-floor commercial space is retail.

Construction Phase - Extended AC phase to last half of BC phase.

Trips and VMT -

Demolition - Based on Google Earth approximations.

Architectural Coating - VCAPCD Rule 74.2

Vehicle Trips - City park used as proxy for landscaping and plaza.
Based on trip generation rates from traffic study.

Area Coating - VCAPCD 74.2

Energy Use - Commercial electricity energy reduced by 30% for 2019 Standards.

Water And Wastewater - Reduced indoor water use by 20% to account for CALGreen compliance.

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - Solar PV system required for low-rise residential buildings.

Stationary Sources - Process Boilers -

Stationary Sources - Process Boilers EF -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Parking | 250.00 | 100.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 250 | 100 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 250 | 100 |
| tblConstructionPhase | NumDays | 10.00 | 129.00 |
| tblEnergyUse | T24E | 8.71 | 6.10 |
| tblEnergyUse | T24E | 2.93 | 2.05 |

| | | | |
|---|---|---|---|
| tblLandUse | LandUseSquareFeet | 55,600.00 | 30,927.60 |
| tblLandUse | LandUseSquareFeet | 7,405.20 | 7,187.00 |
| tblLandUse | LandUseSquareFeet | 2,790.00 | 2,794.00 |
| tblLandUse | LandUseSquareFeet | 3,820.00 | 3,824.00 |
| tblLandUse | LandUseSquareFeet | 91,000.00 | 69,834.00 |
| tblLandUse | LotAcreage | 1.25 | 0.71 |
| tblLandUse | LotAcreage | 2.39 | 0.92 |
| tblLandUse | LotAcreage | 0.19 | 0.00 |
| tblLandUse | Population | 278.00 | 302.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.015 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 353.65 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblVehicleTrips | ST_TR | 22.75 | 0.00 |
| tblVehicleTrips | SU_TR | 16.74 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65 | 7.32 |
| tblVehicleTrips | WD_TR | 1.89 | 0.00 |
| tblVehicleTrips | WD_TR | 127.15 | 112.18 |
| tblVehicleTrips | WD_TR | 44.32 | 37.75 |
| tblWater | IndoorWaterUseRate | 5,929,016.33 | 4,743,213.06 |
| tblWater | IndoorWaterUseRate | 2,006,357.84 | 1,605,086.27 |
| tblWater | IndoorWaterUseRate | 622,209.18 | 497,767.34 |

## 2.0 Emissions Summary

## 2.1 Overall Construction

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.1100 | 0.9036 | 0.7294 | 1.4900e-003 | 0.0616 | 0.0442 | 0.1059 | 0.0196 | 0.0420 | 0.0616 | 0.0000 | 129.3990 | 129.3990 | 0.0228 | 0.0000 | 129.9683 |
| 2021 | 0.6497 | 1.6181 | 1.6016 | 3.3400e-003 | 0.0798 | 0.0757 | 0.1555 | 0.0214 | 0.0727 | 0.0941 | 0.0000 | 288.5822 | 288.5822 | 0.0411 | 0.0000 | 289.6095 |
| **Maximum** | **0.6497** | **1.6181** | **1.6016** | **3.3400e-003** | **0.0798** | **0.0757** | **0.1555** | **0.0214** | **0.0727** | **0.0941** | **0.0000** | **288.5822** | **288.5822** | **0.0411** | **0.0000** | **289.6095** |

### Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.1100 | 0.9036 | 0.7294 | 1.4900e-003 | 0.0616 | 0.0442 | 0.1059 | 0.0196 | 0.0420 | 0.0616 | 0.0000 | 129.3989 | 129.3989 | 0.0228 | 0.0000 | 129.9682 |
| 2021 | 0.6497 | 1.6181 | 1.6016 | 3.3400e-003 | 0.0798 | 0.0757 | 0.1555 | 0.0214 | 0.0727 | 0.0941 | 0.0000 | 288.5820 | 288.5820 | 0.0411 | 0.0000 | 289.6093 |
| **Maximum** | **0.6497** | **1.6181** | **1.6016** | **3.3400e-003** | **0.0798** | **0.0757** | **0.1555** | **0.0214** | **0.0727** | **0.0941** | **0.0000** | **288.5820** | **288.5820** | **0.0411** | **0.0000** | **289.6093** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| 1 | 9-1-2020 | 11-30-2020 | 0.7549 | 0.7549 |
| 2 | 12-1-2020 | 2-28-2021 | 0.6842 | 0.6842 |
| 3 | 3-1-2021 | 5-31-2021 | 0.8919 | 0.8919 |
| 4 | 6-1-2021 | 8-31-2021 | 0.8829 | 0.8829 |
| 5 | 9-1-2021 | 9-30-2021 | 0.0486 | 0.0486 |
| | | Highest | 0.8919 | 0.8919 |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.3982 | 7.7800e-003 | 0.6754 | 4.0000e-005 | | 3.7500e-003 | 3.7500e-003 | | 3.7500e-003 | 3.7500e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0600e-003 | 0.0000 | 1.1331 |
| Energy | 0.0150 | 0.1329 | 0.0918 | 8.2000e-004 | | 0.0103 | 0.0103 | | 0.0103 | 0.0103 | 0.0000 | 257.9236 | 257.9236 | 7.5000e-003 | 3.6500e-003 | 259.1975 |
| Mobile | 0.2314 | 0.9464 | 2.4519 | 0.0102 | 1.1914 | 6.9700e-003 | 1.1984 | 0.3186 | 6.4600e-003 | 0.3250 | 0.0000 | 946.3180 | 946.3180 | 0.0348 | 0.0000 | 947.1885 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 26.2569 | 0.0000 | 26.2569 | 1.5517 | 0.0000 | 65.0503 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.1719 | 22.2301 | 24.4020 | 0.2240 | 5.4600e-003 | 31.6284 |
| **Total** | **0.6445** | **1.0870** | **3.2190** | **0.0111** | **1.1914** | **0.0211** | **1.2125** | **0.3186** | **0.0205** | **0.3391** | **28.4288** | **1,227.5783** | **1,256.0071** | **1.8191** | **9.1100e-003** | **1,304.1979** |

## 2.2 Overall Operational

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.3982 | 7.7800e-003 | 0.6754 | 4.0000e-005 | | 3.7500e-003 | 3.7500e-003 | | 3.7500e-003 | 3.7500e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0600e-003 | 0.0000 | 1.1331 |
| Energy | 0.0150 | 0.1329 | 0.0918 | 8.2000e-004 | | 0.0103 | 0.0103 | | 0.0103 | 0.0103 | 0.0000 | 219.4277 | 219.4277 | 5.8700e-003 | 3.3200e-003 | 220.5635 |
| Mobile | 0.2129 | 0.8537 | 1.9317 | 7.4100e-003 | 0.8340 | 5.2900e-003 | 0.8393 | 0.2230 | 4.9000e-003 | 0.2279 | 0.0000 | 685.9418 | 685.9418 | 0.0269 | 0.0000 | 686.6153 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 26.2569 | 0.0000 | 26.2569 | 1.5517 | 0.0000 | 65.0503 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.1719 | 22.2301 | 24.4020 | 0.2240 | 5.4600e-003 | 31.6284 |
| **Total** | **0.6260** | **0.9943** | **2.6988** | **8.2700e-003** | **0.8340** | **0.0194** | **0.8534** | **0.2230** | **0.0190** | **0.2420** | **28.4288** | **928.7063** | **957.1351** | **1.8096** | **8.7800e-003** | **1,004.9906** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **2.88** | **8.53** | **16.16** | **25.36** | **30.00** | **7.98** | **29.62** | **30.00** | **7.59** | **28.64** | **0.00** | **24.35** | **23.80** | **0.52** | **3.62** | **22.94** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 9/1/2020 | 9/28/2020 | 5 | 20 | |
| 2 | Site Preparation | Site Preparation | 9/29/2020 | 10/1/2020 | 5 | 3 | |
| 3 | Grading | Grading | 10/2/2020 | 10/9/2020 | 5 | 6 | |
| 4 | Building Construction | Building Construction | 10/10/2020 | 8/13/2021 | 5 | 220 | |
| 5 | Architectural Coating | Architectural Coating | 3/22/2021 | 9/16/2021 | 5 | 129 | |
| 6 | Paving | Paving | 8/14/2021 | 8/27/2021 | 5 | 10 | |

**Acres of Grading (Site Preparation Phase): 4.5**

**Acres of Grading (Grading Phase): 3**

**Acres of Paving: 0.91**

**Residential Indoor: 141,414; Residential Outdoor: 47,138; Non-Residential Indoor: 22,527; Non-Residential Outdoor: 7,509; Striped Parking Area: 2,388 (Architectural Coating – sqft)**

**OffRoad Equipment**

High Street Station - 2030 - Ventura County, Annual

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Demolition | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Scrapers | 1 | 8.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 2 | 7.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 7.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Building Construction | Welders | 3 | 8.00 | 46 | 0.45 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Paving | Cement and Mortar Mixers | 1 | 8.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 5 | 13.00 | 0.00 | 107.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 3 | 8.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 4 | 10.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 8 | 91.00 | 20.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 18.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0117 | 0.0000 | 0.0117 | 1.7800e-003 | 0.0000 | 1.7800e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0213 | 0.2095 | 0.1466 | 2.4000e-004 | | 0.0115 | 0.0115 | | 0.0108 | 0.0108 | 0.0000 | 21.0677 | 21.0677 | 5.4200e-003 | 0.0000 | 21.2031 |
| **Total** | **0.0213** | **0.2095** | **0.1466** | **2.4000e-004** | **0.0117** | **0.0115** | **0.0232** | **1.7800e-003** | **0.0108** | **0.0125** | **0.0000** | **21.0677** | **21.0677** | **5.4200e-003** | **0.0000** | **21.2031** |

## 3.2 Demolition - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 3.9000e-004 | 0.0148 | 3.2100e-003 | 4.0000e-005 | 9.2000e-004 | 6.0000e-005 | 9.8000e-004 | 2.5000e-004 | 6.0000e-005 | 3.1000e-004 | 0.0000 | 3.9857 | 3.9857 | 3.8000e-004 | 0.0000 | 3.9952 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.8000e-004 | 3.2000e-004 | 3.4700e-003 | 1.0000e-005 | 1.0500e-003 | 1.0000e-005 | 1.0600e-003 | 2.8000e-004 | 1.0000e-005 | 2.9000e-004 | 0.0000 | 0.8981 | 0.8981 | 2.0000e-005 | 0.0000 | 0.8987 |
| **Total** | **8.7000e-004** | **0.0151** | **6.6800e-003** | **5.0000e-005** | **1.9700e-003** | **7.0000e-005** | **2.0400e-003** | **5.3000e-004** | **7.0000e-005** | **6.0000e-004** | **0.0000** | **4.8838** | **4.8838** | **4.0000e-004** | **0.0000** | **4.8939** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0117 | 0.0000 | 0.0117 | 1.7800e-003 | 0.0000 | 1.7800e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0213 | 0.2095 | 0.1466 | 2.4000e-004 | | 0.0115 | 0.0115 | | 0.0108 | 0.0108 | 0.0000 | 21.0676 | 21.0676 | 5.4200e-003 | 0.0000 | 21.2030 |
| **Total** | **0.0213** | **0.2095** | **0.1466** | **2.4000e-004** | **0.0117** | **0.0115** | **0.0232** | **1.7800e-003** | **0.0108** | **0.0125** | **0.0000** | **21.0676** | **21.0676** | **5.4200e-003** | **0.0000** | **21.2030** |

## 3.2 Demolition - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 3.9000e-004 | 0.0148 | 3.2100e-003 | 4.0000e-005 | 9.2000e-004 | 6.0000e-005 | 9.8000e-004 | 2.5000e-004 | 6.0000e-005 | 3.1000e-004 | 0.0000 | 3.9857 | 3.9857 | 3.8000e-004 | 0.0000 | 3.9952 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.8000e-004 | 3.2000e-004 | 3.4700e-003 | 1.0000e-005 | 1.0500e-003 | 1.0000e-005 | 1.0600e-003 | 2.8000e-004 | 1.0000e-005 | 2.9000e-004 | 0.0000 | 0.8981 | 0.8981 | 2.0000e-005 | 0.0000 | 0.8987 |
| **Total** | **8.7000e-004** | **0.0151** | **6.6800e-003** | **5.0000e-005** | **1.9700e-003** | **7.0000e-005** | **2.0400e-003** | **5.3000e-004** | **7.0000e-005** | **6.0000e-004** | **0.0000** | **4.8838** | **4.8838** | **4.0000e-004** | **0.0000** | **4.8939** |

## 3.3 Site Preparation - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 2.3900e-003 | 0.0000 | 2.3900e-003 | 2.6000e-004 | 0.0000 | 2.6000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.4800e-003 | 0.0299 | 0.0169 | 4.0000e-005 | | 1.1700e-003 | 1.1700e-003 | | 1.0700e-003 | 1.0700e-003 | 0.0000 | 3.2290 | 3.2290 | 1.0400e-003 | 0.0000 | 3.2551 |
| **Total** | **2.4800e-003** | **0.0299** | **0.0169** | **4.0000e-005** | **2.3900e-003** | **1.1700e-003** | **3.5600e-003** | **2.6000e-004** | **1.0700e-003** | **1.3300e-003** | **0.0000** | **3.2290** | **3.2290** | **1.0400e-003** | **0.0000** | **3.2551** |

## 3.3 Site Preparation - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.0000e-005 | 3.0000e-005 | 3.2000e-004 | 0.0000 | 1.0000e-004 | 0.0000 | 1.0000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.0829 | 0.0829 | 0.0000 | 0.0000 | 0.0830 |
| **Total** | **4.0000e-005** | **3.0000e-005** | **3.2000e-004** | **0.0000** | **1.0000e-004** | **0.0000** | **1.0000e-004** | **3.0000e-005** | **0.0000** | **3.0000e-005** | **0.0000** | **0.0829** | **0.0829** | **0.0000** | **0.0000** | **0.0830** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 2.3900e-003 | 0.0000 | 2.3900e-003 | 2.6000e-004 | 0.0000 | 2.6000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.4800e-003 | 0.0299 | 0.0169 | 4.0000e-005 | | 1.1700e-003 | 1.1700e-003 | | 1.0700e-003 | 1.0700e-003 | 0.0000 | 3.2290 | 3.2290 | 1.0400e-003 | 0.0000 | 3.2551 |
| **Total** | **2.4800e-003** | **0.0299** | **0.0169** | **4.0000e-005** | **2.3900e-003** | **1.1700e-003** | **3.5600e-003** | **2.6000e-004** | **1.0700e-003** | **1.3300e-003** | **0.0000** | **3.2290** | **3.2290** | **1.0400e-003** | **0.0000** | **3.2551** |

## 3.3 Site Preparation - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.0000e-005 | 3.0000e-005 | 3.2000e-004 | 0.0000 | 1.0000e-004 | 0.0000 | 1.0000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.0829 | 0.0829 | 0.0000 | 0.0000 | 0.0830 |
| **Total** | **4.0000e-005** | **3.0000e-005** | **3.2000e-004** | **0.0000** | **1.0000e-004** | **0.0000** | **1.0000e-004** | **3.0000e-005** | **0.0000** | **3.0000e-005** | **0.0000** | **0.0829** | **0.0829** | **0.0000** | **0.0000** | **0.0830** |

## 3.4 Grading - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0197 | 0.0000 | 0.0197 | 0.0101 | 0.0000 | 0.0101 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 5.7700e-003 | 0.0640 | 0.0298 | 6.0000e-005 | | 2.9700e-003 | 2.9700e-003 | | 2.7300e-003 | 2.7300e-003 | 0.0000 | 5.4333 | 5.4333 | 1.7600e-003 | 0.0000 | 5.4773 |
| **Total** | **5.7700e-003** | **0.0640** | **0.0298** | **6.0000e-005** | **0.0197** | **2.9700e-003** | **0.0226** | **0.0101** | **2.7300e-003** | **0.0128** | **0.0000** | **5.4333** | **5.4333** | **1.7600e-003** | **0.0000** | **5.4773** |

## 3.4 Grading - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.1000e-004 | 7.0000e-005 | 8.0000e-004 | 0.0000 | 2.4000e-004 | 0.0000 | 2.4000e-004 | 6.0000e-005 | 0.0000 | 7.0000e-005 | 0.0000 | 0.2073 | 0.2073 | 1.0000e-005 | 0.0000 | 0.2074 |
| **Total** | **1.1000e-004** | **7.0000e-005** | **8.0000e-004** | **0.0000** | **2.4000e-004** | **0.0000** | **2.4000e-004** | **6.0000e-005** | **0.0000** | **7.0000e-005** | **0.0000** | **0.2073** | **0.2073** | **1.0000e-005** | **0.0000** | **0.2074** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0197 | 0.0000 | 0.0197 | 0.0101 | 0.0000 | 0.0101 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 5.7700e-003 | 0.0640 | 0.0298 | 6.0000e-005 | | 2.9700e-003 | 2.9700e-003 | | 2.7300e-003 | 2.7300e-003 | 0.0000 | 5.4333 | 5.4333 | 1.7600e-003 | 0.0000 | 5.4773 |
| **Total** | **5.7700e-003** | **0.0640** | **0.0298** | **6.0000e-005** | **0.0197** | **2.9700e-003** | **0.0226** | **0.0101** | **2.7300e-003** | **0.0128** | **0.0000** | **5.4333** | **5.4333** | **1.7600e-003** | **0.0000** | **5.4773** |

## 3.4 Grading - 2020

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.1000e-004 | 7.0000e-005 | 8.0000e-004 | 0.0000 | 2.4000e-004 | 0.0000 | 2.4000e-004 | 6.0000e-005 | 0.0000 | 7.0000e-005 | 0.0000 | 0.2073 | 0.2073 | 1.0000e-005 | 0.0000 | 0.2074 |
| **Total** | **1.1000e-004** | **7.0000e-005** | **8.0000e-004** | **0.0000** | **2.4000e-004** | **0.0000** | **2.4000e-004** | **6.0000e-005** | **0.0000** | **7.0000e-005** | **0.0000** | **0.2073** | **0.2073** | **1.0000e-005** | **0.0000** | **0.2074** |

## 3.5 Building Construction - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0675 | 0.5143 | 0.4395 | 7.4000e-004 | | 0.0280 | 0.0280 | | 0.0268 | 0.0268 | 0.0000 | 61.2551 | 61.2551 | 0.0124 | 0.0000 | 61.5659 |
| **Total** | **0.0675** | **0.5143** | **0.4395** | **7.4000e-004** | | **0.0280** | **0.0280** | | **0.0268** | **0.0268** | **0.0000** | **61.2551** | **61.2551** | **0.0124** | **0.0000** | **61.5659** |

## 3.5 Building Construction - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.0200e-003 | 0.0641 | 0.0171 | 1.5000e-004 | 3.9300e-003 | 3.8000e-004 | 4.3100e-003 | 1.1300e-003 | 3.7000e-004 | 1.5000e-003 | 0.0000 | 14.6950 | 14.6950 | 1.2100e-003 | 0.0000 | 14.7252 |
| Worker | 9.9000e-003 | 6.6700e-003 | 0.0717 | 2.1000e-004 | 0.0217 | 1.6000e-004 | 0.0218 | 5.7500e-003 | 1.4000e-004 | 5.8900e-003 | 0.0000 | 18.5451 | 18.5451 | 5.0000e-004 | 0.0000 | 18.5576 |
| **Total** | **0.0119** | **0.0707** | **0.0888** | **3.6000e-004** | **0.0256** | **5.4000e-004** | **0.0261** | **6.8800e-003** | **5.1000e-004** | **7.3900e-003** | **0.0000** | **33.2400** | **33.2400** | **1.7100e-003** | **0.0000** | **33.2828** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0675 | 0.5143 | 0.4395 | 7.4000e-004 | | 0.0280 | 0.0280 | | 0.0268 | 0.0268 | 0.0000 | 61.2550 | 61.2550 | 0.0124 | 0.0000 | 61.5658 |
| **Total** | **0.0675** | **0.5143** | **0.4395** | **7.4000e-004** | | **0.0280** | **0.0280** | | **0.0268** | **0.0268** | **0.0000** | **61.2550** | **61.2550** | **0.0124** | **0.0000** | **61.5658** |

## 3.5 Building Construction - 2020

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.0200e-003 | 0.0641 | 0.0171 | 1.5000e-004 | 3.9300e-003 | 3.8000e-004 | 4.3100e-003 | 1.1300e-003 | 3.7000e-004 | 1.5000e-003 | 0.0000 | 14.6950 | 14.6950 | 1.2100e-003 | 0.0000 | 14.7252 |
| Worker | 9.9000e-003 | 6.6700e-003 | 0.0717 | 2.1000e-004 | 0.0217 | 1.6000e-004 | 0.0218 | 5.7500e-003 | 1.4000e-004 | 5.8900e-003 | 0.0000 | 18.5451 | 18.5451 | 5.0000e-004 | 0.0000 | 18.5576 |
| **Total** | **0.0119** | **0.0707** | **0.0888** | **3.6000e-004** | **0.0256** | **5.4000e-004** | **0.0261** | **6.8800e-003** | **5.1000e-004** | **7.3900e-003** | **0.0000** | **33.2400** | **33.2400** | **1.7100e-003** | **0.0000** | **33.2828** |

## 3.5 Building Construction - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1646 | 1.2902 | 1.1723 | 2.0100e-003 | | 0.0658 | 0.0658 | | 0.0630 | 0.0630 | 0.0000 | 167.1572 | 167.1572 | 0.0329 | 0.0000 | 167.9794 |
| **Total** | **0.1646** | **1.2902** | **1.1723** | **2.0100e-003** | | **0.0658** | **0.0658** | | **0.0630** | **0.0630** | **0.0000** | **167.1572** | **167.1572** | **0.0329** | **0.0000** | **167.9794** |

## 3.5 Building Construction - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 4.6400e-003 | 0.1570 | 0.0423 | 4.1000e-004 | 0.0107 | 4.4000e-004 | 0.0112 | 3.0900e-003 | 4.2000e-004 | 3.5100e-003 | 0.0000 | 39.8363 | 39.8363 | 3.1700e-003 | 0.0000 | 39.9155 |
| Worker | 0.0253 | 0.0164 | 0.1805 | 5.4000e-004 | 0.0591 | 4.2000e-004 | 0.0595 | 0.0157 | 3.8000e-004 | 0.0161 | 0.0000 | 49.0857 | 49.0857 | 1.2400e-003 | 0.0000 | 49.1168 |
| **Total** | **0.0300** | **0.1734** | **0.2227** | **9.5000e-004** | **0.0698** | **8.6000e-004** | **0.0706** | **0.0188** | **8.0000e-004** | **0.0196** | **0.0000** | **88.9221** | **88.9221** | **4.4100e-003** | **0.0000** | **89.0323** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1646 | 1.2902 | 1.1723 | 2.0100e-003 | | 0.0658 | 0.0658 | | 0.0630 | 0.0630 | 0.0000 | 167.1570 | 167.1570 | 0.0329 | 0.0000 | 167.9792 |
| **Total** | **0.1646** | **1.2902** | **1.1723** | **2.0100e-003** | | **0.0658** | **0.0658** | | **0.0630** | **0.0630** | **0.0000** | **167.1570** | **167.1570** | **0.0329** | **0.0000** | **167.9792** |

## 3.5 Building Construction - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 4.6400e-003 | 0.1570 | 0.0423 | 4.1000e-004 | 0.0107 | 4.4000e-004 | 0.0112 | 3.0900e-003 | 4.2000e-004 | 3.5100e-003 | 0.0000 | 39.8363 | 39.8363 | 3.1700e-003 | 0.0000 | 39.9155 |
| Worker | 0.0253 | 0.0164 | 0.1805 | 5.4000e-004 | 0.0591 | 4.2000e-004 | 0.0595 | 0.0157 | 3.8000e-004 | 0.0161 | 0.0000 | 49.0857 | 49.0857 | 1.2400e-003 | 0.0000 | 49.1168 |
| **Total** | **0.0300** | **0.1734** | **0.2227** | **9.5000e-004** | **0.0698** | **8.6000e-004** | **0.0706** | **0.0188** | **8.0000e-004** | **0.0196** | **0.0000** | **88.9221** | **88.9221** | **4.4100e-003** | **0.0000** | **89.0323** |

## 3.6 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.4302 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0141 | 0.0985 | 0.1172 | 1.9000e-004 | | 6.0700e-003 | 6.0700e-003 | | 6.0700e-003 | 6.0700e-003 | 0.0000 | 16.4685 | 16.4685 | 1.1300e-003 | 0.0000 | 16.4967 |
| **Total** | **0.4443** | **0.0985** | **0.1172** | **1.9000e-004** | | **6.0700e-003** | **6.0700e-003** | | **6.0700e-003** | **6.0700e-003** | **0.0000** | **16.4685** | **16.4685** | **1.1300e-003** | **0.0000** | **16.4967** |

## 3.6 Architectural Coating - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.0200e-003 | 2.6000e-003 | 0.0286 | 9.0000e-005 | 9.3600e-003 | 7.0000e-005 | 9.4300e-003 | 2.4900e-003 | 6.0000e-005 | 2.5500e-003 | 0.0000 | 7.7795 | 7.7795 | 2.0000e-004 | 0.0000 | 7.7844 |
| **Total** | **4.0200e-003** | **2.6000e-003** | **0.0286** | **9.0000e-005** | **9.3600e-003** | **7.0000e-005** | **9.4300e-003** | **2.4900e-003** | **6.0000e-005** | **2.5500e-003** | **0.0000** | **7.7795** | **7.7795** | **2.0000e-004** | **0.0000** | **7.7844** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.4302 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0141 | 0.0985 | 0.1172 | 1.9000e-004 | | 6.0700e-003 | 6.0700e-003 | | 6.0700e-003 | 6.0700e-003 | 0.0000 | 16.4685 | 16.4685 | 1.1300e-003 | 0.0000 | 16.4967 |
| **Total** | **0.4443** | **0.0985** | **0.1172** | **1.9000e-004** | | **6.0700e-003** | **6.0700e-003** | | **6.0700e-003** | **6.0700e-003** | **0.0000** | **16.4685** | **16.4685** | **1.1300e-003** | **0.0000** | **16.4967** |

## 3.6 Architectural Coating - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.0200e-003 | 2.6000e-003 | 0.0286 | 9.0000e-005 | 9.3600e-003 | 7.0000e-005 | 9.4300e-003 | 2.4900e-003 | 6.0000e-005 | 2.5500e-003 | 0.0000 | 7.7795 | 7.7795 | 2.0000e-004 | 0.0000 | 7.7844 |
| **Total** | **4.0200e-003** | **2.6000e-003** | **0.0286** | **9.0000e-005** | **9.3600e-003** | **7.0000e-005** | **9.4300e-003** | **2.4900e-003** | **6.0000e-005** | **2.5500e-003** | **0.0000** | **7.7795** | **7.7795** | **2.0000e-004** | **0.0000** | **7.7844** |

## 3.7 Paving - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 5.3200e-003 | 0.0532 | 0.0589 | 9.0000e-005 | | 2.9100e-003 | 2.9100e-003 | | 2.6900e-003 | 2.6900e-003 | 0.0000 | 7.7524 | 7.7524 | 2.4600e-003 | 0.0000 | 7.8138 |
| Paving | 1.1900e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **6.5100e-003** | **0.0532** | **0.0589** | **9.0000e-005** | | **2.9100e-003** | **2.9100e-003** | | **2.6900e-003** | **2.6900e-003** | **0.0000** | **7.7524** | **7.7524** | **2.4600e-003** | **0.0000** | **7.8138** |

## 3.7 Paving - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.6000e-004 | 1.7000e-004 | 1.8500e-003 | 1.0000e-005 | 6.0000e-004 | 0.0000 | 6.1000e-004 | 1.6000e-004 | 0.0000 | 1.6000e-004 | 0.0000 | 0.5026 | 0.5026 | 1.0000e-005 | 0.0000 | 0.5029 |
| **Total** | **2.6000e-004** | **1.7000e-004** | **1.8500e-003** | **1.0000e-005** | **6.0000e-004** | **0.0000** | **6.1000e-004** | **1.6000e-004** | **0.0000** | **1.6000e-004** | **0.0000** | **0.5026** | **0.5026** | **1.0000e-005** | **0.0000** | **0.5029** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 5.3200e-003 | 0.0532 | 0.0589 | 9.0000e-005 | | 2.9100e-003 | 2.9100e-003 | | 2.6900e-003 | 2.6900e-003 | 0.0000 | 7.7524 | 7.7524 | 2.4600e-003 | 0.0000 | 7.8138 |
| Paving | 1.1900e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **6.5100e-003** | **0.0532** | **0.0589** | **9.0000e-005** | | **2.9100e-003** | **2.9100e-003** | | **2.6900e-003** | **2.6900e-003** | **0.0000** | **7.7524** | **7.7524** | **2.4600e-003** | **0.0000** | **7.8138** |

### 3.7 Paving - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.6000e-004 | 1.7000e-004 | 1.8500e-003 | 1.0000e-005 | 6.0000e-004 | 0.0000 | 6.1000e-004 | 1.6000e-004 | 0.0000 | 1.6000e-004 | 0.0000 | 0.5026 | 0.5026 | 1.0000e-005 | 0.0000 | 0.5029 |
| **Total** | **2.6000e-004** | **1.7000e-004** | **1.8500e-003** | **1.0000e-005** | **6.0000e-004** | **0.0000** | **6.1000e-004** | **1.6000e-004** | **0.0000** | **1.6000e-004** | **0.0000** | **0.5026** | **0.5026** | **1.0000e-005** | **0.0000** | **0.5029** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

Increase Density

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.2129 | 0.8537 | 1.9317 | 7.4100e-003 | 0.8340 | 5.2900e-003 | 0.8393 | 0.2230 | 4.9000e-003 | 0.2279 | 0.0000 | 685.9418 | 685.9418 | 0.0269 | 0.0000 | 686.6153 |
| Unmitigated | 0.2314 | 0.9464 | 2.4519 | 0.0102 | 1.1914 | 6.9700e-003 | 1.1984 | 0.3186 | 6.4600e-003 | 0.3250 | 0.0000 | 946.3180 | 946.3180 | 0.0348 | 0.0000 | 947.1885 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 666.12 | 581.49 | 533.26 | 1,754,689 | 1,228,282 |
| City Park | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 428.53 | 604.97 | 503.63 | 538,900 | 377,230 |
| High Turnover (Sit Down Restaurant) | 312.98 | 441.85 | 367.83 | 393,594 | 275,516 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 317.10 | 353.14 | 171.61 | 464,265 | 324,985 |
| Total | 1,724.73 | 1,981.45 | 1,576.33 | 3,151,448 | 2,206,014 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 10.80 | 7.30 | 7.50 | 32.90 | 18.00 | 49.10 | 86 | 11 | 3 |
| City Park | 9.50 | 7.30 | 7.30 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |
| High Turnover (Sit Down | 9.50 | 7.30 | 7.30 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| High Turnover (Sit Down | 9.50 | 7.30 | 7.30 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Other Asphalt Surfaces | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Parking Lot | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Strip Mall | 9.50 | 7.30 | 7.30 | 16.60 | 64.40 | 19.00 | 45 | 40 | 15 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.611155 | 0.038739 | 0.187677 | 0.096955 | 0.013383 | 0.005563 | 0.020646 | 0.018593 | 0.001209 | 0.001094 | 0.003654 | 0.000418 | 0.000914 |
| City Park | 0.611155 | 0.038739 | 0.187677 | 0.096955 | 0.013383 | 0.005563 | 0.020646 | 0.018593 | 0.001209 | 0.001094 | 0.003654 | 0.000418 | 0.000914 |
| High Turnover (Sit Down Restaurant) | 0.611155 | 0.038739 | 0.187677 | 0.096955 | 0.013383 | 0.005563 | 0.020646 | 0.018593 | 0.001209 | 0.001094 | 0.003654 | 0.000418 | 0.000914 |
| Other Asphalt Surfaces | 0.611155 | 0.038739 | 0.187677 | 0.096955 | 0.013383 | 0.005563 | 0.020646 | 0.018593 | 0.001209 | 0.001094 | 0.003654 | 0.000418 | 0.000914 |
| Parking Lot | 0.611155 | 0.038739 | 0.187677 | 0.096955 | 0.013383 | 0.005563 | 0.020646 | 0.018593 | 0.001209 | 0.001094 | 0.003654 | 0.000418 | 0.000914 |
| Strip Mall | 0.611155 | 0.038739 | 0.187677 | 0.096955 | 0.013383 | 0.005563 | 0.020646 | 0.018593 | 0.001209 | 0.001094 | 0.003654 | 0.000418 | 0.000914 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

High Street Station - 2030 - Ventura County, Annual

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 71.4564 | 71.4564 | 3.0300e-003 | 6.1000e-004 | 71.7128 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 109.9523 | 109.9523 | 4.6600e-003 | 9.3000e-004 | 110.3468 |
| NaturalGas Mitigated | 0.0150 | 0.1329 | 0.0918 | 8.2000e-004 | | 0.0103 | 0.0103 | | 0.0103 | 0.0103 | 0.0000 | 147.9714 | 147.9714 | 2.8400e-003 | 2.7100e-003 | 148.8507 |
| NaturalGas Unmitigated | 0.0150 | 0.1329 | 0.0918 | 8.2000e-004 | | 0.0103 | 0.0103 | | 0.0103 | 0.0103 | 0.0000 | 147.9714 | 147.9714 | 2.8400e-003 | 2.7100e-003 | 148.8507 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Apartments Mid Rise | 1.0399e+006 | 5.6100e-003 | 0.0479 | 0.0204 | 3.1000e-004 | | 3.8700e-003 | 3.8700e-003 | | 3.8700e-003 | 3.8700e-003 | 0.0000 | 55.4930 | 55.4930 | 1.0600e-003 | 1.0200e-003 | 55.8227 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 724540 | 3.9100e-003 | 0.0355 | 0.0298 | 2.1000e-004 | | 2.7000e-003 | 2.7000e-003 | | 2.7000e-003 | 2.7000e-003 | 0.0000 | 38.6642 | 38.6642 | 7.4000e-004 | 7.1000e-004 | 38.8940 |
| High Turnover (Sit Down Restaurant) | 991640 | 5.3500e-003 | 0.0486 | 0.0408 | 2.9000e-004 | | 3.6900e-003 | 3.6900e-003 | | 3.6900e-003 | 3.6900e-003 | 0.0000 | 52.9177 | 52.9177 | 1.0100e-003 | 9.7000e-004 | 53.2321 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 16800 | 9.0000e-005 | 8.2000e-004 | 6.9000e-004 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | 0.0000 | 0.8965 | 0.8965 | 2.0000e-005 | 2.0000e-005 | 0.9018 |
| **Total** | | **0.0150** | **0.1329** | **0.0917** | **8.1000e-004** | | **0.0103** | **0.0103** | | **0.0103** | **0.0103** | **0.0000** | **147.9714** | **147.9714** | **2.8300e-003** | **2.7200e-003** | **148.8507** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Apartments Mid Rise | 1.0399e+006 | 5.6100e-003 | 0.0479 | 0.0204 | 3.1000e-004 | | 3.8700e-003 | 3.8700e-003 | | 3.8700e-003 | 3.8700e-003 | 0.0000 | 55.4930 | 55.4930 | 1.0600e-003 | 1.0200e-003 | 55.8227 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 724540 | 3.9100e-003 | 0.0355 | 0.0298 | 2.1000e-004 | | 2.7000e-003 | 2.7000e-003 | | 2.7000e-003 | 2.7000e-003 | 0.0000 | 38.6642 | 38.6642 | 7.4000e-004 | 7.1000e-004 | 38.8940 |
| High Turnover (Sit Down Restaurant) | 991640 | 5.3500e-003 | 0.0486 | 0.0408 | 2.9000e-004 | | 3.6900e-003 | 3.6900e-003 | | 3.6900e-003 | 3.6900e-003 | 0.0000 | 52.9177 | 52.9177 | 1.0100e-003 | 9.7000e-004 | 53.2321 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 16800 | 9.0000e-005 | 8.2000e-004 | 6.9000e-004 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | 0.0000 | 0.8965 | 0.8965 | 2.0000e-005 | 2.0000e-005 | 0.9018 |
| **Total** | | **0.0150** | **0.1329** | **0.0917** | **8.1000e-004** | | **0.0103** | **0.0103** | | **0.0103** | **0.0103** | **0.0000** | **147.9714** | **147.9714** | **2.8300e-003** | **2.7200e-003** | **148.8507** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 361752 | 58.0298 | 2.4600e-003 | 4.9000e-004 | 58.2380 |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 129519 | 20.7765 | 8.8000e-004 | 1.8000e-004 | 20.8511 |
| High Turnover (Sit Down Restaurant) | 94632.8 | 15.1803 | 6.4000e-004 | 1.3000e-004 | 15.2348 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 10824.7 | 1.7364 | 7.0000e-005 | 1.0000e-005 | 1.7427 |
| Strip Mall | 88704 | 14.2293 | 6.0000e-004 | 1.2000e-004 | 14.2803 |
| **Total** | | **109.9523** | **4.6500e-003** | **9.3000e-004** | **110.3468** |

## 5.3 Energy by Land Use - Electricity

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 327469 | 52.5303 | 2.2300e-003 | 4.5000e-004 | 52.7188 |
| City Park | -34282.9 | -5.4994 | -0.0002 | -0.0001 | -5.5192 |
| High Turnover (Sit Down Restaurant) | 60349.9 | 9.6809 | 4.1000e-004 | 8.0000e-005 | 9.7157 |
| High Turnover (Sit Down Restaurant) | 95236 | 15.2771 | 6.5000e-004 | 1.3000e-004 | 15.3319 |
| Other Asphalt Surfaces | -34282.9 | -5.4994 | -0.0002 | -0.0001 | -5.5192 |
| Parking Lot | -23458.2 | -3.7630 | -0.0002 | 0.0000 | -3.7765 |
| Strip Mall | 54421.1 | 8.7299 | 3.7000e-004 | 7.0000e-005 | 8.7612 |
| **Total** | | **71.4564** | **3.0400e-003** | **6.0000e-004** | **71.7128** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.3982 | 7.7800e-003 | 0.6754 | 4.0000e-005 | | 3.7500e-003 | 3.7500e-003 | | 3.7500e-003 | 3.7500e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0600e-003 | 0.0000 | 1.1331 |
| Unmitigated | 0.3982 | 7.7800e-003 | 0.6754 | 4.0000e-005 | | 3.7500e-003 | 3.7500e-003 | | 3.7500e-003 | 3.7500e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0600e-003 | 0.0000 | 1.1331 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0439 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.3340 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0203 | 7.7800e-003 | 0.6754 | 4.0000e-005 | | 3.7500e-003 | 3.7500e-003 | | 3.7500e-003 | 3.7500e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0600e-003 | 0.0000 | 1.1331 |
| **Total** | **0.3982** | **7.7800e-003** | **0.6754** | **4.0000e-005** | | **3.7500e-003** | **3.7500e-003** | | **3.7500e-003** | **3.7500e-003** | **0.0000** | **1.1066** | **1.1066** | **1.0600e-003** | **0.0000** | **1.1331** |

## 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0439 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.3340 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0203 | 7.7800e-003 | 0.6754 | 4.0000e-005 | | 3.7500e-003 | 3.7500e-003 | | 3.7500e-003 | 3.7500e-003 | 0.0000 | 1.1066 | 1.1066 | 1.0600e-003 | 0.0000 | 1.1331 |
| **Total** | **0.3982** | **7.7800e-003** | **0.6754** | **4.0000e-005** | | **3.7500e-003** | **3.7500e-003** | | **3.7500e-003** | **3.7500e-003** | **0.0000** | **1.1066** | **1.1066** | **1.0600e-003** | **0.0000** | **1.1331** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

High Street Station - 2030 - Ventura County, Annual

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 24.4020 | 0.2240 | 5.4600e-003 | 31.6284 |
| Unmitigated | 24.4020 | 0.2240 | 5.4600e-003 | 31.6284 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 4.74321 / 3.73786 | 18.0737 | 0.1553 | 3.7900e-003 | 23.0846 |
| City Park | 0 / 0.202552 | 0.3610 | 2.0000e-005 | 0.0000 | 0.3623 |
| High Turnover (Sit Down Restaurant) | 1.60509 / 0.128065 | 4.0901 | 0.0525 | 1.2700e-003 | 5.7785 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 0.497767 / 0.381354 | 1.8773 | 0.0163 | 4.0000e-004 | 2.4031 |
| **Total** | | **24.4020** | **0.2240** | **5.4600e-003** | **31.6284** |

### 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 4.74321 / 3.73786 | 18.0737 | 0.1553 | 3.7900e-003 | 23.0846 |
| City Park | 0 / 0.202552 | 0.3610 | 2.0000e-005 | 0.0000 | 0.3623 |
| High Turnover (Sit Down Restaurant) | 1.60509 / 0.128065 | 4.0901 | 0.0525 | 1.2700e-003 | 5.7785 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 0.497767 / 0.381354 | 1.8773 | 0.0163 | 4.0000e-004 | 2.4031 |
| **Total** | | **24.4020** | **0.2240** | **5.4600e-003** | **31.6284** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 26.2569 | 1.5517 | 0.0000 | 65.0503 |
| Unmitigated | 26.2569 | 1.5517 | 0.0000 | 65.0503 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 41.86 | 8.4972 | 0.5022 | 0.0000 | 21.0515 |
| City Park | 0.01 | 2.0300e-003 | 1.2000e-004 | 0.0000 | 5.0300e-003 |
| High Turnover (Sit Down Restaurant) | 78.66 | 15.9673 | 0.9436 | 0.0000 | 39.5582 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 8.82 | 1.7904 | 0.1058 | 0.0000 | 4.4356 |
| **Total** | | **26.2569** | **1.5517** | **0.0000** | **65.0503** |

## 8.2 Waste by Land Use

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 41.86 | 8.4972 | 0.5022 | 0.0000 | 21.0515 |
| City Park | 0.01 | 2.0300e-003 | 1.2000e-004 | 0.0000 | 5.0300e-003 |
| High Turnover (Sit Down Restaurant) | 78.66 | 15.9673 | 0.9436 | 0.0000 | 39.5582 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 8.82 | 1.7904 | 0.1058 | 0.0000 | 4.4356 |
| **Total** | | **26.2569** | **1.5517** | **0.0000** | **65.0503** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# Solar PV Requirements for Low-Rise Residential Buildings
# (2019 California Energy Code Section 150.1(b)14)

| | |
|---|---|
| **Equation 150.1-C** | kWPV = (CFA x A)/1000 + (NDwell x B) |

| Inputs | | |
|---|---|---|
| **Climate Zone** | | 9 |
| **A** | Adjustment Factor from Table 150.1-C | 0.613 |
| **B** | Dwelling Adjustment Factor from Table 150.1-C | 1.36 |

| **Unit Type** | **Conditioned Floor Area (CFA) per Unit** | **Number of Dwelling Units (Ndwell)** | **kWPV (KWdc Size of the PV System)** |
|---|---|---|---|
| Plan A | 677 | 10 | 14 |
| Plan B | 633 | 26 | 36 |
| Plan C | 810 | 8 | 11 |
| Plan D | 770 | 39 | 54 |
| Plan E | 1262 | 8 | 12 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **Total Size of PV System (kW)** | | 91 | 126 |
| **kW to kWh Conversion Factor** | | | 1900 |
| **Amount of Electricity Generated (kWh/yr)** | | | 239,980 |

| Table 150.1-C | | |
|---|---|---|
| Climate Zone | A - CFA | B - Dwelling Units |
| 1 | 0.793 | 1.27 |
| 2 | 0.621 | 1.22 |
| 3 | 0.628 | 1.12 |
| 4 | 0.586 | 1.21 |
| 5 | 0.585 | 1.06 |
| 6 | 0.594 | 1.23 |
| 7 | 0.572 | 1.15 |
| 8 | 0.586 | 1.37 |
| 9 | 0.613 | 1.36 |
| 10 | 0.627 | 1.41 |
| 11 | 0.836 | 1.44 |
| 12 | 0.613 | 1.40 |
| 13 | 0.894 | 1.51 |
| 14 | 0.741 | 1.26 |
| 15 | 1.56 | 1.47 |
| 16 | 0.59 | 1.22 |

| Sources | |
|---|---|
| **Climate Zones** | California Energy Commission. "California Building Climate Zone Areas." Last modified: November 2017. https://www.energy.ca.gov/maps/renewable/building_climate_zones.html |
| **2019 California Energy Code** | California Energy Commission. 2018. 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. December 2018. https://www.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf |
| **kWh per kW PV Solar System (see page 12 of PDF)** | United States Department of Energy. 2003. A Consumer's Guide: Get Your Power from the Sun. https://www.nrel.gov/docs/fy04osti/35297.pdf |

## N2O Operational GHG Emission Mobile Calculations

| Project Code & Title: 18-05844 High Street Station, Moorpark |
|---|

| Vehicle Population Breakdown* | |
|---|---|
| 543735 | Gasoline vehicles |
| 29744 | Diesel vehicles |
| 94.8% | Gasoline vehicle % |
| 5.2% | Diesel vehicle % |

| VMT per Vehicle Type | |
|---|---|
| 2206014 | Project VMT (CalEEMod output) |
| 2091597 | Gasoline vehicle VMT |
| 114417 | Diesel vehicle VMT |

| Gasoline Vehicles | |
|---|---|
| 94.8% | Gasoline vehicle % |
| 0.8537 | Tons per year mobile NOX emissions (annual output in CalEEMod) |
| 0.81 | Gasoline vehicle tons per year NOX emissions |
| 0.0528 | Tons per year N2O emissions for gasoline vehicles** |
| 0.0479 | Metric tons per year N2O emissions for gasoline vehicles |

| Diesel Vehicles | |
|---|---|
| 1.60 | grams N2O per gallon of fuel for diesel vehicles** |
| 24.15 | Diesel average miles per gallon* |
| 0.06624 | grams per mile N2O for diesel vehicles |
| 7578.9 | grams per year N2O for diesel vehicles |
| 0.0075789 | Metric tons per year N2O emissions for diesel vehicles |

| CO2e Emissions from N2O | |
|---|---|
| 0.0555 | Metric tons per year from gasoline + diesel vehicles |
| 298 | GWP of N2O*** |
| **16.5** | **CO2e emissions per year from N2O emissions from gasoline + diesel vehicles** |

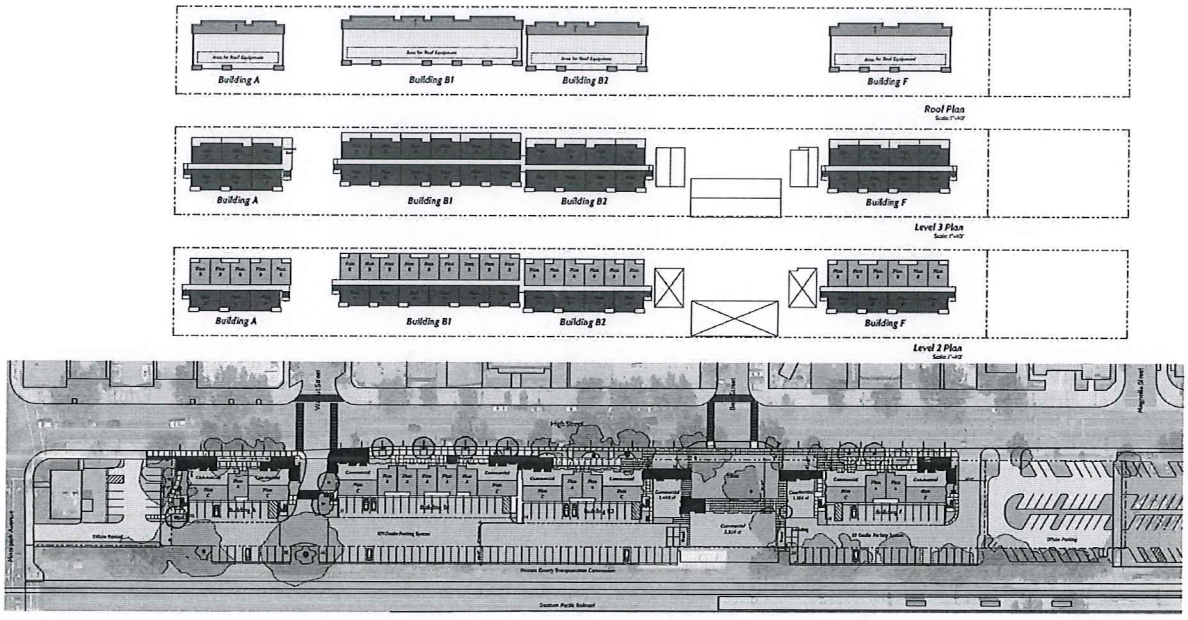
| Sources |
|---|
| ***Vehicle population source:** |
| EMFAC2017 (v1.0.2) Emissions Inventory |
| EMFAC2017 (v1.0.2) Emissions Inventory |
| Region Type: County |
| Region: VENTURA |
| Calendar Year: 2030 |
| Season: Annual |
| Vehicle Classification: EMFAC2011 Categories |
| ****Methodology source:** |
| EMFAC2017 Volume III - Technical Documentation |
| https://www.arb.ca.gov/msei/emfac2011-faq.htm |
| |
| *****GWP source:** |
| Intergovernmental Panel on Climate Change (IPCC). 2007. |
| AR4 Climate Change 2007: The Physical Science Basis. |
| Contrbution of Working Group I to the Fourth Assessment Report of the |
| Intergovernmental Panel on Climate Change. |

# Appendix D

Traffic and Parking Study

# MOORPARK RAILROAD DEPOT PROJECT
# CITY OF MOORPARK, CALIFORNIA

## REVISED TRAFFIC AND PARKING STUDY




**December 10, 2019** **ATE Project #18050**

**Prepared for:**

**Rincon Consultants, Inc.**
**180 North Ashwood Avenue**
**Ventura, CA 93003**


**ASSOCIATED TRANSPORTATION ENGINEERS**

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110-1686 • (805) 687-4418 • FAX (805) 682-8509

# ASSOCIATED TRANSPORTATION ENGINEERS

*100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805)687-4418 • main@atesb.com*

Since 1978

Richard L. Pool, P.E.
Scott A. Schell, AICP, PTP


December 10, 2019 18050R03.wp

Mr. Joe Power
Rincon Consultants, Inc
180 North Ashwood Avenue
Ventura, CA 93003

**REVISED TRAFFIC AND PARKING STUDY FOR THE MOORPARK RAILROAD DEPOT PROJECT, CITY OF MOORPARK**

Associated Transportation Engineers has prepared the following revised traffic and parking study for the Moorpark Railroad Depot Project proposed in the City of Moorpark. The revised traffic and parking study addresses the comments provided by Linscott, Law & Greenspan, Engineers on the October 8, 2019 study. We appreciate the opportunity to assist you with this Project.

Associated Transportation Engineers

Scott A. Schell, AICP, PTP.
Vice President

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## INTRODUCTION

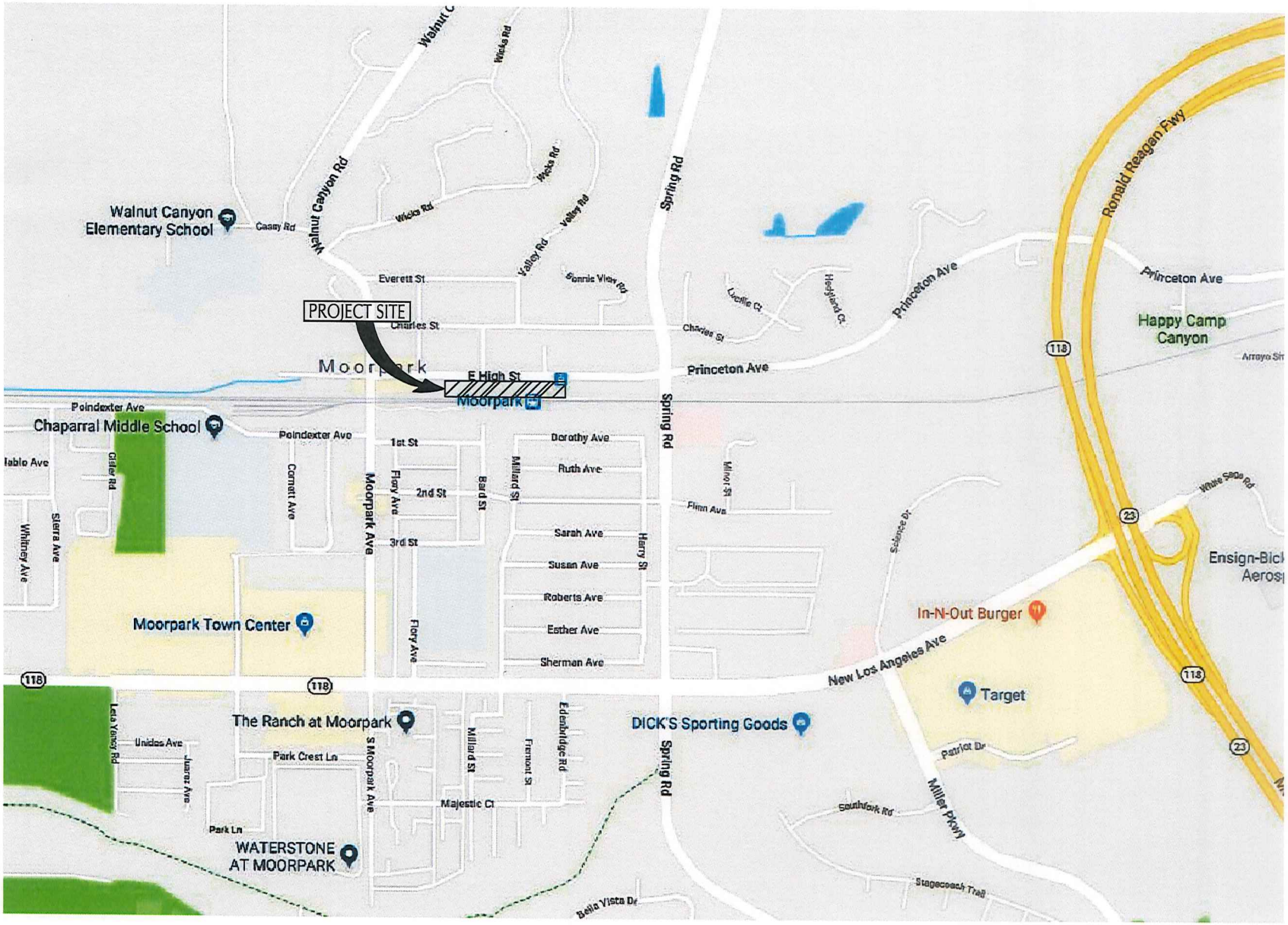
The following revised study contains an analysis of the potential traffic impacts associated with the Moorpark Railroad Depot Project (the Project). The study provides information regarding existing and future traffic conditions within the project study-area and recommends improvements where necessary. The study also reviews the Project's parking requirements.

## PROJECT DESCRIPTION

The Project is proposing to construct a Transit-Oriented Development (TOD) infill development consisting of 91 apartment units, 3,824 square feet of brewery space, 2,794 square feet of restaurant space, 8,400 square feet of retail commercial space. A TOD, is a type of community development that includes a mixture of housing, office, retail and/or other amenities integrated into a walkable neighborhood and located within a half-mile of quality public transportation. Studies have found that TOD commuters typically use transit 2 to 5 times more than other commuters. The TOD transit mode share can vary from 5% to near 50%, which results in increased transit ridership and lower vehicle trip generation and parking demands. In addition, the Project will coordinate with tenants to develop a Transportation Demand Management Plan to reduce vehicle trips and increase transit and bicycle use.

The Project site is located on High Street between Moorpark Avenue and Spring Street in the City of Moorpark. Figure 1 shows the location of the Project site within the City. Regional access to the Project site is provided by State Route 118 via the State Route 118-23/Los Angeles Avenue interchange. Direct access to the project site would be provided by a driveway connection to High Street opposite Walnut Street and a driveway east of Bard Street. Figure 2 illustrates the Project site plan. The Project site is located adjacent to the Metrolink/Amtrak station and parking lot facilities and along the Moorpark City Transit bus routes. The local rail transit and bus transit facilities are less than a quarter mile walk from the Project site. Project pedestrian facilities will connect the Project site to the local transit facilities. These pedestrian facilities will improve the walkability of the High Street corridor adjacent to the Project site.

The Project would redevelop a 2.15 acre site currently occupied by the old granary an other commercial businesses which are no longer operational. The Project site is located within the Moorpark Downtown Specific Plan Area and is currently zoned Old Town Commercial (C-OT). The C-OT zoning designation does not allow residential uses. A Zoning Ordinance Amendment will therefore be required to accommodate residential uses within the C-OT zone.



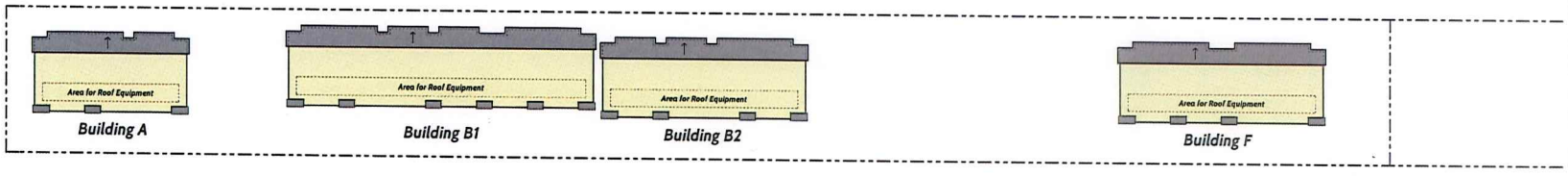

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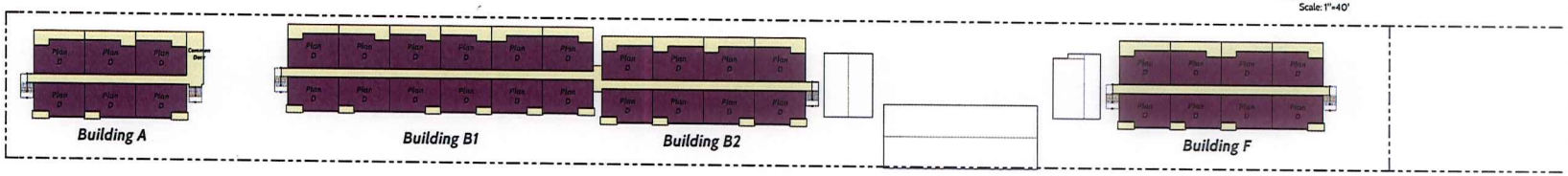
EXISTING STREET NETWORK AND PROJECT SITE LOCATION

FIGURE 1

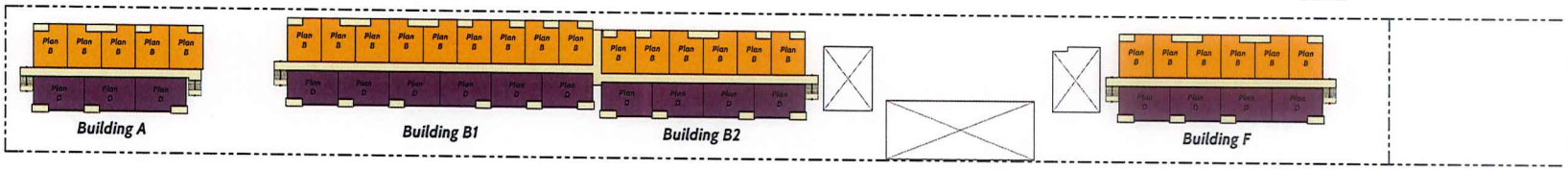
EKM - ATE#18050



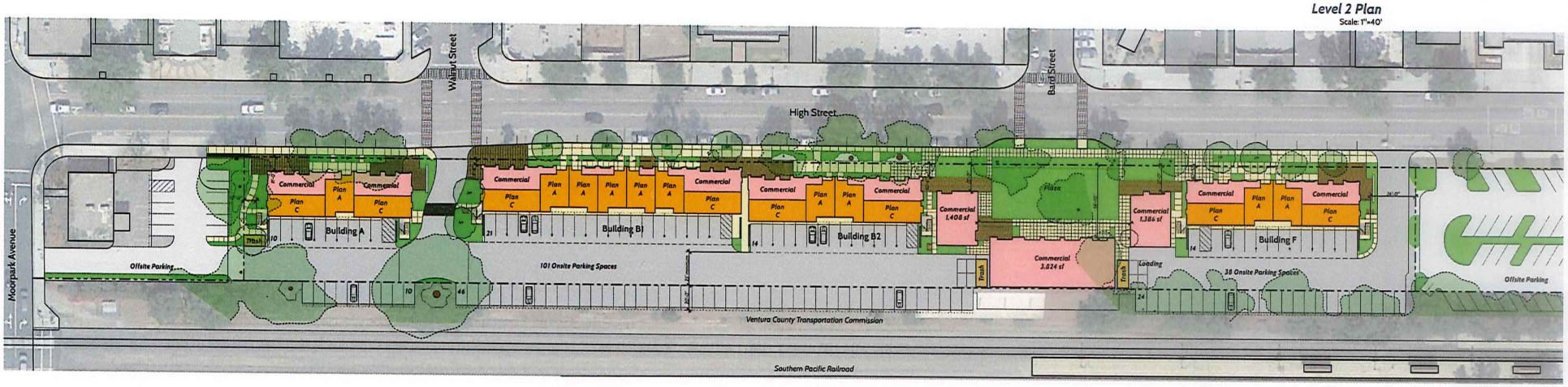

Roof Plan
Scale: 1"=40'




Level 3 Plan
Scale: 1"=40'




Level 2 Plan
Scale: 1"=40'




Ground Plan

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PROJECT SITE PLAN

FIGURE 2

EKM - ATE#18050

## EXISTING CONDITIONS

### Street Network

**State Route 118 (Los Angeles Avenue)**, located south of the Project site, is a 2- to 6-lane highway that extends from the State Route 126 (Santa Paula Freeway) in the City of Ventura to State Route 210 (Foothill Freeway) east of the City of San Fernando. State Route 118 is signalized at Moorpark Avenue and Spring Road.

**State Route 23 (Walnut Canyon Road - Moorpark Avenue)**, located west of the Project site, is a 2 to 3-lane roadway with a center left-turn lane in the study-area. State Route 23 serves as the primary north-south route between the Cities of Moorpark and Fillmore.

**Spring Road**, located east of the Project site, is a 2 to 4-lane divided arterial roadway that extends south from Walnut Canyon Road to Tierra Rejada Road within the City of Moorpark. Spring Road is signalized at High Street and Los Angeles Avenue.

**High Street**, located adjacent to the Project site, is a 2-lane arterial roadway that extends west from Walnut Canyon Road becoming Princeton Avenue east of Spring Road. High Street serves primarily commercial land uses. High Street is fully improved with sidewalk, curb and gutter on both sides. High Street is signalized at Moorpark Avenue and Spring Street.

**Poindexter Avenue**, located south of the Project site, is a 2-lane roadway that extends west from Moorpark Avenue to Gabbert Road. Poindexter Avenue forms an off-set 4-legged intersection with First Street at Moorpark Avenue. Poindexter Avenue serves primarily residential land uses. Poindexter Avenue is signalized at Moorpark Avenue.

**First Street**, located south of the Project site, is a 2-lane roadway that extends east from Moorpark Avenue to Bard Street. First Street forms an off-set 4-legged intersection with Poindexter Avenue at Moorpark Avenue. First Street serves primarily residential land uses. First Street is signalized at Moorpark Avenue.

### Intersection Operations

Because traffic flow on urban arterial roadways is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical intersections during peak travel periods. In rating intersection operations, "Levels of Service" (LOS) A through F are used, with LOS A indicating free flow operations and LOS F indicating congested operations (more complete definitions of levels of service are included in the Technical Appendix).The City of Moorpark considers LOS C to be the minimum acceptable operating standard for intersections.

Figure 3 illustrates the existing traffic controls and geometries at the study-area intersections. Existing peak hour volumes for the study-area intersections were collected by ATE for this study (traffic count data is contained in the Technical Appendix for reference). The existing A.M. and P.M. peak hour traffic volumes for the study-area intersections are illustrated on Figure 4.

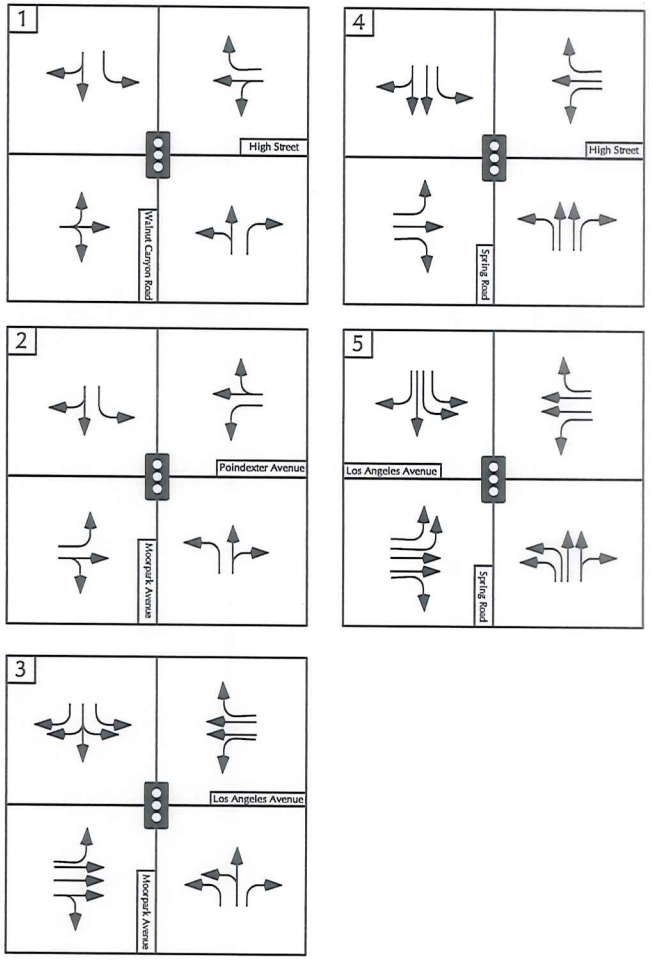
Levels of service were calculated for intersections using the "Intersection Capacity Utilization" (ICU) methodology adopted by the City of Moorpark. Table 1 lists the existing levels of service for the study-area intersections (calculation worksheets are contained in the Technical Appendix).

**Table 1**
**Existing Intersection Levels of Service**

| | Intersection | A.M. Peak Hour | | P.M. Peak Hour | |
|---|---|---|---|---|---|
| | | V/C | LOS | V/C | LOS |
| 1. | Moorpark Avenue/High Street | 0.68 | LOS B | 0.68 | LOS B |
| 2. | Spring Road/High Street | 0.63 | LOS B | 0.72 | LOS C |
| 3. | Moorpark Avenue/Poindexter Avenue | 0.68 | LOS B | 0.67 | LOS B |
| 4. | Los Angeles Avenue/Moorpark Avenue | 0.65 | LOS B | 0.68 | LOS B |
| 5. | Los Angeles Avenue/Spring Road | 0.70 | LOS B | 0.70 | LOS B |

The data presented in Table 1 show that the study-area intersections currently operate at LOS C or better during the A.M. and P.M. peak hour periods, which meets the City's LOS C standard.




LEGEND

- Signalized Intersection
- Lane Geometry

N
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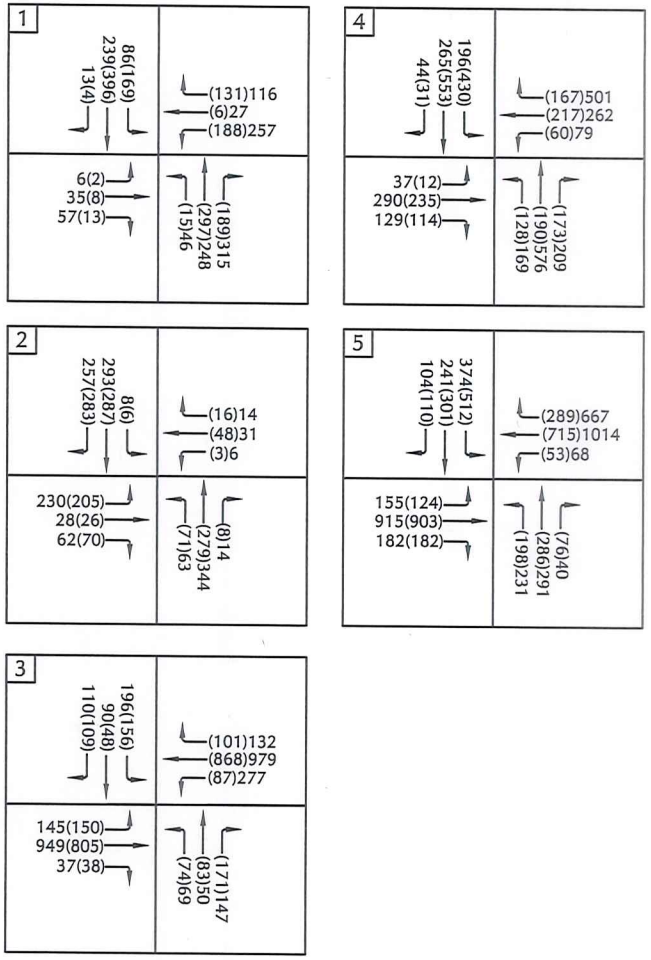
ASSOCIATED TRANSPORTATION ENGINEERS

STUDY-AREA INTERSECTIONS AND EXISTING LANE GEOMETRIES

FIGURE 3

EKM - ATE#18050




LEGEND

└(XX)XX - (A.M.)P.M. Peak Hour Volume

N

NOT TO SCALE

ASSOCIATED TRANSPORTATION ENGINEERS

EXISTING PEAK TRAFFIC VOLUMES

FIGURE 4

EKM - ATE#18050

## THRESHOLDS OF SIGNIFICANCE

Per Policy 2.1 of the City of Moorpark Circulation Element, Level of Service (LOS) C shall be the system performance objective. For facilities already operating at less than LOS C, the system performance objective shall be to maintain or improve the current level of service. The City of Moorpark, "Guidelines for Preparing Traffic and Circulation Studies" states that if a level of service degradation of one level of service or greater is attributable to a project it will be considered significant enough to require mitigation measures. The City's criteria also states that a level of service degradation of less than one level of service may also be considered significant, depending on circumstances.

## PROJECT-SPECIFIC ANALYSIS

### Project Trip Generation

Trip generation estimates were calculated for the Moorpark Railroad Depot Project based on the rates presented in the Institute of Transportation Engineers (ITE), Trip Generation, 10th Edition for Multi-Family Housing (Land-Use Code #220), Shopping Center (Land-Use Code #820) High Turnover Restaurant (Land-Use Code #932).[1] ATE utilized the average trip generation rates for each land use which is consistent with the trip generation methodology used in the City of Moorpark for other development projects. The "green space" component of the Project is an amenity for the apartment residents and the patrons of the retail commercial and restaurant space not a destination that requires use specific trip generation. Table 2 summarizes the average daily, A.M. and P.M. peak hour trip generation estimates for the Project.

**Table 2**
**Project Trip Generation**

| Land Use | Size | ADT | | A.M. Peak Hour | | P.M. Peak Hour | |
|---|---|---|---|---|---|---|---|
| | | Rate | Trips | Rate | Trips (In/Out) | Rate | Trips (In/Out) |
| Apartments | 91 units | 7.32 | 666 | 0.46 | 42 (10/32) | 0.56 | 51 (32/19) |
| Brewery | 3,824 Sq.Ft. | 112.18 | 429 | 0.00 | 0 (0/0) | 9.77 | 37 (23/14) |
| Restaurant | 2,794 Sq.Ft. | 112.18 | 313 | 9.94 | 28 (15/13) | 9.77 | 27 (17/10) |
| Retail Commercial | 8,400 Sq.Ft. | 37.75 | 317 | 0.94 | 8 (5/3) | 3.81 | 32 (15/17) |
| **Total Trip Generation:** | | | **1,725** | | **78 (30/48)** | | **147 (87/60)** |

[1] Trip Generation, Institute of Transportation Engineers, 10th Edition, 2017.

The data presented in Table 2 show that the Project would generate 1,725 average daily trips (ADT), 78 A.M. peak hour trips, and 147 P.M. peak hour trips.

The trip generation analysis also accounts for the various trip types that would occur at the site, including "Internal Capture" and "External" trips. The following text outlines the trip type definitions and forecasts. The breakdown of project trip types is shown in Table 3.

Internal Capture/External Trips. Internal capture trips are trips made between land uses within the mixed-use project site (for example, residents would also patronize the on-site commercial uses). Internal capture trips would not affect the off-site street network. The ITE mixed-use traffic model[2] was used to determine the number of trips that would be captured on the site. (a copy of the mixed-use model is included in the Technical Appendix for reference).

Transit usage was also evaluated. The effects of TOD on travel and parking have been summarized in TCRP Report 128[3]. The report contains studies conducted on the west coast as well as the east coast. The Lee studies included TOD developments in the suburban locations of Pleasant Hill, San Mateo, and Pleasanton in California. Those studies show that high density transit oriented housing projects located immediately adjacent to transit hubs generate about 15% less vehicular traffic in the A.M. and P.M. peak commute hours when compared to the standard ITE rates. It is important to note that the studies taken at the TOD sites may be served by a more robust transit system (BART- Caltrain plus local bus service) than that provided in the vicinity of the Moorpark Railroad Depot Project site.

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2 Trip Generation Handbook, 3rd Edition, 2017.

3 Effects of TOD on Housing, Parking and Travel, Transit Cooperative Research Program, Transportation Research Board, 2008.

The mixed use model shows that about 10% of the A.M. peak hour trips and 36% of the P.M. peak hour trips would be internal to the site, and the remaining trips would be external vehicle or transit trips. Based on the TOD data ATE assumed 10% of the Project residential traffic would be transit oriented. ITE mixed-use model does not contain data for the ADT, so internal/external trips were not calculated. Table 3 summarizes the Project trip types.

**Table 3**
**Project Trip Types**

| Trip Generation | A.M. Peak Hour Trips | P.M. Peak Hour Trips |
|---|---|---|
| Total | 78 | 147 |
| Internal Capture Trips (a) | 8 | 54 |
| External Transit Trips (b)) | 4 | 3 |
| External Vehicle Trips | 66 | 90 |

(a) Internal Capture Trips = 10% of total A.M. peak hour trips/36% of total P.M. peak hour trips.
(b) External Transit Trips = 10% of trips.

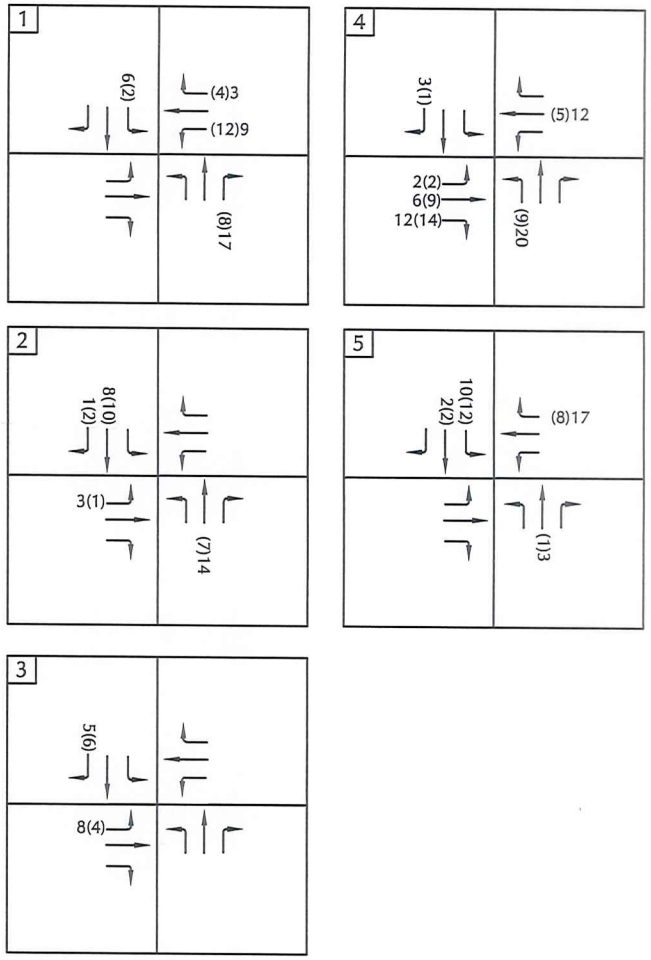
## Project Trip Distribution

The external Project-generated vehicle trips were distributed and assigned to the adjacent street network based on percentages illustrated in Table 4 and presented on Figure 5. The trip distribution percentages are based on recent traffic studies, existing traffic patterns observed in the study-area and consideration of the most logical travel routes for drivers accessing the proposed development.

**Table 4**
**Project Trip Distribution**

| Route | Origin/Destination | Percent |
|---|---|---|
| Moorpark Avenue North of High Street | North | 10% |
| Spring Road North of High Street | North | 5% |
| Spring Road South of Los Angeles Avenue | South | 5% |
| Los Angeles Avenue West of Moorpark Avenue | West | 15% |
| Los Angeles Avenue East of Spring Road | East | 30% |
| High Street East of Spring Road | East | 20% |
| Poindexter Avenue West of Moorpark Avenue | West | 5% |
| Local Area Below High Street | Local Internal | 10% |
| | **Total** | **100%** |




LEGEND

└(XX)XX - (A.M.)P.M. Peak Hour Volume

(%) - Distribution Percentage

N

NOT TO SCALE

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# PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

FIGURE 5

EKM - ATE#18050

## Intersection Operations

Levels of service were calculated for the study-area intersections assuming the Existing + Project traffic volumes illustrated on Figure 6. Tables 5 and 6 compare the Existing and Existing + Project levels of service and identify potential project-specific impacts based on City thresholds.

**Table 5**
**Existing and Existing + Project AM Peak Hour Levels of Service**

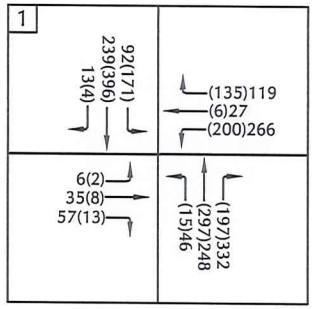
| Intersection | | Existing | | Existing + Project | | LOS Change? | |
|---|---|---|---|---|---|---|---|
| | | ICU | LOS | ICU | LOS | Change | Impact |
| 1. | Moorpark Avenue/High Street | 0.68 | B | 0.69 | B | NO | NO |
| 2. | Spring Road/High Street | 0.63 | B | 0.64 | B | NO | NO |
| 3. | Moorpark Avenue/Poindexter Avenue | 0.68 | B | 0.69 | B | NO | NO |
| 4. | Los Angeles Avenue/Moorpark Avenue | 0.65 | B | 0.65 | B | NO | NO |
| 5. | Los Angeles Avenue/Spring Road | 0.70 | B | 0.71 | C | YES | NO |

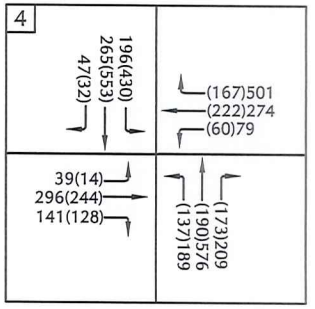
**Table 6**
**Existing and Existing + Project PM Peak Hour Levels of Service**

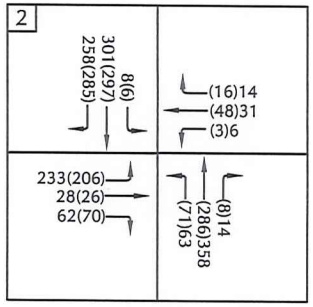
| Intersection | | Existing | | Existing + Project | | LOS Change? | |
|---|---|---|---|---|---|---|---|
| | | ICU | LOS | ICU | LOS | Change | Impact |
| 1. | Moorpark Avenue/High Street | 0.68 | B | 0.69 | B | NO | NO |
| 2. | Spring Road/High Street | 0.72 | C | 0.72 | C | NO | NO |
| 3. | Moorpark Avenue/Poindexter Avenue | 0.67 | B | 0.67 | B | NO | NO |
| 4. | Los Angeles Avenue/Moorpark Avenue | 0.68 | B | 0.69 | B | NO | NO |
| 5. | Los Angeles Avenue/Spring Road | 0.70 | B | 0.70 | B | NO | NO |

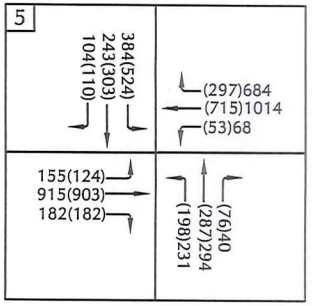
The data presented in Tables 5 and 6 indicate that the study-area intersections would continue to operate at LOS C or better with Project-Added traffic. While the addition of Project-generated traffic to the Los Angeles Avenue/Spring Road study-area intersections would degrade the existing LOS by one level of service, the Project would not generate Project-specific impacts at the study-area intersections based on City of Moorpark thresholds as the intersections would operate acceptably in the LOS B-C range.

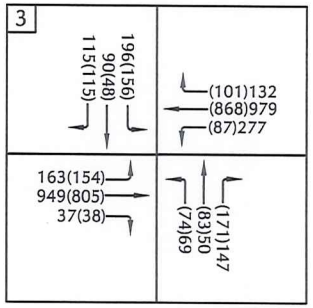



LEGEND

└(XX)XX - (A.M.)P.M. Peak Hour Volume

N

NOT TO SCALE

ASSOCIATED TRANSPORTATION ENGINEERS

EXISTING + PROJECT PEAK HOUR TRAFFIC VOLUMES

FIGURE 6

EKM - ATE#18050

## CUMULATIVE ANALYSIS

### Traffic Forecasts

Cumulative traffic volumes were forecast for the study-area intersections assuming the development of the approved and pending projects located in the City of Moorpark and the immediate surrounding area that would add traffic to the study-area intersections. The list of approved and pending projects was provided by City staff. Trip generation estimates were developed for the cumulative projects using the rates published in the ITE, Trip Generation, 10th Edition[4]. Table 7 summarizes the average daily, A.M. and P.M. peak hour trip generation for the cumulative projects.

**Table 7**
**Cumulative Development Projects Trip Generation**

| Project | Land Use | Size | ADT | AM Peak Hour | PM Peak Hour |
|---|---|---|---|---|---|
| Triliad Development | Movie Studio | 37 Acres | 100 | 10 | 10 |
| Pacific Communities | Single Family Res. | 283 Units | 2,694 | 212 | 283 |
| Essex Moorpark, LLC | Apartments | 200 Units | 1,318 | 92 | 57 |
| Spring Road, LLC | Condominiums | 95 Units | 552 | 42 | 49 |
| City Ventures | Single Family Res. | 110 Units | 1,047 | 82 | 110 |
| Oakmont Senior Housing | Assisted Living | 84 Beds | 219 | 16 | 22 |
| Birdsall Group, LLC | Single Family Res. | 21 Units | 200 | 16 | 12 |
| Aldersgate Senior Housing | Senior Housing<br>Assisted Living | 258 Units<br>212 Beds | 1,468 | 90 | 125 |
| Moorpark Hospitality | Hotel | 108 Rooms | 903 | 51 | 65 |
| Grand Moorpark | Condominiums | 66 Units | 383 | 29 | 34 |
| John C. Chiu, FLP-N | Condominiums | 60 Units | 349 | 26 | 31 |
| AHA Scattered Sites | Apartments | 56 Units | 418 | 26 | 31 |
| Hitch Ranch | Single Family Res.<br>Townhomes<br>Multi-Family Res.<br>Church | 235 Units<br>295 Units<br>225 Units<br>30,000 S.F. | 6,394 | 495 | 611 |
| Moorpark 67/Rasmussen | Single Family Res. | 138 Units | 1,303 | 102 | 137 |
| A-B Properties | Industrial | 36 Acres | 1,865 | 270 | 261 |
| National Ready Mix | Batch Plant | 10 Acres | 600 | 20 | 20 |
| CEMEX | Quarry | N/A | 980 | 276 | 148 |
| Wayne J. Sand & Gravel | Quarry | N/A | 504 | 92 | 34 |
| Grimes Rock | Quarry | N/A | 480 | 35 | 14 |
| | | **Total Trips:** | 21,777 | 1,982 | 2,054 |

**Note: The current cumulative trip generation resulted in fewer trips than what was assumed in the traffic and circulation study for the Aldersgate Senior Living Project prepared by ATE in 2016.**

[4] Trip Generation, Institute of Transportation Engineers, 10th Edition, 2017.

The data presented in Table 7 indicate that the cumulative projects would generate a total of 21,777 average daily trips, 1,982 AM peak hour trips and 2,054 PM peak hour trips. The cumulative projects' peak hour traffic volumes were distributed and assigned to the study-area intersections based on the location of each project, recent traffic studies, existing traffic patterns observed in the study area as well as a general knowledge of the population, employment and commercial centers in Moorpark, Ventura, Oxnard, Thousand Oaks and Simi Valley. Cumulative traffic volumes illustrated on Figure 7.

### Intersection Operations

Levels of service were calculated for the study-area intersections assuming the Cumulative and Cumulative + Project traffic volumes illustrated on Figures 7 and 8. The Cumulative and Cumulative + Project levels of service for the study-area intersections are compared in Tables 8 and 9 and impacts identified based on City thresholds.

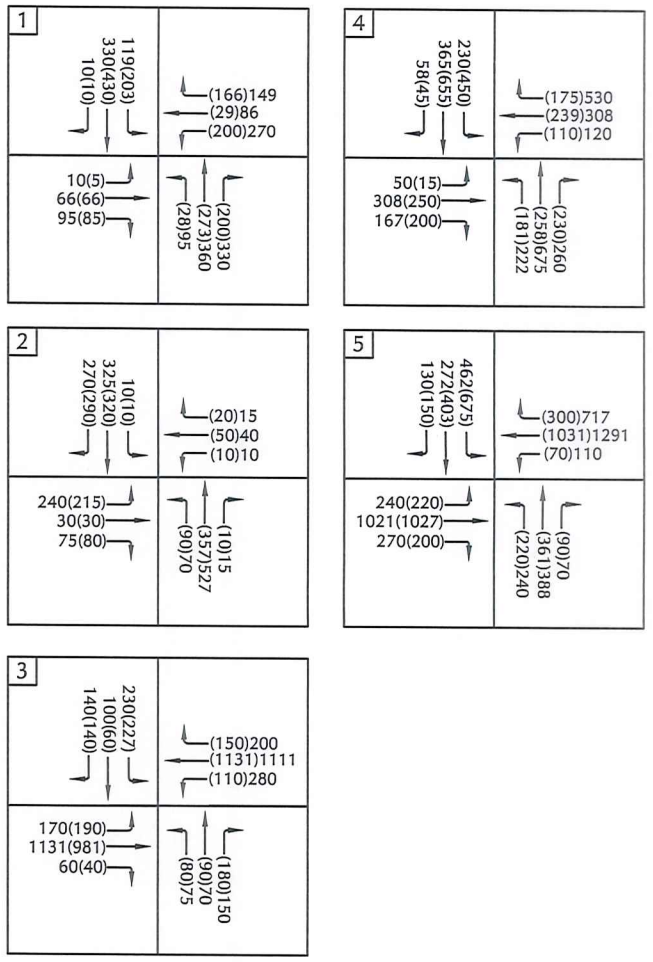
**Table 8**
**Cumulative and Cumulative + Project A.M. Peak Hour Levels of Service**

| | Intersection | Cumulative | | Cumulative + Project | | LOS Change? | |
|---|---|---|---|---|---|---|---|
| | | ICU | LOS | ICU | LOS | Change | Impact |
| 1. | Moorpark Ave./High St. | 0.80 | C | 0.81 | D | YES | **YES** |
| 2. | Spring Rd./High St. | 0.71 | C | 0.72 | C | NO | NO |
| 3. | Moorpark Ave./Poindexter Ave. | 0.73 | C | 0.74 | C | NO | NO |
| 4. | Los Angeles Ave./Moorpark Ave. | 0.79 | C | 0.79 | C | NO | NO |
| 5. | Los Angeles Ave./Spring Rd. | 0.86 | D | 0.86 | D | NO | NO |

**Table 9**
**Cumulative and Cumulative + Project P.M. Peak Hour Levels of Service**

| | Intersection | Cumulative | | Cumulative + Project | | LOS Change? | |
|---|---|---|---|---|---|---|---|
| | | ICU | LOS | ICU | LOS | Change | Impact |
| 1. | Moorpark Ave./High St. | 0.93 | E | 0.93 | E | NO | NO |
| 2. | Spring Rd./High St. | 0.80 | C | 0.80 | C | NO | NO |
| 3. | Moorpark Ave./Poindexter Ave. | 0.71 | C | 0.72 | C | NO | NO |
| 4. | Los Angeles Ave./Moorpark Ave. | 0.76 | C | 0.77 | C | NO | NO |
| 5. | Los Angeles Ave./Spring Rd. | 0.83 | D | 0.84 | D | NO | NO |




LEGEND

└(XX)XX - (A.M.)P.M. Peak Hour Volume

N

NOT TO SCALE

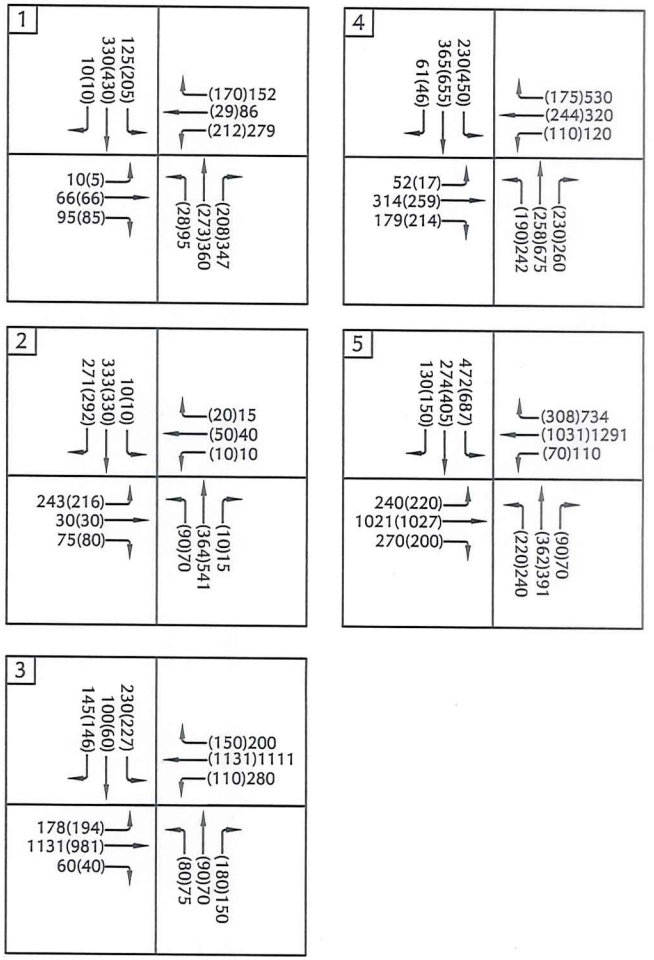
ASSOCIATED TRANSPORTATION ENGINEERS

CUMULATIVE PEAK HOUR TRAFFIC VOLUMES

FIGURE 7

EKM - ATE#18050




LEGEND

└(XX)XX - (A.M.)P.M. Peak Hour Volume

N

NOT TO SCALE

ASSOCIATED TRANSPORTATION ENGINEERS

CUMULATIVE + PROJECT PEAK HOUR TRAFFIC VOLUMES

FIGURE 8

EKM - ATE#18050

The data presented in Tables 8 and 9 indicate that the majority of study-area intersections are forecast to operate in the LOS A-C range during the A.M. and P.M. peak hour periods under Cumulative and Cumulative + Project conditions.

The data indicates that the LOS of the Los Angeles Avenue/Spring Road intersection would operate at LOS D with or without the addition of Project trips. The data also indicates that the LOS of the Moorpark Avenue/High Street intersection would operate in the LOS E range with or without the addition of Project trips during the P.M. peak hour. However, during the A.M. peak hour, the addition of Project-generated traffic to the Moorpark Avenue/High Street intersection would degrade the LOS from C to LOS D, which is considered a cumulative impact based on City of Moorpark thresholds.

## SITE ACCESS

Access to the Project site would be provided by a driveway connection to High Street opposite Walnut Street and a connection to High Street east of Bard Street. Given the Project traffic volumes (66 A.M. and 90 P.M. peak hour trips distributed between two driveways) the driveways are expected to operate at acceptable levels of service. Project driveways would be built to City of Moorpark design standards which would accommodate turning movements by both passenger vehicles and trucks.

### Pedestrian and Bicycle Facilities

The Project incorporates streetscape improvements along the entire Project frontage. The Project will include new sidewalks, landscaped parkways, enhanced commercial storefront entries, crosswalks at both Walnut Street and Bard Street, a pedestrian bulb-out at Bard Street, way-finding signage and a connection to the existing Metrolink train platform. These facilities will significantly im prove the walkability of the High Street corridor adjacent to the site. High Street adjacent to the Project is designated as a Class II bikeway. Bike racks will also be provided on-site to encourage bicycle use.

## PARKING ANALYSIS

City of Moorpark Zoning Ordinance Parking Requirements

The Project is proposing to provide 139 onsite parking spaces. City's Zoning Ordinance parking requirements were calculated for the various components of the Moorpark Railroad Depot Project. Parking in the High Street area (High Street from Moorpark Avenue to Spring Road) must meet 50% of the required parking pursuant to Section 17.32.020 of the Moorpark Municipal Code. In consideration for providing fewer parking spaces than required, a percentage of the parking spaces provided must be open to and available to the general public at all times. All parking provided above 50 percent may be designated as reserved parking. Reserved parking spaces become shared parking spaces after 6:00 P.M. to 2:00 A.M. so that those spaces are available for off-peak parking by the general public. Shared parking is required in accordance with the following standards shown in Table 10.

**Table 10**
**Shared Parking Standards**

| Percentage of Parking Standard Provided | Percentage of Required Shared Parking |
|---|---|
| 40% to 49% | 85% |
| 50% | 75% |

In lieu of meeting the required parking the applicant may pay a fee based on the estimated value of a fully improved parking space, circulation and landscaping to reduce the required on-site parking by an additional 10 percent to 40 percent of the required parking. The City Council shall establish a fee by resolution to be used to offset a portion of the cost required to construct public parking facilities in the downtown area. In addition, eating and drinking places in the High Street area shall have the same required parking as retail shops and services in the High Street area. The parking space requirement for various Moorpark Railroad Depot tenants are as follows and shown in Table 11.

- Residential - 1 space per studio unit; 1.75 spaces per 1 bedroom unit; 2 spaces/2/3 bedroom unit; guest/0.5 space per unit.
- Restaurant - 1 space per 300 SF of gross floor area.
- Office/Retail Commercial - 1 space per 300 SF of gross floor area.
- Brewery - 1 space per 300 SF of gross floor area.

## Table 11
## City Zoning Ordinance Parking Requirements

| Land Use | Size | Zoning Requirement | Required Parking | Parking Provided |
|---|---|---|---|---|
| Residential | 18 Studio Units | 1 space/Unit | 18 spaces | 139 on-site spaces (58% of required) |
| | 26 One Bedroom Units | 1.75 space/Unit | 46 spaces | |
| | 39 Two Bedroom Units | 2 spaces/Unit | 78 spaces | |
| | 8 Three Bedroom Units | 2 spaces/Unit | 16 spaces | |
| | Guest Parking | 0.5 spaces/Unit | 32 spaces | |
| Restaurant | 2,794 SF | 1 space/300 SF | 9 spaces | |
| Commercial | 8,400 SF | 1 space/300 SF | 28 spaces | |
| Brewery | 3,824 SF | 1 space/300 SF | 13 spaces | |
| | | Total Parking Required: | 240 spaces | |

As shown in Table 11, the City of Moorpark Zoning Ordinance requires 240 spaces for the uses contained in Moorpark Railroad Depot Project. The Moorpark Railroad Depot Project provides 139 on-site parking spaces which is 58 percent of the required parking. Therefore, according to the City's Zoning Ordinance, 75 percent of the parking would be shared parking open to the public.

It should be noted that the Zoning Ordinance requirement does not account for the "shared parking" due to the varying peak parking demands of the tenants within the Moorpark Railroad Depot Project. Nor does it account for the TOD characteristics of the Project which includes a mixture of housing, office, retail and/or other amenities integrated into a walkable neighborhood and located within a quarter-mile of quality public transportation. This results in lower parking demands generated by the tenant uses. Given the proximity of the adjacent Amtrak/Metrolink station/parking lot it is expected that daily commuters would also be customers for the retail and restaurant tenants and would walk not drive to those uses. Also, there is additional parking located on High Street readily available to customers of the retail and restaurant tenants.

## MITIGATION MEASURES

To off-set traffic impacts the Project would be required to pay the Citywide Traffic Mitigation Fee. Though the traffic analysis did not identify any project-specific impacts for the Existing + Project scenario, under cumulative conditions two of the study-area intersections are forecast to operate below the City of Moorpark's LOS C performance objective with or without the Project.

In addition to paying the Citywide Traffic Mitigation Fee, there is an Area of Contribution (AOC) established for the Los Angeles Avenue corridor. The Project will be required to pay the AOC fee based upon the level of traffic added within the corridor. The percent contribution at the study-area intersections is shown in Table 12.

**Table 12**
**Cumulative - Project Percent Contributions**

| Study Intersection | Project Percent Contribution (%) |
|---|---|
| Moorpark Avenue/High Street | 1.79% |
| Los Angeles Avenue/Moorpark Avenue | 0.35% |
| Los Angeles Avenue/Spring Road | 0.61% |

As part of the AOC, the City has identified and programmed improvements in the Capital Improvement Program (CIP) for the Los Angeles Avenue/Spring Road intersection that would mitigate cumulative impacts, as discussed below.

Los Angeles Avenue/Spring Road: The intersection is forecast to operate at LOS D during the A.M. and P.M. peak hour period under Cumulative and Cumulative + Project conditions. The programmed improvement consists of adding an additional through lane on the eastbound and westbound approaches. The mitigated geometrics and peak hour levels of service are shown in Tables 13 and 14.

**Table 13**
**Los Angeles Avenue/Spring Road**
**Mitigated Intersection Geometry**

| Scenario | Northbound | Southbound | Eastbound | Westbound |
|---|---|---|---|---|
| Existing Geometry | L L T TR | L L T R | L L TT R | L TT R |
| Mitigated Geometry | L L T TR | L L T R | **L L TTT R** | **L TTT R** |

**Table 14**
**Los Angeles Avenue/Spring Road**
**Mitigated A.M. and P.M. Peak Hour Level of Service**

| Intersection | Peak Period | Cumulative + Project LOS | |
|---|---|---|---|
| | | Existing Geometry | With Improvements |
| Los Angeles Avenue/Spring Road | A.M. | 0.86/LOS D | 0.76/LOS C |
| Los Angeles Avenue/Spring Road | P.M. | 0.84/LOS D | 0.75/LOS C |

Implementing the intersection CIP improvements planned by the City of Moorpark would result in LOS C during the A.M. and P.M. peak hour periods under Cumulative + Project conditions.

The City has identified and programmed improvements in the CIP for the Moorpark Avenue/High Street intersection that would mitigate cumulative impacts, as discussed below.

Moorpark Avenue/High Street: The intersection is forecast to operate at LOS D during the A.M. peak hour period under Cumulative + Project conditions. The programmed improvement consists of adding an additional through lane on the southbound approach and providing a left-turn lane, through lane and right-turn lane on the northbound approach. The mitigated geometrics and peak hour levels of service are shown in Tables 15 and 16.

**Table 15**
**Moorpark Avenue/High Street**
**Mitigated Intersection Geometry**

| Scenario | Northbound | Southbound | Eastbound | Westbound |
|---|---|---|---|---|
| Existing Geometry | LT R | L TR | LTR | LT R |
| Mitigated Geometry | **L T R** | **L T TR** | LTR | LT R |

## Table 16
## Moorpark Avenue/High Street
## Mitigated A.M. and P.M. Peak Hour Level of Service

| Intersection | Peak Period | Cumulative + Project LOS | |
|---|---|---|---|
| | | Existing Geometry | With Improvements |
| Moorpark Avenue/High Street | A.M. | 0.81/LOS D | 0.66/LOS B |
| Moorpark Avenue/High Street | P.M. | 0.93/LOS E | 0.74/LOS C |

Implementing the intersection improvements planned by the City of Moorpark would result in LOS C during the A.M. and P.M. peak hour periods under Cumulative + Project conditions.

## ZONE CHANGE TRIP GENERATION COMPARISON

The current Old Town Commercial (C-OT) Zoning designation does not allow residential uses as part of mixed-use developments. A Zoning Ordinance Amendment will therefore be required to accommodate residential uses within C-OT. Trip generation estimates were calculated for the commercial land uses that are currently allowed within the C-OT zoning designation and compared to the Moorpark Railroad Depot Project. Table 17 summarizes the trip generation comparison of the average daily trips, A.M. and P.M. peak hour trips.

## Table 17
## Trip Generation Comparison

| Land Use | Size | ADT | | A.M. Peak Hour | | P.M. Peak Hour | |
|---|---|---|---|---|---|---|---|
| | | Rate | Trips | Rate | Trips | Rate | Trips |
| Allowed Development: | | | | | | | |
| Office | 17,794 Sq.Ft. | 9.74 | 173 | 1.16 | 21 | 1.15 | 20 |
| Restaurant | 17,794 Sq.Ft. | 112.18 | 1,996 | 9.94 | 177 | 9.77 | 174 |
| | | | 2,169 | | 198 | | 194 |
| Proposed Development: | | | | | | | |
| Apartments | 91 units | 7.32 | 666 | 0.46 | 42 | 0.56 | 51 |
| Brewery | 3,824 Sq,Ft. | 112.18 | 429 | 0.00 | 0 | 9.77 | 37 |
| Restaurant | 2,794 Sq,Ft. | 112.18 | 313 | 9.94 | 28 | 9.77 | 27 |
| Retail Commercial | 8,400 Sq.Ft. | 37.75 | 317 | 0.94 | 8 | 3.81 | 32 |
| | | | 1,725 | | 78 | | 147 |
| **Trip Generation Net Change:** | | | **-444** | | **-120** | | **-47** |

The data presented in Table 17 show that the Moorpark Railroad Depot Project would generate 1,725 ADT, 78 A.M. peak hour trips, and 147 P.M. peak hour trips. Developing the property with the allowed commercial/office uses would generate 2,169 ADT, 198 A.M. peak hour trips, and 194 P.M. peak hour trips. The Zone Change would therefore result in a net decrease of -444 ADT, -120 A.M. peak hour trips, and -47 P.M. peak hour trip.

■ ■ ■

## REFERENCES AND PERSONS CONTACTED

### Associated Transportation Engineers

Scott A. Schell, AICP, PTP, Principal Planner
Darryl F. Nelson, Senior Transportation Planner
Erica K. Monson, Transportation Planner I

### References

Trip Generation, Institute of Transportation Engineers, 10th Edition, 2017.

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### Persons Contacted

Karen Vaughn, Community Development Director, City of Moorpark

## TECHNICAL APPENDIX

CONTENTS:

LEVEL OF SERVICE DEFINITIONS

TRAFFIC COUNT DATA

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 - Moorpark Avenue/High Street
Reference 2 - Spring Road/High Street
Reference 3 - Moorpark Avenue/Poindexter Avenue
Reference 4 - Los Angeles Avenue/Moorpark Avenue
Reference 5 - Los Angeles Avenue/Spring Road

PROJECT TRIP GENERATION WORKSHEET

# LEVEL OF SERVICE DEFINITIONS

# DISCUSSION OF INTERSECTION CAPACITY UTILIZATION (ICU)

The ability of a roadway to carry traffic is referred to as capacity. The capacity is usually less at intersections because traffic flows continuously between them and only during the green phase at them. Capacity at intersections is best defined in terms of vehicles per lane per hour of green. The technique used to compare the volumes and capacity of an intersection is known as Intersection Capacity Utilization (ICU). ICU or volume-to-capacity ratio, usually expressed as a percentage, is the proportion of an hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. If an intersection is operating at 80 percent of capacity, then 20 percent of the signal cycle is not used.

The ICU calculation assumes that an intersection is signalized and that the signal is ideally timed. Although calculating ICU for an unsignalized intersection is invalid, the presumption is that a signal can be installed and the calculation shows whether the geometrics are capable of accommodating the expected volumes. It is possible to have an ICU well below 100 percent, yet have severe traffic congestion. This would occur if one or more movements is not getting sufficient time to satisfy its demand, and excess time exists on other movements. This is an operational problem which should be addressed.

Capacity is often defined in terms of roadway width. However, standard lanes have approximately the same capacity whether they are 11 or 14 feet wide. Data collected by Kunzman Associates indicates a typical lane, whether a through-lane or a left-turn lane, has a capacity of approximately 1,700 vehicles per hour, with nearly all locations showing a capacity greater than 1,600 vehicles per hour per lane. This finding is published in the August, 1978 issue of ITE Journal in the article entitled, "Another Look at Signalized Intersection Capacity" by William Kunzman. For this study, a capacity of 1,600 vehicles per hour per lane will be assumed for left-turn, through, and right-turn lanes as per City policy.

The yellow time can either be assumed to be completely used and no penalty applied, or it can be assumed to be only partially usable. Total yellow time accounts for less than 10 percent of a cycle, and a penalty of up to five percent is reasonable. On the other hand, during peak hour traffic operation, the yellow times are nearly completely used. In this study, no penalty will be applied for the yellow because the capacities have been assumed to be only 1,600 vehicles per hour per lane when in general they are 1,700-1,800 vehicles per hour per lane.

The ICU technique is an ideal tool to quantify existing as well as future intersection operations. The impact of adding a lane can be quickly determined by examining the effect the lane has on the intersection capacity utilization.

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**Source:** Oxnard Airport Business Park Traffic Study, Kunzman Assoc., City of Oxnard, 1985.

## Signalized Intersection Level of Service Definitions

| LOS | Delay[a] | V/C Ratio | Definition |
|---|---|---|---|
| A | < 10.0 | < 0.60 | Progression is extremely favorable. Most vehicles arrive during the green phase. Many vehicles do not stop at all. |
| B | 10.1 - 20.0 | 0.61 - 0.70 | Good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay. |
| C | 20.1 - 35.0 | 0.71 - 0.80 | Only fair progression, longer cycle lengths, or both, result in higher cycle lengths. Cycle lengths may fail to serve queued vehicles, and overflow occurs. Number of vehicles stopped is significant, though many still pass through intersection without stopping. |
| D | 35.1 - 55.0 | 0.81 - 0.90 | Congestion becomes more noticeable. Unfavorable progression, long cycle lengths and high v/c ratios result in longer delays. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable. |
| E | 55.1 - 80.0 | 0.91 - 1.00 | High delay values indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent |
| F | > 80.0 | > 1.00 | Considered unacceptable for most drivers, this level occurs when arrival flow rates exceed the capacity of lane groups, resulting in many individual cycle failures. Poor progression and long cycle lengths may also contribute to high delay levels. |

[a] Average control delay per vehicle in seconds.

## Unsignalized Intersection Level of Service Definitions

The HCM[1] uses *control delay* to determine the level of service at unsignalized intersections. Control delay is the difference between the travel time actually experienced at the control device and the travel time that would occur in the absence of the traffic control device. Control delay includes deceleration from free flow speed, queue move-up time, stopped delay and acceleration back to free flow speed.

| LOS | Control Delay Seconds per Vehicle |
|---|---|
| A | < 10.0 |
| B | 10.1 - 15.0 |
| C | 15.1 - 25.0 |
| D | 25.1 - 35.0 |
| E | 35.1 - 50.0 |
| F | > 50.0 |

[1] Highway Capacity Manual, National Research Board, 2000

TRAFFIC COUNT DATA

Prepared by National Data & Surveying Services

# Moorpark Ave & High St

## Peak Hour Turning Movement Count

**ID:** 18-05389-001
**City:** Moorpark

**Day:** Thursday
**Date:** 06/07/2018

**PEAK HOURS**

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:30 PM - 05:30 PM

**COUNT PERIODS**

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

### Moorpark Ave — SOUTHBOUND

| | | | | | | |
|---|---|---|---|---|---|---|
| AM | 4 | 396 | 169 | 0 | 430 | AM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| PM | 13 | 239 | 86 | 0 | 370 | PM |

### EASTBOUND — High St

| AM | NOON | PM | |
|---|---|---|---|
| 25 | 0 | 84 | ⇦ |
| 0 | 0 | 0 | ↶ 0 |
| 2 | 0 | 6 | ↑ 0 |
| 8 | 0 | 35 | → 0 |
| 13 | 0 | 57 | ↷ 0 |
| AM | NOON | PM | |

### WESTBOUND — High St

| PM | NOON | AM | |
|---|---|---|---|
| 116 | 0 | 131 | 0 ↱ |
| 27 | 0 | 6 | 0 ← |
| 257 | 0 | 188 | 0 ↰ |
| 0 | 0 | 0 | 0 ↷ |
| 436 | 0 | 366 | ⇨ |
| PM | NOON | AM | |

### CONTROL

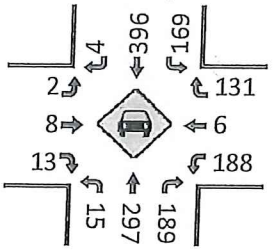
Signalized

| | | | |
|---|---|---|---|
| TEV | 1418 | 0 | 1445 |
| | AM | NOON | PM |
| PHF | 0.85 | | 0.95 |

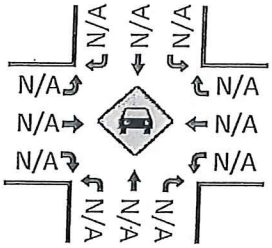
### NORTHBOUND — Moorpark Ave

| | | | | | | |
|---|---|---|---|---|---|---|
| PM | 555 | 2 | 44 | 248 | 315 | PM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| AM | 597 | 0 | 15 | 297 | 189 | AM |

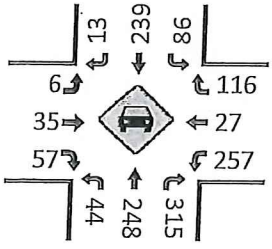
Total Vehicles (AM)



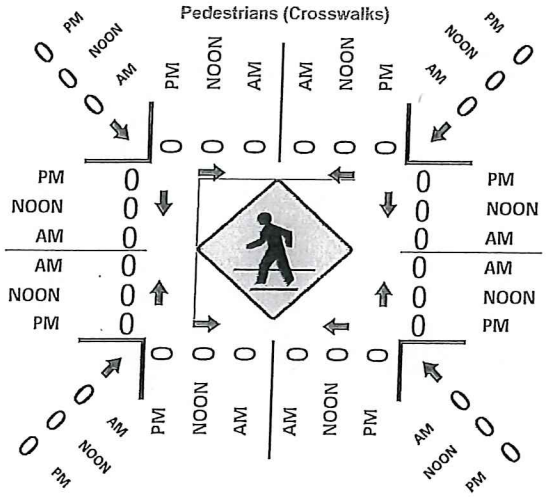

Total Vehicles (NOON)



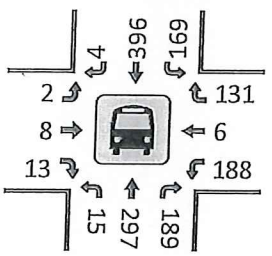

Total Vehicles (PM)



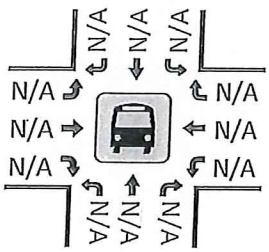

Pedestrians (Crosswalks)



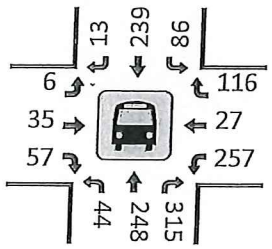

Total Vehicles (AM)




Total Vehicles (NOON)




Total Vehicles (PM)



Prepared by National Data & Surveying Services

# Spring Rd & High St

## Peak Hour Turning Movement Count

**ID:** 18-05389-004
**City:** Moorpark

**Day:** Thursday
**Date:** 06/07/2018

**PEAK HOURS**

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 04:30 PM - 05:30 PM

**COUNT PERIODS**

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

### SOUTHBOUND — Spring Rd

| | | | | | | |
|---|---|---|---|---|---|---|
| AM | 31 | 553 | 430 | 0 | 369 | AM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| PM | 44 | 265 | 196 | 0 | 1114 | PM |

### EASTBOUND — High St

| AM | NOON | PM | |
|---|---|---|---|
| 376 | 0 | 475 | ⇦ |
| 0 | 0 | 0 | ↶ 0 |
| 12 | 0 | 37 | ↱ 0 |
| 235 | 0 | 290 | → 0 |
| 114 | 0 | 129 | ↷ 0 |
| AM | NOON | PM | |

### WESTBOUND — High St

| PM | NOON | AM | |
|---|---|---|---|
| 501 | 0 | 167 | 0 ↱ |
| 262 | 0 | 217 | 0 ← |
| 79 | 0 | 60 | 0 ↰ |
| 0 | 0 | 0 | 0 ↶ |
| 695 | 0 | 838 | ⇨ |
| PM | NOON | AM | |

### CONTROL

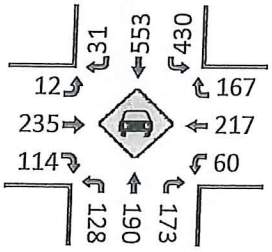
Signalized

| | | | |
|---|---|---|---|
| TEV | 2310 AM | 0 NOON | 2757 PM |
| PHF | 0.95 | | 0.94 |

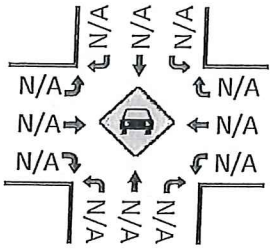
### NORTHBOUND — Spring Rd

| | | | | | | |
|---|---|---|---|---|---|---|
| PM | 473 | 0 | 169 | 576 | 209 | PM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| AM | 727 | 0 | 128 | 190 | 173 | AM |

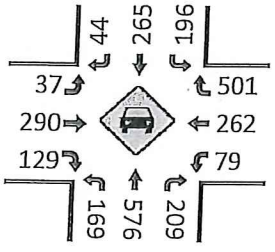
Total Vehicles (AM)



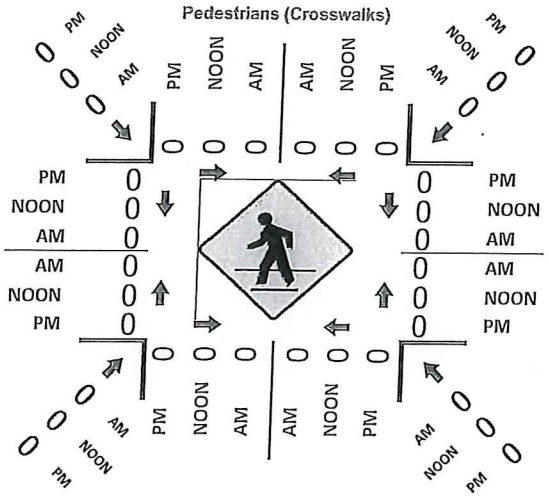

Total Vehicles (NOON)



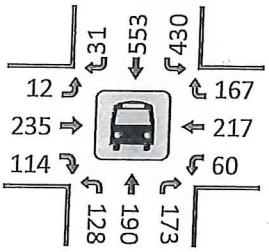

Total Vehicles (PM)



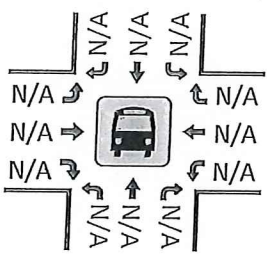

Pedestrians (Crosswalks)



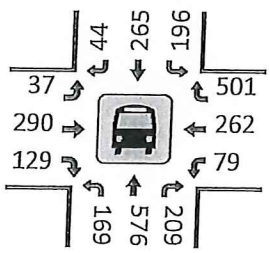

Total Vehicles (AM)




Total Vehicles (NOON)




Total Vehicles (PM)



Prepared by National Data & Surveying Services

# Moorpark Ave & Poindexter Ave/1st St

## Peak Hour Turning Movement Count

**ID:** 18-05389-002
**City:** Moorpark

**Day:** Thursday
**Date:** 06/07/2018

| PEAK HOURS | COUNT PERIODS |
|---|---|
| 07:45 AM - 08:45 AM | 07:00 AM - 09:00 AM |
| NONE | NONE |
| 04:30 PM - 05:30 PM | 04:00 PM - 06:00 PM |

### Moorpark Ave — SOUTHBOUND

| | | | | | | |
|---|---|---|---|---|---|---|
| AM | 283 | 287 | 6 | 0 | 500 | AM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| PM | 257 | 293 | 8 | 0 | 588 | PM |

### Poindexter Ave/1st St — EASTBOUND

| AM | NOON | PM | |
|---|---|---|---|
| 402 | 0 | 351 | |
| 0 | 0 | 0 | 0 |
| 205 | 0 | 230 | 0 |
| 26 | 0 | 28 | 0 |
| 70 | 0 | 62 | 0 |
| AM | NOON | PM | |

### CONTROL

Signalized

| | | | |
|---|---|---|---|
| TEV | 1302 AM | 0 NOON | 1350 PM |
| PHF | 0.90 | | 0.95 |

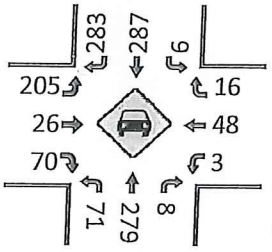
### Poindexter Ave/1st St — WESTBOUND

| PM | NOON | AM | |
|---|---|---|---|
| 14 | 0 | 16 | 0 |
| 31 | 0 | 48 | 0 |
| 6 | 0 | 3 | 0 |
| 0 | 0 | 0 | 0 |
| 50 | 0 | 40 | |
| PM | NOON | AM | |

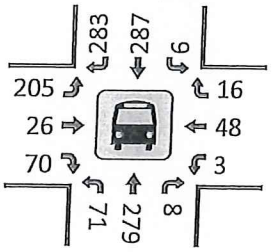
### Moorpark Ave — NORTHBOUND

| | | | | | |
|---|---|---|---|---|---|
| PM | 361 | 0 | 63 | 344 | 14 | PM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| AM | 360 | 0 | 71 | 279 | 8 | AM |

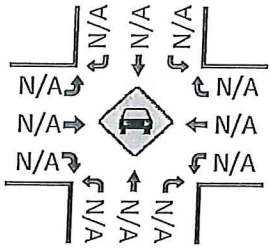
Total Vehicles (AM)



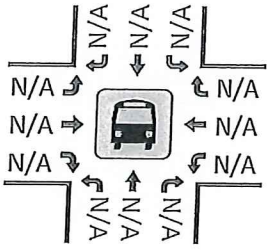

Total Vehicles (AM)



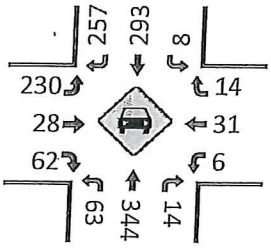

Total Vehicles (NOON)



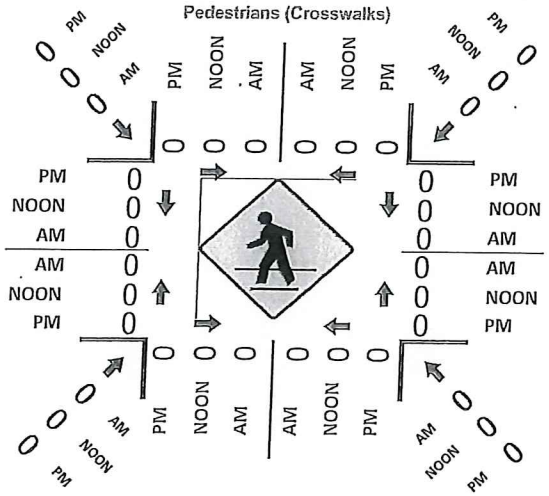

Total Vehicles (NOON)



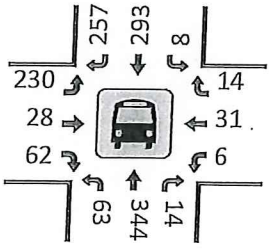

Total Vehicles (PM)




Pedestrians (Crosswalks)




Total Vehicles (PM)



Prepared by National Data & Surveying Services

# Moorpark Ave & Los Angeles Ave

## Peak Hour Turning Movement Count

**ID:** 18-05389-003
**City:** Moorpark

**Day:** Thursday
**Date:** 06/07/2018

PEAK HOURS: 07:30 AM - 08:30 AM; NONE; 04:30 PM - 05:30 PM

COUNT PERIODS: 07:00 AM - 09:00 AM; NONE; 04:00 PM - 06:00 PM

### Moorpark Ave — SOUTHBOUND

| | | | | | | |
|---|---|---|---|---|---|---|
| AM | 109 | 48 | 156 | 0 | 334 | AM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| PM | 110 | 90 | 196 | 0 | 327 | PM |

### Los Angeles Ave — EASTBOUND

| AM | NOON | PM | |
|---|---|---|---|
| 1051 | 0 | 1158 | |
| 0 | 0 | 0 | 0 |
| 150 | 0 | 145 | 0 |
| 805 | 0 | 949 | 0 |
| 38 | 0 | 37 | 0 |
| AM | NOON | PM | |

### CONTROL

Signalized

| | | | |
|---|---|---|---|
| TEV | 2690 AM | 0 NOON | 3181 PM |
| PHF | 0.90 | | 0.96 |

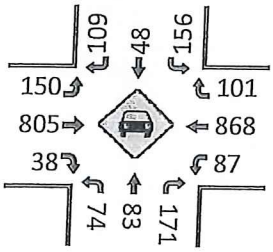
### Los Angeles Ave — WESTBOUND

| PM | NOON | AM | |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 132 | 0 | 101 | 0 |
| 979 | 0 | 868 | 0 |
| 277 | 0 | 87 | 0 |
| 0 | 0 | 0 | 0 |
| 1292 | 0 | 1132 | |
| PM | NOON | AM | |

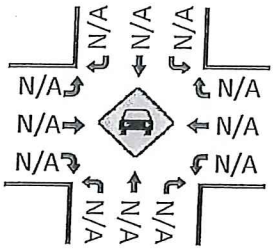
### Moorpark Ave — NORTHBOUND

| | | | | | | |
|---|---|---|---|---|---|---|
| PM | 404 | 0 | 69 | 50 | 147 | PM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| AM | 173 | 0 | 74 | 83 | 171 | AM |

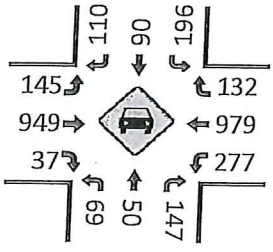
Total Vehicles (AM)



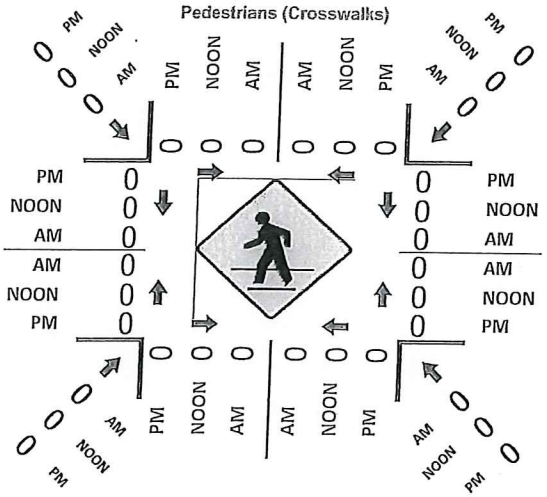

Total Vehicles (NOON)



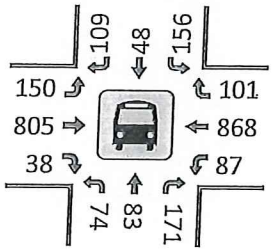

Total Vehicles (PM)



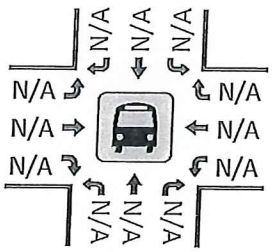

Pedestrians (Crosswalks)



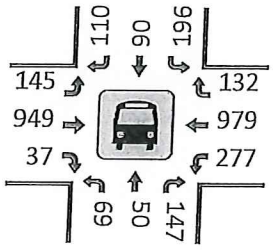

Total Vehicles (AM)




Total Vehicles (NOON)




Total Vehicles (PM)



Prepared by National Data & Surveying Services

# Spring Rd & Los Angeles Ave

## Peak Hour Turning Movement Count

**ID:** 18-05389-005
**City:** Moorpark

**Day:** Thursday
**Date:** 06/07/2018

**PEAK HOURS**

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:30 PM - 05:30 PM

**COUNT PERIODS**

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

### Spring Rd — SOUTHBOUND

| | | | | | | |
|---|---|---|---|---|---|---|
| AM | 110 | 301 | 512 | 0 | 699 | AM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| PM | 104 | 241 | 374 | 0 | 1113 | PM |

### Los Angeles Ave — EASTBOUND

| AM | NOON | PM | |
|---|---|---|---|
| 1023 | 0 | 1349 | ⇦ |
| 0 | 0 | 0 | ↶ |
| 124 | 0 | 155 | ↑ |
| 903 | 0 | 915 | → |
| 182 | 0 | 182 | ↷ |

AM NOON PM

### CONTROL

Signalized

| | | | |
|---|---|---|---|
| TEV | 3749 AM | 0 NOON | 4282 PM |
| PHF | 0.96 | | 0.97 |

### Los Angeles Ave — WESTBOUND

| PM | NOON | AM | |
|---|---|---|---|
| 667 | 0 | 289 | ↶ |
| 1014 | 0 | 715 | ← |
| 61 | 0 | 40 | ↰ |
| 7 | 0 | 13 | ↷ |
| 1336 | 0 | 1504 | ⇨ |

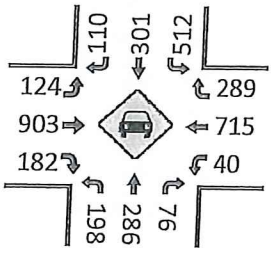
PM NOON AM

### Spring Rd — NORTHBOUND

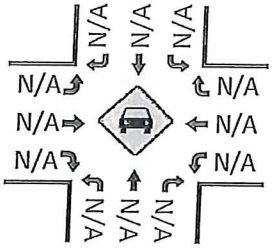
| | | | | | | |
|---|---|---|---|---|---|---|
| PM | 484 | 0 | 231 | 291 | 40 | PM |
| NOON | 0 | 0 | 0 | 0 | 0 | NOON |
| AM | 523 | 0 | 198 | 286 | 76 | AM |

Spring Rd

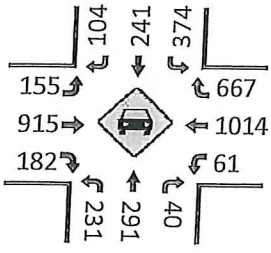
### Total Vehicles (AM)



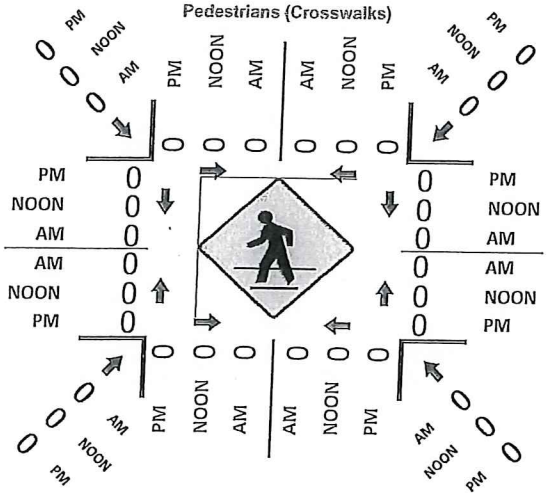

### Total Vehicles (NOON)



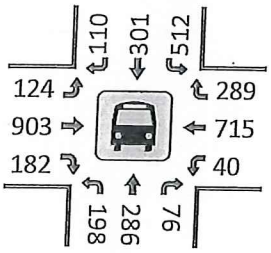

### Total Vehicles (PM)



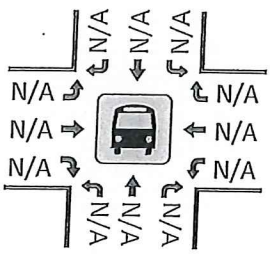

### Pedestrians (Crosswalks)



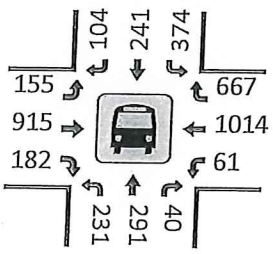

### Total Vehicles (AM)




### Total Vehicles (NOON)




### Total Vehicles (PM)



## INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 - Moorpark Avenue/High Street
Reference 2 - Spring Road/High Street
Reference 3 - Moorpark Avenue/Poindexter Avenue
Reference 4 - Los Angeles Avenue/Moorpark Avenue
Reference 5 - Los Angeles Avenue/Spring Road

#18548 - MOORPARK RAILROAD DEPOT PROJECT REF: 01 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *WALNUT CANYON ROAD*

E/W STREET: *HIGH STREET*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | T | R | SOUTH BOUND L | T | R | EAST BOUND L | T | R | WEST BOUND L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | 15 | 297 | 189 | 169 | 396 | 4 | 2 | 8 | 13 | 188 | 6 | 131 |
| (B) PROJECT-ADDED: | 0 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 4 |
| (C) CUMULATIVE: | 28 | 273 | 200 | 203 | 430 | 10 | 5 | 66 | 85 | 200 | 29 | 166 |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND LT R | SOUTH BOUND L TR | EAST BOUND LTR | WEST BOUND LT R |
|---|---|---|---|---|

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 0 | 0 | 15 | 15 | 28 | 28 | - | - | - | - |
| NBT | 1 | 1600 | 297 | 297 | 273 | 273 | 0.195 * | 0.195 * | 0.188 * | 0.188 * |
| NBR | 1 | 1500 | 189 | 197 | 200 | 208 | 0.126 | 0.131 | 0.133 | 0.139 |
| SBL | 1 | 1500 | 169 | 171 | 203 | 205 | 0.113 | 0.114 | 0.135 | 0.137 |
| SBT | 1 | 1600 | 396 | 396 | 430 | 430 | 0.250 * | 0.250 * | 0.275 * | 0.275 * |
| SBR | 0 | 0 | 4 | 4 | 10 | 10 | - | - | - | - |
| EBL | 0 | 0 | 2 | 2 | 5 | 5 | - | - | - | - |
| EBT | 1 | 1600 | 8 | 8 | 66 | 66 | 0.014 * | 0.014 * | 0.098 * | 0.098 * |
| EBR | 0 | 0 | 13 | 13 | 85 | 85 | - | - | - | - |
| WBL | 0 | 0 | 188 | 200 | 200 | 212 | - | - | - | - |
| WBT | 1 | 1600 | 6 | 6 | 29 | 29 | 0.121 * | 0.129 * | 0.143 * | 0.151 * |
| WBR | 1 | 1500 | 131 | 135 | 166 | 170 | 0.087 | 0.090 | 0.111 | 0.113 |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.680** | **0.688** | **0.804** | **0.812** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | **B** | **B** | **C** | **D** |

***NOTES:***

Printed: 12/08/19

#18050- MOORPARK RAILROAD DEPOT PROJECT REF: 01 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *WALNUT CANYON ROAD*

E/W STREET: *HIGH STREET*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | T | R | SOUTH BOUND L | T | R | EAST BOUND L | T | R | WEST BOUND L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | 46 | 248 | 315 | 86 | 239 | 13 | 6 | 35 | 57 | 257 | 27 | 116 |
| (B) PROJECT-ADDED: | 0 | 0 | 17 | 6 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 3 |
| (C) CUMULATIVE: | 95 | 360 | 330 | 119 | 330 | 10 | 10 | 66 | 95 | 270 | 86 | 149 |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | LT R | L TR | LTR | LT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 0 | 0 | 46 | 46 | 95 | 95 | - | - | - | - |
| NBT | 1 | 1600 | 248 | 248 | 360 | 360 | 0.184 * | 0.184 * | 0.284 * | 0.284 * |
| NBR | 1 | 1500 | 315 | 332 | 330 | 347 | 0.210 | 0.221 | 0.220 | 0.231 |
| SBL | 1 | 1500 | 86 | 92 | 119 | 125 | 0.057 | 0.061 | 0.079 | 0.083 |
| SBT | 1 | 1600 | 239 | 239 | 330 | 330 | 0.158 * | 0.158 * | 0.213 * | 0.213 * |
| SBR | 0 | 0 | 13 | 13 | 10 | 10 | - | - | - | - |
| EBL | 0 | 0 | 6 | 6 | 10 | 10 | - | - | - | - |
| EBT | 1 | 1600 | 35 | 35 | 66 | 66 | 0.061 * | 0.061 * | 0.107 * | 0.107 * |
| EBR | 0 | 0 | 57 | 57 | 95 | 95 | - | - | - | - |
| WBL | 0 | 0 | 257 | 266 | 270 | 279 | - | - | - | - |
| WBT | 1 | 1600 | 27 | 27 | 86 | 86 | 0.178 * | 0.183 * | 0.223 * | 0.228 * |
| WBR | 1 | 1500 | 116 | 119 | 149 | 152 | 0.077 | 0.079 | 0.099 | 0.101 |
| | | | *LOST TIME:* | | | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | | | **0.681** | **0.686** | **0.927** | **0.932** |
| | | | SCENARIO LEVEL OF SERVICE: | | | | **B** | **B** | **E** | **E** |

***NOTES:***

Printed: 12/08/19

#18548 - MOORPARK RAILROAD DEPOT PROJECT REF: 01 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *WALNUT CANYON ROAD*

E/W STREET: *HIGH STREET*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | **15** | **297** | **189** | **169** | **396** | **4** | **2** | **8** | **13** | **188** | **6** | **131** |
| (B) PROJECT-ADDED: | **0** | **0** | **8** | **2** | **0** | **0** | **0** | **0** | **0** | **12** | **0** | **4** |
| (C) CUMULATIVE: | **28** | **273** | **200** | **203** | **430** | **10** | **5** | **66** | **85** | **200** | **29** | **166** |

## GEOMETRICS

| IMPROVED LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L T R | L T TR | LTR | LT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 1 | 1500 | 15 | 15 | 28 | 28 | 0.01 | 0.01 | 0.02 | 0.02 |
| NBT | 1 | 1600 | 297 | 297 | 273 | 273 | 0.186 * | 0.186 * | 0.171 * | 0.171 * |
| NBR | 1 | 1500 | 189 | 197 | 200 | 208 | 0.126 | 0.131 | 0.133 | 0.139 |
| SBL | 1 | 1500 | 169 | 171 | 203 | 205 | 0.113 * | 0.114 * | 0.135 * | 0.137 * |
| SBT | 2 | 3200 | 396 | 396 | 430 | 430 | 0.125 | 0.125 | 0.138 | 0.138 |
| SBR | 0 | 0 | 4 | 4 | 10 | 10 | - | - | - | - |
| EBL | 0 | 0 | 2 | 2 | 5 | 5 | - | - | - | - |
| EBT | 1 | 1600 | 8 | 8 | 66 | 66 | 0.014 * | 0.014 * | 0.098 * | 0.098 * |
| EBR | 0 | 0 | 13 | 13 | 85 | 85 | - | - | - | - |
| WBL | 0 | 0 | 188 | 200 | 200 | 212 | - | - | - | - |
| WBT | 1 | 1600 | 6 | 6 | 29 | 29 | 0.121 * | 0.129 * | 0.143 * | 0.151 * |
| WBR | 1 | 1500 | 131 | 135 | 166 | 170 | 0.087 | 0.090 | 0.111 | 0.113 |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.534** | **0.543** | **0.647** | **0.657** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | **A** | **A** | **B** | **B** |

***NOTES:***

Printed: 12/08/19

#18050- MOORPARK RAILROAD DEPOT PROJECT REF: 01 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *WALNUT CANYON ROAD*

E/W STREET: *HIGH STREET*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| | NORTH BOUND | | | SOUTH BOUND | | | EAST BOUND | | | WEST BOUND | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLUMES | L | T | R | L | T | R | L | T | R | L | T | R |
| (A) EXISTING: | 46 | 248 | 315 | 86 | 239 | 13 | 6 | 35 | 57 | 257 | 27 | 116 |
| (B) PROJECT-ADDED: | 0 | 0 | 17 | 6 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 3 |
| (C) CUMULATIVE: | 95 | 360 | 330 | 119 | 330 | 10 | 10 | 66 | 95 | 270 | 86 | 149 |

## GEOMETRICS

| | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| IMPROVED LANE GEOMETRICS | L T R | L T TR | LTR | LT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 1 | 1500 | 46 | 46 | 95 | 95 | 0.03 | 0.03 | 0.06 | 0.06 |
| NBT | 1 | 1600 | 248 | 248 | 360 | 360 | 0.155 * | 0.155 * | 0.225 * | 0.225 * |
| NBR | 1 | 1500 | 315 | 332 | 330 | 347 | 0.210 | 0.221 | 0.220 | 0.231 |
| SBL | 1 | 1500 | 86 | 92 | 119 | 125 | 0.057 * | 0.061 * | 0.079 * | 0.083 * |
| SBT | 2 | 3200 | 239 | 239 | 330 | 330 | 0.079 | 0.079 | 0.106 | 0.106 |
| SBR | 0 | 0 | 13 | 13 | 10 | 10 | - | - | - | - |
| EBL | 0 | 0 | 6 | 6 | 10 | 10 | - | - | - | - |
| EBT | 1 | 1600 | 35 | 35 | 66 | 66 | 0.061 * | 0.061 * | 0.107 * | 0.107 * |
| EBR | 0 | 0 | 57 | 57 | 95 | 95 | - | - | - | - |
| WBL | 0 | 0 | 257 | 266 | 270 | 279 | - | - | - | - |
| WBT | 1 | 1600 | 27 | 27 | 86 | 86 | 0.178 * | 0.183 * | 0.223 * | 0.228 * |
| WBR | 1 | 1500 | 116 | 119 | 149 | 152 | 0.077 | 0.079 | 0.099 | 0.101 |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.551** | **0.560** | **0.734** | **0.743** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | A | A | C | C |

***NOTES:***

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#18050 - MOORPARK RAILROAD DEPOT PROJECT REF: 02 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *SPRING STREET*

E/W STREET: *HIGH STREET*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | T | R | SOUTH BOUND L | T | R | EAST BOUND L | T | R | WEST BOUND L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | 128 | 190 | 173 | 430 | 553 | 31 | 12 | 235 | 114 | 60 | 217 | 167 |
| (B) PROJECT-ADDED: | 9 | 0 | 0 | 0 | 0 | 1 | 2 | 9 | 14 | 0 | 5 | 0 |
| (C) CUMULATIVE: | 181 | 258 | 230 | 450 | 655 | 45 | 15 | 250 | 200 | 110 | 239 | 175 |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L TT R | L T TR | L T R | L T R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 1 | 1500 | 128 | 137 | 181 | 190 | 0.09 | 0.09 | 0.12 | 0.13 |
| NBT | 2 | 3200 | 190 | 190 | 258 | 258 | 0.059 * | 0.059 * | 0.081 * | 0.081 * |
| NBR | 1 | 1500 | 173 | 173 | 230 | 230 | 0.115 | 0.115 | 0.153 | 0.153 |
| SBL | 1 | 1500 | 430 | 430 | 450 | 450 | 0.287 * | 0.287 * | 0.300 * | 0.300 * |
| SBT | 2 | 3200 | 553 | 553 | 655 | 655 | 0.183 | 0.183 | 0.219 | 0.219 |
| SBR | 0 | 0 | 31 | 32 | 45 | 46 | - | - | - | - |
| EBL | 1 | 1500 | 12 | 14 | 15 | 17 | 0.01 | 0.01 | 0.01 | 0.01 |
| EBT | 1 | 1600 | 235 | 244 | 250 | 259 | 0.147 * | 0.153 * | 0.156 * | 0.162 * |
| EBR | 1 | 1500 | 114 | 128 | 200 | 214 | 0.08 | 0.09 | 0.13 | 0.14 |
| WBL | 1 | 1500 | 60 | 60 | 110 | 110 | 0.04 * | 0.04 * | 0.07 * | 0.07 * |
| WBT | 1 | 1600 | 217 | 222 | 239 | 244 | 0.136 | 0.139 | 0.149 | 0.153 |
| WBR | 1 | 1500 | 150 | 150 | 158 | 158 | 0.100 | 0.100 | 0.105 | 0.105 |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.633** | **0.639** | **0.710** | **0.716** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | **B** | **B** | **C** | **C** |

***NOTES:***

Printed: 12/08/19

#18050 - MOORPARK RAILROAD DEPOT PROJECT REF: 02 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *SPRING STREET*

E/W STREET: *HIGH STREET*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | T | R | SOUTH BOUND L | T | R | EAST BOUND L | T | R | WEST BOUND L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | 169 | 576 | 209 | 196 | 265 | 44 | 37 | 290 | 129 | 79 | 262 | 501 |
| (B) PROJECT-ADDED: | 20 | 0 | 0 | 0 | 0 | 3 | 2 | 6 | 12 | 0 | 12 | 0 |
| (C) CUMULATIVE: | 222 | 675 | 260 | 230 | 365 | 58 | 50 | 308 | 167 | 120 | 308 | 530 |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND L T T R | SOUTH BOUND L T TR | EAST BOUND L T R | WEST BOUND L T R |
|---|---|---|---|---|

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 1 | 1500 | 169 | 189 | 222 | 242 | 0.11 | 0.13 | 0.15 | 0.16 |
| NBT | 2 | 3200 | 576 | 576 | 675 | 675 | 0.180 * | 0.180 * | 0.211 * | 0.211 * |
| NBR | 1 | 1500 | 188 | 188 | 234 | 234 | 0.125 | 0.125 | 0.156 | 0.156 |
| SBL | 1 | 1500 | 196 | 196 | 230 | 230 | 0.131 * | 0.131 * | 0.153 * | 0.153 * |
| SBT | 2 | 3200 | 265 | 265 | 365 | 365 | 0.097 | 0.098 | 0.132 | 0.133 |
| SBR | 0 | 0 | 44 | 47 | 58 | 61 | - | - | - | - |
| EBL | 1 | 1500 | 37 | 39 | 50 | 52 | 0.03 * | 0.03 * | 0.03 * | 0.04 * |
| EBT | 1 | 1600 | 290 | 296 | 308 | 314 | 0.181 | 0.185 | 0.193 | 0.196 |
| EBR | 1 | 1500 | 129 | 141 | 167 | 179 | 0.09 | 0.09 | 0.11 | 0.12 |
| WBL | 1 | 1500 | 79 | 79 | 120 | 120 | 0.05 | 0.05 | 0.08 | 0.08 |
| WBT | 1 | 1600 | 262 | 274 | 308 | 320 | 0.164 | 0.171 | 0.193 | 0.200 |
| WBR | 1 | 1500 | 431 | 431 | 456 | 456 | 0.287 * | 0.287 * | 0.304 * | 0.304 * |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.723** | **0.724** | **0.801** | **0.803** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | **C** | **C** | **C** | **C** |

***NOTES:***

Printed: 12/08/19

#18050 - MOORPARK RAILROAD DEPOT PROJECT REF: 03 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *MOORPARK AVENUE*

E/W STREET: *POINDEXTER AVENUE*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | T | R | SOUTH BOUND L | T | R | EAST BOUND L | T | R | WEST BOUND L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | 71 | 279 | 8 | 6 | 287 | 283 | 205 | 26 | 70 | 3 | 48 | 16 |
| (B) PROJECT-ADDED: | 0 | 7 | 0 | 0 | 10 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| (C) CUMULATIVE: | 90 | 357 | 10 | 10 | 320 | 290 | 215 | 30 | 80 | 10 | 50 | 20 |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L TR | L TR | L R | L TR |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 1 | 1500 | 71 | 71 | 90 | 90 | 0.05 * | 0.05 * | 0.06 * | 0.06 * |
| NBT | 1 | 1600 | 279 | 286 | 357 | 364 | 0.179 | 0.184 | 0.229 | 0.234 |
| NBR | 0 | 0 | 8 | 8 | 10 | 10 | - | - | - | - |
| SBL | 1 | 1500 | 6 | 6 | 10 | 10 | 0.004 | 0.004 | 0.007 | 0.007 |
| SBT | 1 | 1600 | 287 | 297 | 320 | 330 | 0.356 * | 0.364 * | 0.381 * | 0.389 * |
| SBR | 0 | 0 | 283 | 285 | 290 | 292 | - | - | - | - |
| EBL | 1 | 1500 | 205 | 206 | 215 | 216 | 0.14 * | 0.14 * | 0.14 * | 0.14 * |
| EBT | 0 | 0 | 26 | 26 | 30 | 30 | - | - | - | - |
| EBR | 1 | 1500 | 70 | 70 | 80 | 80 | 0.05 | 0.05 | 0.05 | 0.05 |
| WBL | 1 | 1500 | 3 | 3 | 10 | 10 | 0.00 | 0.00 | 0.01 | 0.01 |
| WBT | 1 | 1600 | 48 | 48 | 50 | 50 | 0.040 * | 0.040 * | 0.044 * | 0.044 * |
| WBR | 0 | 0 | 16 | 16 | 20 | 20 | - | - | - | - |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.680** | **0.688** | **0.728** | **0.737** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | **B** | **B** | **C** | **C** |

***NOTES:***

Printed: 12/08/19

#18050 - MOORPARK RAILROAD DEPOT PROJECT REF: 03PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *MOORPARK AVENUE*

E/W STREET: *POINDEXTER AVENUE*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| | NORTH BOUND | | | SOUTH BOUND | | | EAST BOUND | | | WEST BOUND | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLUMES | L | T | R | L | T | R | L | T | R | L | T | R |
| (A) EXISTING: | 63 | 344 | 14 | 8 | 293 | 257 | 230 | 28 | 62 | 6 | 31 | 14 |
| (B) PROJECT-ADDED: | 0 | 14 | 0 | 0 | 8 | 1 | 3 | 0 | 0 | 0 | 0 | 0 |
| (C) CUMULATIVE: | 70 | 527 | 15 | 10 | 325 | 270 | 240 | 30 | 75 | 10 | 40 | 15 |

## GEOMETRICS

| | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| LANE GEOMETRICS | L TR | L TR | L R | L TR |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 1 | 1500 | 63 | 63 | 70 | 70 | 0.04 * | 0.04 * | 0.05 * | 0.05 * |
| NBT | 1 | 1600 | 344 | 358 | 527 | 541 | 0.224 | 0.233 | 0.339 | 0.348 |
| NBR | 0 | 0 | 14 | 14 | 15 | 15 | - | - | - | - |
| SBL | 1 | 1500 | 8 | 8 | 10 | 10 | 0.005 | 0.005 | 0.007 | 0.007 |
| SBT | 1 | 1600 | 293 | 301 | 325 | 333 | 0.344 * | 0.349 * | 0.372 * | 0.378 * |
| SBR | 0 | 0 | 257 | 258 | 270 | 271 | - | - | - | - |
| EBL | 1 | 1500 | 230 | 233 | 240 | 243 | 0.15 * | 0.16 * | 0.16 * | 0.16 * |
| EBT | 0 | 0 | 28 | 28 | 30 | 30 | - | - | - | - |
| EBR | 1 | 1500 | 62 | 62 | 75 | 75 | 0.04 | 0.04 | 0.05 | 0.05 |
| WBL | 1 | 1500 | 6 | 6 | 10 | 10 | 0.00 | 0.00 | 0.01 | 0.01 |
| WBT | 1 | 1600 | 31 | 31 | 40 | 40 | 0.028 * | 0.028 * | 0.034 * | 0.034 * |
| WBR | 0 | 0 | 14 | 14 | 15 | 15 | - | - | - | - |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.667** | **0.674** | **0.713** | **0.721** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | **B** | **B** | **C** | **C** |

***NOTES:***

Printed: 12/08/19

#18050 - MOORPARK RAILROAD DEPOT PROJECT

REF: 04 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *MOORPARK AVENUE*

E/W STREET: *LOS ANGELES AVENUE*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | T | R | SOUTH BOUND L | T | R | EAST BOUND L | T | R | WEST BOUND L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | 74 | 83 | 171 | 156 | 48 | 109 | 150 | 805 | 38 | 87 | 868 | 101 |
| (B) PROJECT-ADDED: | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 0 |
| (C) CUMULATIVE: | 80 | 90 | 180 | 227 | 60 | 140 | 190 | 981 | 40 | 110 | 1131 | 150 |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L LT R | L LTR R | L TT TR | L TT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 0 | 0 | 74 | 74 | 80 | 80 | - | - | - | - |
| NBT | 2 | 3200 | 83 | 83 | 90 | 90 | 0.049 | 0.049 | 0.053 | 0.053 |
| NBR | 1 | 1500 | 171 | 171 | 180 | 180 | 0.114 * | 0.114 * | 0.120 * | 0.120 * |
| SBL | 0 | 0 | 156 | 156 | 227 | 227 | - | - | - | - |
| SBT | 3 | 4800 | 48 | 48 | 60 | 60 | 0.065 * | 0.066 * | 0.089 * | 0.090 * |
| SBR | 0 | 0 | 109 | 115 | 140 | 146 | - | - | - | - |
| EBL | 1 | 1500 | 150 | 154 | 190 | 194 | 0.10 * | 0.10 * | 0.13 * | 0.13 * |
| EBT | 3 | 4800 | 805 | 805 | 981 | 981 | 0.176 | 0.176 | 0.213 | 0.213 |
| EBR | 0 | 0 | 38 | 38 | 40 | 40 | - | - | - | - |
| WBL | 1 | 1500 | 87 | 87 | 110 | 110 | 0.06 | 0.06 | 0.07 | 0.07 |
| WBT | 2 | 3200 | 868 | 868 | 1131 | 1131 | 0.271 * | 0.271 * | 0.353 * | 0.353 * |
| WBR | 1 | 1500 | 101 | 101 | 150 | 150 | 0.067 | 0.067 | 0.100 | 0.100 |
| | | | *LOST TIME:* | | | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | | | **0.650** | **0.654** | **0.789** | **0.792** |
| | | | SCENARIO LEVEL OF SERVICE: | | | | **B** | **B** | **C** | **C** |

***NOTES:***

Printed: 12/08/19

#18050- MOORPARK RAILROAD DEPOT PROJECT REF: 04 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *MOORPARK AVENUE*

E/W STREET: *LOS ANGELES AVENUE*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | T | R | SOUTH BOUND L | T | R | EAST BOUND L | T | R | WEST BOUND L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | 69 | 50 | 147 | 196 | 90 | 110 | 145 | 949 | 37 | 277 | 979 | 132 |
| (B) PROJECT-ADDED: | 0 | 0 | 0 | 0 | 0 | 5 | 8 | 0 | 0 | 0 | 0 | 0 |
| (C) CUMULATIVE: | 75 | 70 | 150 | 230 | 100 | 140 | 170 | 1131 | 60 | 280 | 1131 | 200 |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L LT R | L LTR R | L TT TR | L TT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 0 | 0 | 69 | 69 | 75 | 75 | - | - | - | - |
| NBT | 2 | 3200 | 50 | 50 | 70 | 70 | 0.037 | 0.037 | 0.045 | 0.045 |
| NBR | 1 | 1500 | 147 | 147 | 150 | 150 | 0.098 * | 0.098 * | 0.100 * | 0.100 * |
| SBL | 0 | 0 | 196 | 196 | 230 | 230 | - | - | - | - |
| SBT | 3 | 4800 | 90 | 90 | 100 | 100 | 0.083 * | 0.084 * | 0.098 * | 0.099 * |
| SBR | 0 | 0 | 110 | 115 | 140 | 145 | - | - | - | - |
| EBL | 1 | 1500 | 145 | 153 | 170 | 178 | 0.10 * | 0.10 * | 0.11 * | 0.12 * |
| EBT | 3 | 4800 | 949 | 949 | 1131 | 1131 | 0.205 | 0.205 | 0.248 | 0.248 |
| EBR | 0 | 0 | 37 | 37 | 60 | 60 | - | - | - | - |
| WBL | 1 | 1500 | 277 | 277 | 280 | 280 | 0.19 | 0.19 | 0.19 | 0.19 |
| WBT | 2 | 3200 | 979 | 979 | 1131 | 1131 | 0.306 * | 0.306 * | 0.353 * | 0.353 * |
| WBR | 1 | 1500 | 132 | 132 | 200 | 200 | 0.088 | 0.088 | 0.133 | 0.133 |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.684** | **0.690** | **0.764** | **0.771** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | **B** | **B** | **C** | **C** |

***NOTES:***

Printed: 12/08/19

#18050- MOORPARK RAILROAD DEPOT PROJECT

REF: 05 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *SPRING ROAD*

E/W STREET: *LOS ANGELES AVENUE*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | **198** | **286** | **76** | **512** | **301** | **110** | **124** | **903** | **182** | **53** | **715** | **289** |
| (B) PROJECT-ADDED: | **0** | **1** | **0** | **12** | **2** | **0** | **0** | **0** | **0** | **0** | **0** | **8** |
| (C) CUMULATIVE: | **220** | **361** | **90** | **675** | **403** | **150** | **220** | **1027** | **200** | **70** | **1031** | **300** |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | LL T TR | LL T R | LL TT R | L TT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 2 | 3000 | 198 | 198 | 220 | 220 | 0.07 | 0.07 | 0.07 | 0.07 |
| NBT | 2 | 3200 | 286 | 287 | 361 | 362 | 0.113 * | 0.113 * | 0.141 * | 0.141 * |
| NBR | 0 | 0 | 76 | 76 | 90 | 90 | - | - | - | - |
| SBL | 2 | 3000 | 512 | 524 | 675 | 687 | 0.171 * | 0.175 * | 0.225 * | 0.229 * |
| SBT | 1 | 1600 | 301 | 303 | 403 | 405 | 0.188 | 0.189 | 0.252 | 0.253 |
| SBR | 1 | 1500 | 110 | 110 | 150 | 150 | 0.07 | 0.07 | 0.10 | 0.10 |
| EBL | 2 | 3000 | 124 | 124 | 220 | 220 | 0.04 | 0.04 | 0.07 * | 0.07 * |
| EBT | 2 | 3200 | 903 | 903 | 1027 | 1027 | 0.282 * | 0.282 * | 0.321 | 0.321 |
| EBR | 1 | 1500 | 182 | 182 | 200 | 200 | 0.12 | 0.12 | 0.13 | 0.13 |
| WBL | 1 | 1500 | 53 | 53 | 70 | 70 | 0.04 * | 0.04 * | 0.05 | 0.05 |
| WBT | 2 | 3200 | 715 | 715 | 1031 | 1031 | 0.223 | 0.223 | 0.322 * | 0.322 * |
| WBR | 1 | 1500 | 289 | 297 | 300 | 308 | 0.193 | 0.198 | 0.200 | 0.205 |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.701** | **0.705** | **0.861** | **0.865** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | **B** | **C** | **D** | **D** |

***NOTES:***

Printed: 12/08/19

#18050 - MOORPARK RAILROAD DEPOT PROJECT REF: 05 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *SPRING ROAD*

E/W STREET: *LOS ANGELES AVENUE*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | **231** | **291** | **40** | **374** | **241** | **104** | **155** | **915** | **182** | **68** | **1014** | **667** |
| (B) PROJECT-ADDED: | **0** | **3** | **0** | **10** | **2** | **0** | **0** | **0** | **0** | **0** | **0** | **17** |
| (C) CUMULATIVE: | **230** | **240** | **70** | **462** | **272** | **130** | **240** | **1021** | **270** | **110** | **1291** | **717** |

## GEOMETRICS

| | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| IMPROVED LANE GEOMETRICS | LL T TR | LL T R | LL TTT R | L TTT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 2 | 3000 | 231 | 231 | 230 | 230 | 0.08 | 0.08 | 0.08 | 0.08 |
| NBT | 2 | 3200 | 291 | 294 | 240 | 243 | 0.103 * | 0.104 * | 0.097 * | 0.098 * |
| NBR | 0 | 0 | 40 | 40 | 70 | 70 | - | - | - | - |
| SBL | 2 | 3000 | 374 | 384 | 462 | 472 | 0.125 * | 0.128 * | 0.154 * | 0.157 * |
| SBT | 1 | 1600 | 241 | 243 | 272 | 274 | 0.151 | 0.152 | 0.170 | 0.171 |
| SBR | 1 | 1500 | 104 | 104 | 130 | 130 | 0.07 | 0.07 | 0.09 | 0.09 |
| EBL | 2 | 3000 | 155 | 155 | 240 | 240 | 0.05 * | 0.05 * | 0.08 * | 0.08 * |
| EBT | 2 | 3200 | 915 | 915 | 1021 | 1021 | 0.286 | 0.286 | 0.319 | 0.319 |
| EBR | 1 | 1500 | 182 | 182 | 270 | 270 | 0.12 | 0.12 | 0.18 | 0.18 |
| WBL | 1 | 1500 | 68 | 68 | 110 | 110 | 0.05 | 0.05 | 0.07 | 0.07 |
| WBT | 2 | 3200 | 1014 | 1014 | 1291 | 1291 | 0.317 * | 0.317 * | 0.403 * | 0.403 * |
| WBR | 1 | 1500 | 667 | 684 | 717 | 734 | 0.445 | 0.456 | 0.478 | 0.489 |
| | | | *LOST TIME:* | | | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | | | **0.697** | **0.701** | **0.834** | **0.838** |
| | | | SCENARIO LEVEL OF SERVICE: | | | | **B** | **B** | **D** | **D** |

***NOTES:***

Printed: 12/08/19

#18050- MOORPARK RAILROAD DEPOT PROJECT REF: 05 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *SPRING ROAD*

E/W STREET: *LOS ANGELES AVENUE*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | **198** | **286** | **76** | **512** | **301** | **110** | **124** | **903** | **182** | **53** | **715** | **289** |
| (B) PROJECT-ADDED: | **0** | **1** | **0** | **12** | **2** | **0** | **0** | **0** | **0** | **0** | **0** | **8** |
| (C) CUMULATIVE: | **220** | **361** | **90** | **675** | **403** | **150** | **220** | **1027** | **200** | **70** | **1031** | **300** |

## GEOMETRICS

| IMPROVED LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | LL T TR | LL T R | LL TTT R | L TTT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 2 | 3000 | 198 | 198 | 220 | 220 | 0.07 | 0.07 | 0.07 | 0.07 |
| NBT | 2 | 3200 | 286 | 287 | 361 | 362 | 0.113 * | 0.113 * | 0.141 * | 0.141 * |
| NBR | 0 | 0 | 76 | 76 | 90 | 90 | - | - | - | - |
| SBL | 2 | 3000 | 512 | 524 | 675 | 687 | 0.171 * | 0.175 * | 0.225 * | 0.229 * |
| SBT | 1 | 1600 | 301 | 303 | 403 | 405 | 0.188 | 0.189 | 0.252 | 0.253 |
| SBR | 1 | 1500 | 110 | 110 | 150 | 150 | 0.07 | 0.07 | 0.10 | 0.10 |
| EBL | 2 | 3000 | 124 | 124 | 220 | 220 | 0.04 | 0.04 | 0.07 * | 0.07 * |
| EBT | 3 | 4800 | 903 | 903 | 1027 | 1027 | 0.188 * | 0.188 * | 0.214 | 0.214 |
| EBR | 1 | 1500 | 182 | 182 | 200 | 200 | 0.12 | 0.12 | 0.13 | 0.13 |
| WBL | 1 | 1500 | 53 | 53 | 70 | 70 | 0.04 * | 0.04 * | 0.05 | 0.05 |
| WBT | 3 | 4800 | 715 | 715 | 1031 | 1031 | 0.149 | 0.149 | 0.215 * | 0.215 * |
| WBR | 1 | 1500 | 289 | 297 | 300 | 308 | 0.193 | 0.198 | 0.200 | 0.205 |
| | | | *LOST TIME:* | | | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | | | **0.607** | **0.611** | **0.754** | **0.758** |
| | | | SCENARIO LEVEL OF SERVICE: | | | | **B** | **B** | **C** | **C** |

***NOTES:***

Printed: 12/08/19

**#18050 - MOORPARK RAILROAD DEPOT PROJECT** REF: 05 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *JUNE 6, 2018*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *SPRING ROAD*

E/W STREET: *LOS ANGELES AVENUE*

CONTROL TYPE: *SIGNAL*

## TRAFFIC VOLUME SUMMARY

| VOLUMES | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) EXISTING: | **231** | **291** | **40** | **374** | **241** | **104** | **155** | **915** | **182** | **68** | **1014** | **667** |
| (B) PROJECT-ADDED: | **0** | **3** | **0** | **10** | **2** | **0** | **0** | **0** | **0** | **0** | **0** | **17** |
| (C) CUMULATIVE: | **240** | **388** | **70** | **462** | **272** | **130** | **240** | **1021** | **270** | **110** | **1291** | **717** |

## GEOMETRICS

| IMPROVED GEOMETRIC | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | LL T TR | LL T R | LL TTT R | L TTT R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 2 | 3000 | 231 | 231 | 240 | 240 | 0.08 | 0.08 | 0.08 | 0.08 |
| NBT | 2 | 3200 | 291 | 294 | 388 | 391 | 0.103 * | 0.104 * | 0.143 * | 0.144 * |
| NBR | 0 | 0 | 40 | 40 | 70 | 70 | - | - | - | - |
| SBL | 2 | 3000 | 374 | 384 | 462 | 472 | 0.125 * | 0.128 * | 0.154 * | 0.157 * |
| SBT | 1 | 1600 | 241 | 243 | 272 | 274 | 0.151 | 0.152 | 0.170 | 0.171 |
| SBR | 1 | 1500 | 104 | 104 | 130 | 130 | 0.07 | 0.07 | 0.09 | 0.09 |
| EBL | 2 | 3000 | 155 | 155 | 240 | 240 | 0.05 * | 0.05 * | 0.08 * | 0.08 * |
| EBT | 3 | 4800 | 915 | 915 | 1021 | 1021 | 0.191 | 0.191 | 0.213 | 0.213 |
| EBR | 1 | 1500 | 182 | 182 | 270 | 270 | 0.12 | 0.12 | 0.18 | 0.18 |
| WBL | 1 | 1500 | 68 | 68 | 110 | 110 | 0.05 | 0.05 | 0.07 | 0.07 |
| WBT | 3 | 4800 | 1014 | 1014 | 1291 | 1291 | 0.211 * | 0.211 * | 0.269 * | 0.269 * |
| WBR | 1 | 1500 | 667 | 684 | 717 | 734 | 0.445 | 0.456 | 0.478 | 0.489 |
| | | | | | *LOST TIME:* | | 0.10 | 0.10 | 0.10 | 0.10 |
| | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.591** | **0.595** | **0.746** | **0.750** |
| | | | | | SCENARIO LEVEL OF SERVICE: | | A | A | C | C |

***NOTES:***

Printed: 12/08/19

# PROJECT TRIP GENERATION

Associated Transportation Engineers
Trip Generation Worksheet - With In/Out Splits (no office)

| MOORPARK PROJECT (#18050) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land-Use | Size | ADT | | A.M. | | | | | | P.M. | | | | | |
| | | Rate | Trips | Rate | Trips | In % | Trips | Out % | Trips | Rate | Trips | In % | Trips | Out % | Trips |
| Apartments (a) | 91 | 7.32 | 666 | 0.46 | 42 | 23% | 10 | 77% | 32 | 0.56 | 51 | 63% | 32 | 37% | 19 |
| Brewery (b) | 3,824 | 112.18 | 429 | 0.00 | 0 | 50% | 0 | 50% | 0 | 9.77 | 37 | 62% | 23 | 38% | 14 |
| Restaurant (b) | 2,794 | 112.18 | 313 | 9.94 | 28 | 55% | 15 | 45% | 13 | 9.77 | 27 | 62% | 17 | 38% | 10 |
| Retail/Commercial Space (c) | 8,400 | 37.75 | 317 | 0.94 | 8 | 62% | 5 | 38% | 3 | 3.81 | 32 | 48% | 15 | 52% | 17 |
| **TOTAL PROJECT TRIPS:** | | | **1,725** | | **78** | | **30** | | **48** | | **147** | | **87** | | **60** |

(a) ITE trip generation rates for Multifamily Housing (#220)
(b) ITE trip generation rates for High-Turnover Restaurant (#932)
(c) ITE trip generation rates for Shopping Center (#820)

| NCHRP 684 Internal Trip Capture Estimation Tool | | | |
|---|---|---|---|
| **Project Name:** | RAILROAD DEPOT PROJECT (#18050) | **Organization:** | ATE |
| **Project Location:** | MOORPARK | **Performed By:** | DFN |
| **Scenario Description:** | PROJECT ADDED TRIPS | **Date:** | 9/2/2019 |
| **Analysis Year:** | 2018 | **Checked By:** | |
| **Analysis Period:** | AM Street Peak Hour | **Date:** | |

**Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)**

| Land Use | Development Data (*For Information Only*) | | | Estimated Vehicle-Trips[3] | | |
|---|---|---|---|---|---|---|
| | ITE LUCs[1] | Quantity | Units | Total | Entering | Exiting |
| Office | | | | 0 | | |
| Retail | #820 | 8,400 | SF | 8 | 5 | 3 |
| Restaurant | #932 | 6,618 | SF | 28 | 15 | 13 |
| Cinema/Entertainment | | | | 0 | | |
| Residential | #220 | 91 | units | 42 | 10 | 32 |
| Hotel | | | | 0 | | |
| All Other Land Uses[2] | | | | 0 | | |
| | | | | 78 | 30 | 48 |

**Table 2-A: Mode Split and Vehicle Occupancy Estimates**

| Land Use | Entering Trips | | | Exiting Trips | | |
|---|---|---|---|---|---|---|
| | Veh. Occ.[4] | % Transit | % Non-Motorized | Veh. Occ.[4] | % Transit | % Non-Motorized |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | 10% | | | 10% | |
| Hotel | | | | | | |
| All Other Land Uses[2] | | | | | | |

**Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)**

| Origin (From) | Destination (To) | | | | | |
|---|---|---|---|---|---|---|
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |

**Table 4-A: Internal Person-Trip Origin-Destination Matrix***

| Origin (From) | Destination (To) | | | | | |
|---|---|---|---|---|---|---|
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | | 0 | 0 | 0 | 0 |
| Restaurant | 0 | 0 | | 0 | 1 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 0 | 3 | 0 | | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | |

**Table 5-A: Computations Summary**

| | Total | Entering | Exiting |
|---|---|---|---|
| All Person-Trips | 78 | 30 | 48 |
| Internal Capture Percentage | 10% | 13% | 8% |
| | | | |
| External Vehicle-Trips[5] | 66 | 25 | 41 |
| External Transit-Trips[6] | 4 | 1 | 3 |
| External Non-Motorized Trips[6] | 0 | 0 | 0 |

**Table 6-A: Internal Trip Capture Percentages by Land Use**

| Land Use | Entering Trips | Exiting Trips |
|---|---|---|
| Office | N/A | N/A |
| Retail | 0% | 0% |
| Restaurant | 20% | 8% |
| Cinema/Entertainment | N/A | N/A |
| Residential | 10% | 9% |
| Hotel | N/A | N/A |

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

| NCHRP 684 Internal Trip Capture Estimation Tool | | | |
|---|---|---|---|
| **Project Name:** | RAILROAD DEPOT PROJECT (#18050) | **Organization:** | ATE |
| **Project Location:** | MOORPARK | **Performed By:** | DFN |
| **Scenario Description:** | PROJECT ADDED TRIPS | **Date:** | 9/2/2019 |
| **Analysis Year:** | 2018 | **Checked By:** | |
| **Analysis Period:** | **PM Street Peak Hour** | **Date:** | |

**Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)**

| Land Use | Development Data (*For Information Only*) | | | Estimated Vehicle-Trips[3] | | |
|---|---|---|---|---|---|---|
| | ITE LUCs[1] | Quantity | Units | Total | Entering | Exiting |
| Office | | | | 0 | | |
| Retail | #820 | 8,400 | SF | 32 | 15 | 17 |
| Restaurant | #932 | 6,618 | SF | 64 | 40 | 24 |
| Cinema/Entertainment | | | | 0 | | |
| Residential | #220 | 95 | units | 51 | 32 | 19 |
| Hotel | | | | 0 | | |
| All Other Land Uses[2] | | | | 0 | | |
| | | | | 147 | 87 | 60 |

**Table 2-P: Mode Split and Vehicle Occupancy Estimates**

| Land Use | Entering Trips | | | Exiting Trips | | |
|---|---|---|---|---|---|---|
| | Veh. Occ.[4] | % Transit | % Non-Motorized | Veh. Occ.[4] | % Transit | % Non-Motorized |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | 10% | | | 10% | |
| Hotel | | | | | | |
| All Other Land Uses[2] | | | | | | |

**Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)**

| Origin (From) | Destination (To) | | | | | |
|---|---|---|---|---|---|---|
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |

**Table 4-P: Internal Person-Trip Origin-Destination Matrix***

| Origin (From) | Destination (To) | | | | | |
|---|---|---|---|---|---|---|
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | | 5 | 0 | 4 | 0 |
| Restaurant | 0 | 8 | | 0 | 4 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 2 | 4 | 0 | | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | |

**Table 5-P: Computations Summary**

| | Total | Entering | Exiting |
|---|---|---|---|
| All Person-Trips | 147 | 87 | 60 |
| Internal Capture Percentage | 37% | 31% | 45% |
| | | | |
| External Vehicle-Trips[5] | 90 | 58 | 32 |
| External Transit-Trips[6] | 3 | 2 | 1 |
| External Non-Motorized Trips[6] | 0 | 0 | 0 |

**Table 6-P: Internal Trip Capture Percentages by Land Use**

| Land Use | Entering Trips | Exiting Trips |
|---|---|---|
| Office | N/A | N/A |
| Retail | 67% | 53% |
| Restaurant | 23% | 50% |
| Cinema/Entertainment | N/A | N/A |
| Residential | 25% | 32% |
| Hotel | N/A | N/A |

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

# Appendix E

Cultural Resources Assessment Report




# High Street Station Mixed Use Development

## Cultural Resources Assessment Report

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**June 2018**

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# 1 Executive Summary

Rincon Consultants, Inc. (Rincon) was retained by Daly Group Inc. to prepare an Initial Study and Mitigated Negative Declaration (IS-MND) for the High Street Station Mixed Use Development, located in the city of Moorpark in the Downtown Specific Plan Area, in Ventura County, California. As part of the IS-MND, Rincon was scoped with the preparation of this cultural resources study to identify cultural resources with the potential to be impacted by the proposed project. The study included a cultural resources records search, Native American consultation, an intensive-level pedestrian survey, and historic evaluation of the subject parcel, culminating in the compilation of this report. All work completed in this study was conducted in accordance with the requirements of the California Environmental Quality Act (CEQA) and applicable local regulations.

The proposed project boundary encompasses a 2.15-acre parcel (Assessor Parcel Number: 512-0-090-115). Five built environment resources were identified within the boundary of the proposed project. They include two large grain storage buildings that line the parcel's southern boundary, constructed circa 1956; an additional grain storage building, the facades of which were designed to mimic those of a historic railroad depot constructed in 1979; and two industrial buildings, constructed in 1954 and 1964. According to the current project description, construction of the proposed project requires the demolition of all five of the extant buildings.

The subject parcel was recorded on California Department of Parks and Recreation (DPR) 523 series forms and evaluated for listing in the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), and as a City of Moorpark Landmark. The subject property appears ineligible for listing in the NRHP, CRHR, or as a City of Moorpark Landmark under any of the applicable significance criteria. Therefore, the subject parcel is not considered an historical resource as defined by CEQA. As a result, the demolition of the buildings on the subject parcel would not result in a significant adverse impact to historical resources.

Although the project site is not considered an historical resource in accordance with CEQA, the proposed project site is bound to the north by a segment of Ventura County Landmark # 72 that consists of a row of pepper trees planted by early Moorpark settlers John Nubee and John Barrett in 1904. Although the proposed project does not include any adjacent street trees, due to the proximity of the trees to the project area, they may be vulnerable to damage during project construction. Trees located near where mechanized equipment will be used can be susceptible to bark removal, branch breakage, or surface grading, all of which can result in significant damage or death of the tree. Therefore, Rincon recommends the implementation of CUL-1 to minimize impacts to this historical resource during construction activities.

No archaeological resources were found within the proposed project boundary. However, 11 cultural resources within 0.5-mile radius of the project APE were identified during the records search. Of these resources, four are prehistoric and seven are historical. Rincon assisted the City of Moorpark with Native American consultation in accordance with California Assembly Bill (AB) 52 by contacting the Native American Heritage Commission (NAHC) and requesting a Sacred Lands File (SLF) search of the project area. The NAHC responded with negative results for the SLF, but in accordance with AB 52, the NAHC provided a list of Native American contacts that was given to the City to initiate the tribal consultation. Although no archaeological resources were identified during the records search, CUL-2 and CUL-3 are recommended in case of unanticipated discoveries.

# CUL-1 Avoidance of impacts to Ventura County Landmark #72

Avoidance of impacts to Ventura County Landmark # 72 shall be accomplished through the implementation of the City of Moorpark's Tree Preservation Guidelines (Moorpark Municipal Code 12.12.060). In order to protect trees during construction, a physical barrier (flagging or safety fencing) should be installed around any adjacent pepper trees that are situated near mechanized equipment. Completion of this mitigation measure shall be monitored and enforced by the City of Moorpark.

# CUL-2 Unanticipated Discovery of Cultural Resources

If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) must be contacted immediately to evaluate the find. If the discovery proves to be significant under NHPA, additional work such as data recovery excavation may be warranted.

# CUL-3 Unanticipated Discovery of Human Remains

The discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the state of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. In the event of an unanticipated discovery of human remains, the County coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the NAHC, which will determine and notify an MLD. The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

# 2 Introduction

Rincon was retained by Daly Group Inc. to prepare an IS-MND for the High Street Station Mixed Use Development (proposed project), located in Moorpark in the City's Downtown Specific Plan Area, in Ventura County, California (Figure 1 ). As part of the IS-MND, Rincon was scoped with the preparation of this cultural resources study to identify historical resources with the potential to be impacted by the proposed project. The study included a cultural resources records search, Native American consultation, an intensive-level pedestrian survey, historic evaluation of the subject parcel, and the completion of this report. All activities completed as a component of this study were conducted in accordance with the requirements of the CEQA and applicable local regulations.

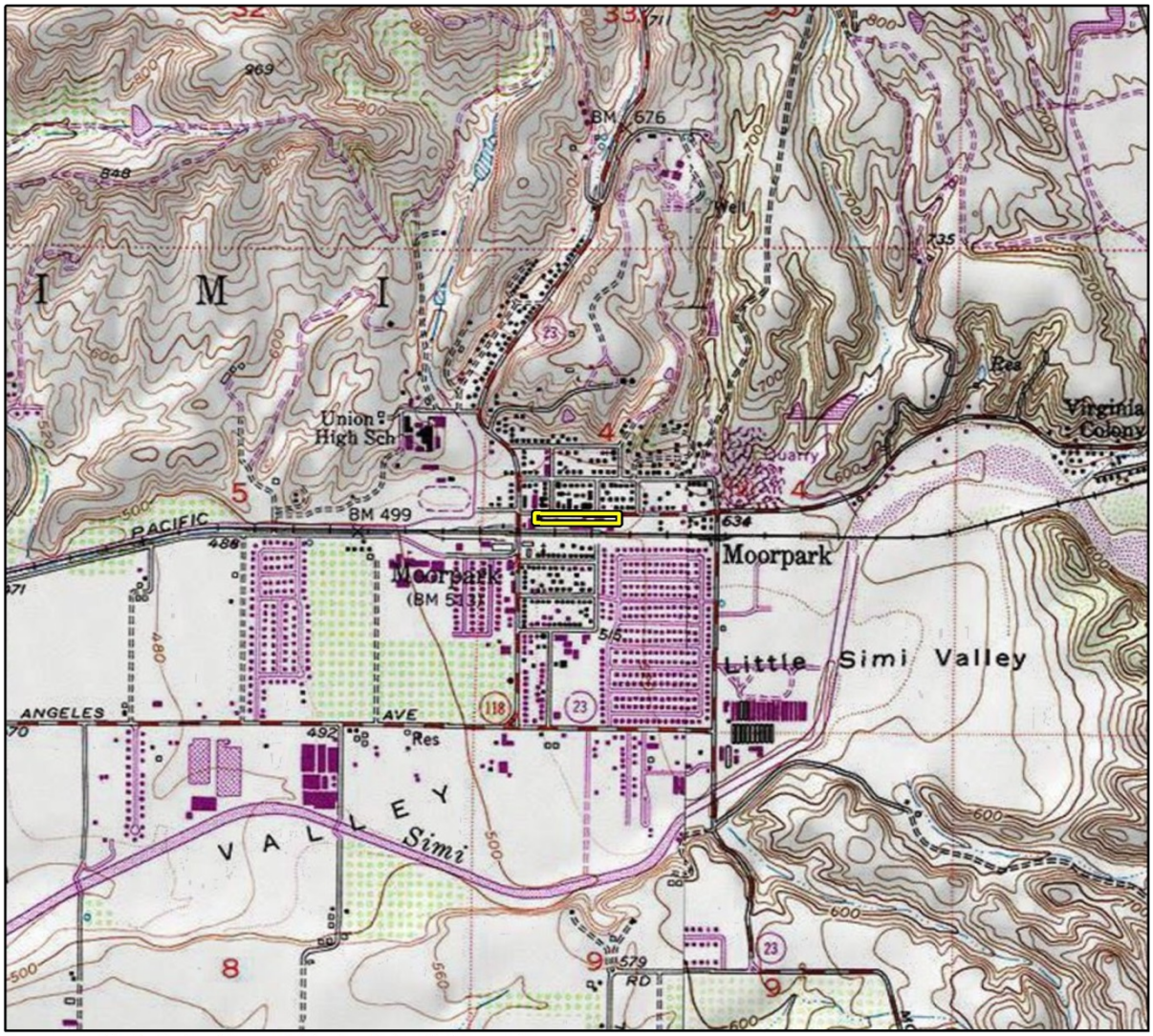
## 2.1 Project Description

The proposed project site is located Moorpark in the City's Downtown Specific Plan Area. The project site consists of one 2.15-acre parcel, adjacent to (north of) the railroad right-of-way, on High Street (Figure 2). Five buildings are located within the project boundary: three large grain storage buildings and two ancillary buildings. The properties surrounding the project site are primarily of commercial use.

The proposed project is a mixed use development on the 2.15-acre site to include:

- 77 residential units
- Up to 7,243 square feet of commercial space
- Approximately 720 square feet of amenity space
- 140 associated on-site parking spaces
- Approximately 8,725 square feet of circulation area

## Figure 1 Project Vicinity




*Imagery provided by National Geographic Society, Esri and its licensors © 2018. Moorpark Quadrangle. T02N R19W S04. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.*

Project Location

0 1,000 2,000 Feet

N

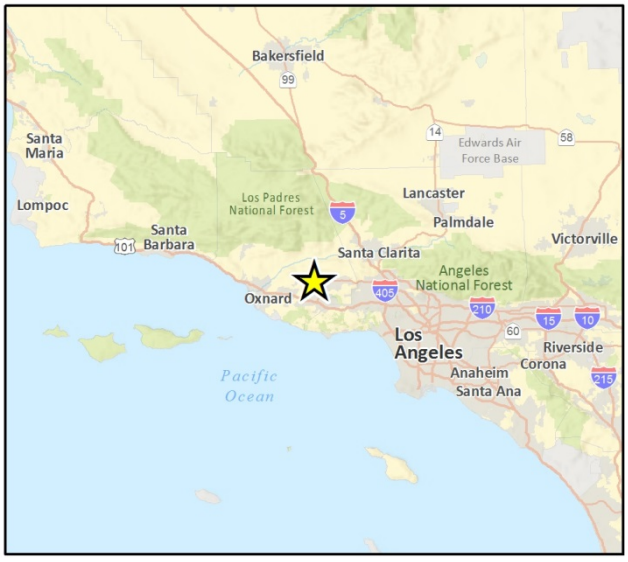


**Figure 2 Project Location**




*Imagery provided by Google and its licensors © 2018.*

Fig 2 Project Location

# 3 Regulatory Setting

This section discusses applicable federal, state, and local laws, ordinances, regulations, and standards governing cultural resources to which the proposed project must adhere before and during implementation.

## 3.1 Federal

The proposed project does not involve federal funding or permitting (i.e., have a federal nexus) and, therefore, compliance with the provisions of the National Historic Preservation Act of 1966 (NHPA) and other federal laws is provided here for informational purposes only. Projects that have a federal nexus must comply with NHPA, as amended (16 United States Code [U.S.C.] 470f). Cultural resources are considered during federal undertakings chiefly under Section 106 of NHPA through one of its implementing regulations, 36 Code of Federal Regulations (CFR) 800 (Protection of Historic Properties), and the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d) (6) (A) of NHPA. Other relevant federal laws include the Archaeological Data Preservation Act of 1974, American Indian Religious Freedom Act of 1978, Archaeological Resources Protection Act of 1979, and Native American Graves Protection and Repatriation Act of 1989.

The NRHP was established by NHPA as "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36, CFR 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if any of the following are true:

a. It is associated with events that have made a significant contribution to the broad patterns of our history.

b. It is associated with the lives of persons significant in our past.

c. It embodies the distinctive characteristics of a type, period, or method of installation, or represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.

d. It has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting these criteria, a property must retain historic integrity, defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service 1990). In order to assess integrity, the National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined in the following manner in National Register Bulletin 15:

1. **Location.** The place where the historic property was constructed or the place where the historic event occurred
2. **Design.** The combination of elements that create the form, plan, space, structure, and style of a property
3. **Setting.** The physical environment of a historic property
4. **Materials.** Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. **Workmanship.** The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory
6. **Feeling.** A property's expression of the aesthetic or historic sense of a particular period of time
7. **Association.** The direct link between an important historic event or person and a historic property

## 3.2 State

As the lead agency for the proposed project, the City of El Segundo must comply with the provisions of CEQA, which requires a lead agency to determine whether a project may have a significant effect on historical resources (PRC Section 21084.1). An historical resource is one listed, or determined to be eligible for listing, in the CRHR; a resource included in a local register of historical resources; or an object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (*State CEQA Guidelines*, Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
2. Is associated with the lives of persons important to our past
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
4. Has yielded, or may be likely to yield, information important in prehistory or history

In addition, if a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person

As of July 1, 2015, 52 of 2014 was enacted and expands CEQA by defining a new resource category: tribal cultural resources. AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and meets either of the following criteria:

- Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k)
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1 (in applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe)

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed in the jurisdiction of the lead agency.

## Assembly Bill 52

As of July 1, 2015, AB 52 was enacted and expands CEQA by defining a new resource category called *Tribal Cultural Resources* (TCR). AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a TCR, when feasible (PRC Section 21084.3).

PRC Section 21074(a)(1)(A) and (B) defines TCRs as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and meets either of the following criteria:

- Listed or eligible for listing in the CRHR, or in a local register of historical resources, as defined in PRC Section 5020.1(k)
- A resource determined by the lead agency, at its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe

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these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe

## 3.3 Local

In addition to federal and state regulations, projects built in the City of Moorpark are also subject to a number of local regulations relating to historical resources. Chapter 15.38 of the Moorpark Municipal Code pertains specifically to historic preservation within the city. Cited in Section 15.33.010 of the Municipal Code, its purpose is as follows:

> *To provide for the identification, protection, enhancement, perpetuation and use of historic landmarks within the city that reflects special elements of the city's historical heritage and to promote the general welfare by:*
>
> *A. Encouraging public knowledge, understanding, and appreciation of the city's past*
>
> *B. Fostering civic pride in the beauty and personality of the city and in the accomplishments of the city's past*
>
> *C. Safeguarding the heritage of the city by protecting landmarks that reflect the city's history*
>
> *D. Protecting and enhancing property values within the city and increasing economic and financial benefits to the city and its inhabitant*
>
> *E. Identifying as early as possible and resolving conflicts between the preservation of historical landmarks and alternative land uses*
>
> *F. Preserving historic building materials through maintenance and restoration of existing historical landmarks*
>
> *G. Taking whatever steps are reasonable and necessary to safeguard the property rights of the owners whose building or structure is declared to be a landmark*
>
> *H. Promoting the use of landmarks for the education and enjoyment of the people of the city*
>
> *I. Promoting awareness of the economic benefits of historic preservation*
> (Moorpark Municipal Code Section 15.36.10 1994)

The ordinance establishes the procedure for the designation of cultural resources in Moorpark. The criterion for the designation of a landmark is as follows:

> *A building, site, tree or structure may be designated as a landmark if it is found that the proposed landmark meets one or more of the following criteria:*
>
> *1. It is associated with persons or events significant in local, state, or national history.*
>
> *2. It reflects or exemplifies a particular period of national, state, or local history.*
>
> *3. It embodies the distinctive characteristics of a type, style or period of architecture or of a method of construction.*
>
> *4. It is strongly identified with a person or persons who significantly contributed to the culture, history or development of the area.*
>
> *5. It is one of the few remaining examples in the area possessing distinguishing characteristics of an architectural type of specimen.*
>
> *6. It is a notable work of an architect or master builder whose individual work has significantly influenced the development of the area.*

*7. It embodies elements of architectural design, detail, materials or craftsmanship that represents a significant architectural innovation.*

*8. It has a unique location or singular physical characteristics representing an established and familiar visual feature of a neighborhood, community or the area.*

*9. It has unique design or detailing.*

*10. It is a particularly good example of a period of style.*

*11. It contributes to the historical or scenic heritage or historical or scenic properties of the area (to include, but not limited to landscaping, light standards, trees, curbing and signs).* (Moorpark Municipal Code Section 15.36.060 1994)

### 3.3.1 City of Moorpark Historic Trees

Historic trees are discussed in Title 12 of the City of Moorpark Municipal Code. Chapter 12.12.060, *Tree Preservation Guidelines*, provides instruction that pertain specifically to the preservation of trees. These guidelines are provided below, and should be adhered to throughout the construction of the proposed project to ensure protection of the historic trees.

a. Initial project layout, design and grading shall recognize the desirability of preserving native oak trees, historic trees or mature trees with appropriate modifications and adjustments to accommodate preservation and maintenance by locating the best candidates in areas where preservation is feasible. Design of the grading and other improvements shall reflect consideration of the following safeguards:

    1. Location in minimum growing areas as required by individual species
    2. No disruption or removal of structural feeder roots
    3. Fencing of trees at or beyond their driplines during grading and construction activities
    4. No filling, cutting, development or compaction of soils within the dripline
    5. Such other measures required by the species of tree to be preserved as recommended by the consulting arborist, horticulturist or landscape architect

b. It is recognized that the complete preservation of healthy trees may sometimes conflict with normal land developmental considerations such as proper drainage, grading, circulation, safety and provision of utilities. Within a given development, it may not be practical to preserve all healthy trees, and therefore, the city and the developer must be willing to compromise the goal of complete tree preservation in order to address other public safety and design concerns. In such instances, the design of the development must address preservation of the most desirable and significant of the healthy trees and the developer is encouraged to utilize creative land planning techniques to achieve this end.

c. The planning commission of the city, when reviewing development plans, shall determine the adequacy and appropriateness of the proposed preservation plan.

d. Following approval of such a development, the developer shall submit grading, improvement and precise landscaping plans detailing the approved preservation plan. Such plans shall be approved by the city engineer and/or the director of community development, as appropriate. Prior to use inauguration, the preserved trees shall be trimmed for balance, structural integrity, ornamental appearance and treated for any diseases.

e. The precise vertical and horizontal locations plus or minus 1 foot of all mature trees shall be shown on an exhibit as part of the initial application for any project unless that project would involve no exterior construction activities (Ord. 101 § 1, 1988).

# 4 Natural and Cultural Setting

## 4.1 Natural Setting

The proposed project is located in Moorpark at an elevation of 515 feet above mean sea level. It is situated in a predominantly urban environment, surrounded by commercial and civic buildings as well as residential neighborhoods. Five buildings are currently located at proposed project site. Vegetation in the proposed project boundary at the time of the survey consisted of sections of grass and mature ornamental trees including pepper and palm trees.

## 4.2 Cultural Setting

### 4.2.1 Prehistoric Overview

During the 20th century, many archaeologists developed chronological sequences to explain prehistoric cultural changes within all or portions of southern California (Moratto 1984, Jones and Klar 2007). A prehistoric chronology was devised for the southern California coastal region based on early studies and focused on data synthesis that included four horizons: Early Man, Milling Stone, Intermediate, and Late Prehistoric (Wallace 1955, 1978). Though initially lacking the chronological precision of absolute dates (Moratto 1984:159), Wallace's 1955 synthesis has been modified and improved using thousands of radiocarbon dates obtained by Southern California researchers over recent decades (Byrd and Raab 2007:217; Koerper and Drover 1983; Koerper et al. 2002; Mason and Peterson 1994). The prehistoric chronological sequence for Southern California presented below is a composite based on Wallace (1955) and Warren (1968) as well as later studies, including Koerper and Drover (1983).

#### Early Man Horizon (ca. 10,000 – 6000 B.C.)

Numerous pre-8000 BC sites have been identified along the mainland coast and Channel Islands of southern California (Moratto 1984; Erlandson 1991; Rick et al. 2001:609; Johnson et al. 2002; Jones and Klar 2007). The Arlington Springs site on Santa Rosa Island produced human femurs dated to approximately 13,000 years ago (Johnson et al. 2002; Arnold et al. 2004). On nearby San Miguel Island, human occupation at Daisy Cave (SMI-261) has been dated to nearly 13,000 years ago and included basketry greater than 12,000 years old, the earliest recorded on the Pacific Coast (Arnold et al. 2004).

Although few Clovis- or Folsom-style fluted points have been found in Southern California, Early Man Horizon sites are generally associated with a greater emphasis on hunting than subsequent horizons (Erlandson et al. 1987; Dillon 2002). Recent data indicate that the Early Man economy was a diverse mixture of hunting and gathering, including a significant focus on aquatic resources in coastal areas and on inland Pleistocene lakeshores (Moratto 1984; Jones et al. 2002). A warm and dry 3,000-year period called the Altithermal began around 6000 BC. The conditions of the Altithermal are likely responsible for the change in human subsistence patterns at this time, including a greater emphasis on plant foods and small game.

## Milling Stone Horizon (6000–3000 BC)

Wallace defined the Milling Stone Horizon as "marked by extensive use of milling stones and mullers, a general lack of well-made projectile points, and burials with rock cairns" (Wallace 1955:219). The dominance of such artifact types indicate a subsistence strategy oriented around collecting plant foods and small animals. A broad spectrum of food resources were consumed including small and large terrestrial mammals, sea mammals, birds, shellfish and other littoral and estuarine species, near-shore fishes, yucca, agave, and seeds and other plant products (Reinman 1964; Kowta 1969). Variability in artifact collections over time and from the coast to inland sites indicates that Milling Stone Horizon subsistence strategies adapted to environmental conditions (Byrd and Raab 2007:220). Lithic artifacts associated with Milling Stone Horizon sites are dominated by locally available tool stone and in addition to ground stone tools, such as manos and metates, chopping, scraping, and cutting tools, are very common. Kowta attributes the presence of numerous scraper-plane tools in Milling Stone Horizon collections to the processing of agave or yucca for food or fiber (Kowta 1969). The mortar and pestle, associated with acorns or other foods processed through pounding, were first used during the Milling Stone Horizon and increased dramatically in later periods (Wallace 1955, 1978; Warren 1968).

Two types of artifacts that are considered diagnostic of the Milling Stone period are the cogged stone and discoidal, most of which have been found in sites dating between 4,000 and 1,000 BC (Moratto 1984:149), though possibly as far back as 5,500 BC (Couch et al. 2009). The cogged stone is a ground stone object that has gear-like teeth on the perimeter and is produced from a variety of materials. The function of cogged stones is unknown, but many scholars have postulated ritualistic or ceremonial uses (Eberhart 1961:367; Dixon 1968:64-65;). Similar to cogged stones, discoidals are found in the archaeological record subsequent to the introduction of the cogged stone. Cogged stones and discoidals were often purposefully buried, or "cached." They are most common in sites along the coastal drainages from southern Ventura County southward and are particularly abundant at some Orange County sites, although a few specimens have been found inland at Cajon Pass (Dixon 1968:63; Moratto 1984:149). Discoidals and cogged stones have been found together at some Orange County sites, such as CA-ORA-83/86/144 (Van Bueren et al. 1989:772) and Los Cerritos Ranch (Dixon 1975). Cogged stones have been collected in Riverside County and their distribution appears to center on the Santa Ana River basin (Eberhart 1961).

Mortuary practices observed at Milling Stone Horizon sites include extended and loosely flexed burials. Flexed burials oriented north were common in Orange and San Diego counties, with reburials common in Los Angeles County (Wallace 1955, 1978; Warren 1968).

## Intermediate Horizon (3,000 B.C. – A.D. 500)

Wallace's Intermediate Horizon dates from approximately 3,000 BC-AD 500 and is characterized by a shift toward a hunting and maritime subsistence strategy, as well as greater use of plant foods. During the Intermediate Horizon, a noticeable trend occurred toward greater adaptation to local resources including a broad variety of fish, land mammal, and sea mammal remains along the coast. Tool kits for hunting, fishing, and processing food and materials reflect this increased diversity, with flake scrapers, drills, various projectile points, and shell fishhooks being manufactured.

Mortars and pestles became more common during this transitional period, gradually replacing manos and metates as the dominant milling equipment. Many archaeologists believe this change in milling stones signals a change from the processing and consuming of hard seed resources to the increasing reliance on acorn (Glassow et al. 1988; True 1993). Mortuary practices during the

Intermediate typically included fully flexed burials oriented toward the north or west (Warren 1968:2-3).

### Late Prehistoric Horizon (AD 500–Historic Contact)

During Wallace's Late Prehistoric Horizon the diversity of plant food resources and land and sea mammal hunting increased even further than during the Intermediate Horizon (Wallace 1955, 1978). More classes of artifacts were observed during this period and high quality exotic lithic materials were used for small finely worked projectile points associated with the bow and arrow. Steatite containers were made for cooking and storage and an increased use of asphalt for waterproofing is noted. More artistic artifacts were recovered from Late Prehistoric sites and cremation became a common mortuary custom. Larger, more permanent villages supported an increased population size and social structure (Wallace 1955:223).

According to Warren (1968), the period between A.D. 500 and European contact is divided into three regional patterns. The Chumash Tradition is present mainly in the region of Santa Barbara and Ventura counties; the Takic or Numic Tradition is present mainly in the Los Angeles and Orange Counties region; and the Yuman Tradition is present mainly in the San Diego region. The seemingly abrupt changes in material culture, burial practices, and subsistence focus at the beginning of the Late Prehistoric period are considered the result of a migration to the coast of peoples from inland desert regions to the east. This Takic or Numic Tradition was formerly referred to as the "Shoshonean wedge" or "Shoshonean intrusion" (Warren 1968); however, the Chumash were not assimilated or replaced and retained cultural identity.

After A.D. 500, a wealth of ornaments, ceremonial, and artistic items characterize the Chumash Tradition (Warren 1968) along the central coast and offshore islands. Ground stone items include bowls, mortars and pestles, balls, grooved stones, doughnut stones, stone beads, pendants, pipes, tubes, and mammal effigies. Projectile points, both large and small, were typically non-stemmed and leaf-shaped, with convex or concave bases. Chipped stone implements also included drills and scrapers. Utilitarian objects were made from bone (e.g., awls, fishhooks, whistles, and tubes) and shell (e.g., fishhooks and abalone shell dishes). Shell beads and ornaments were abundant, and bowls, pestles, pipes, and stone tubes were inlaid with shell beads and engraved. Bowls, pipes, and ornaments were commonly manufactured from steatite.

Characteristic mortuary practices during the Chumash Tradition included burial in crowded cemeteries. Burials are normally flexed, placed face down, and oriented toward the north or west (Warren 1968:5). The interments are typically marked by vertical pieces of whalebone, and have abundant grave goods, such as ornaments, effigies, and utensils.

## 4.2.2 Ethnographic Overview

The project site lies within an transitional area historically occupied by the Ventureño Chumash, so called after their historic period association with Mission San Buenaventura (Grant 1978a) and the Tataviam or Fernandeño named after their association with the Mission San Fernando. Ethnographic discussions of both groups are provided here.

### Chumash

The Chumash spoke six closely related Chumashan languages, which have been divided into three branches—Northern Chumash (consisting only of Obispeño), Central Chumash (consisting of Purisimeño, Ineseño, Barbareño, and Ventureño), and Island Chumash (Jones and Klar 2007:80).

Groups neighboring Chumash territory included the Salinan to the north, the Southern Valley Yokuts and Tataviam to the east, and the Gabrielino (Tongva) to the south.

Early Spanish accounts describe the Santa Barbara Channel as heavily populated at the time of contact. Estimates of the total Chumash population range from 8,000-10,000 (Kroeber 1925:551) to 18,000-22,000 (Cook and Heizer 1965: 21). Coastal Chumash lived in hemispherical dwellings made of tule reed mats, or animal skins in rainy weather. These houses could usually lodge as many as 60 people (Brown 2001). The village of šukuw, (or shuku), at Rincon Point, was encountered by Gaspar de Portola in 1769. This village had 60 houses and seven canoes, with an estimated population of 300 (Grant 1978b).

The tomol, or wooden plank canoe, was an especially important tool for the procurement of marine resources and for maintaining trade networks between Coastal and Island Chumash. Sea mammals were hunted with harpoons, while deep-sea fish were caught using nets and hooks and lines. Shellfish were gathered from beach sands using digging sticks, and mussels and abalone were pried from rocks using wood or bone wedges.

The acorn was an especially important resource. Acorn procurement and processing involved the manufacture of baskets for gathering, winnowing, and cooking and the production of mortars and milling stones for grinding. Bow and arrow, spears, traps and other various methods were used for hunting (Hudson and Blackburn 1979). The Chumash also manufactured various other utilitarian and non-utilitarian items. Eating utensils, ornaments, fishhooks, harpoons, and other items were made using bone and shell. *Olivella* shell beads were especially important for trade.

The Chumash were heavily affected by the arrival of Europeans. The Spanish missions and later Mexican and American settlers dramatically altered traditional Chumash lifeways. Chumash population was drastically reduced by the introduction of European diseases. However, many Chumash descendants still inhabit the region.

## Tataviam

The Tataviam were not well documented by early ethnographers; however, researchers today generally agree that the Tataviam spoke a Uto-Aztecan language, most likely a Takic language (Hudson 1982). Tataviam territory included the upper Santa Clara River from Piru Creek eastward, extending over the Sawmill Mountains to the southwest edge of the Antelope Valley (King and Blackburn 1978). Their territory was bounded on the west and north and west by various Chumash groups; on the south by the Tongva (Gabrielino and Fernandeño, though some Tataviam were also identified as Fernandeño because of their association with Mission San Fernando); and to the east by the Kitanemuk and Serrano.

Exogamous marriage was common, with Tataviam intermarrying with Tongva, Chumash, and Kitanemuk neighbors (King and Blackburn 1978). King and Blackburn (1978) hypothesize that the Tataviam relied on yucca as a food source more than their neighbors because of the predominance of large south-facing slopes within their territory. Additional food resources included acorns, sage seeds, berries, small mammals, and deer. Settlement size ranged from 10 to 200 persons, with small settlements often ancillary to large villages. Archaeological evidence from Bower's Cave – located between Newhall and Piru – combined with ethnographic evidence suggest their ritual organization was similar to both the Chumash and Gabrielino. By 1810 the Tataviam were virtually completely "missionized" through baptism at Mission San Fernando.

# 4.3 Historic Overview

Post-European contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present).

## Spanish Period (1769–1822)

Spanish exploration of California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the California coast and made limited inland expeditions, but they did not establish permanent settlements (Bean 1968; Rolle 2003). In 1769, Gaspar de Portolá and Franciscan Father Junipero Serra established the first Spanish settlement in what was then known as Alta (upper) California at Mission San Diego de Alcalá. This was the first of 21 missions erected by the Spanish between 1769 and 1823. It was during this time that initial Spanish settlement of the project vicinity began. Portolá passed though the project vicinity and the village of Calleguas in 1770. Juan Bautista de Anza followed Portolá's route in 1774. In 1782, Father Junipero Serra founded Mission San Buenaventura, in what is now downtown Ventura, approximately 20 miles west of the proposed project site, as the crow flies.

## Mexican Period (1822–1848)

The Mexican Period commenced when news of the success of the Mexican Revolution (1810-1821) against the Spanish crown reached California in 1822. This period saw the privatization of mission lands in California with the passage of the Secularization Act of 1833. This Act enabled Mexican governors in California to distribute mission lands to individuals in the form of land grants. Successive Mexican governors made more than 700 land grants between 1822 and 1846, putting most of the state's lands into private ownership for the first time (Shumway 2007). About 20 land grants (ranchos) were located in Ventura County.

The Mexican Period for Ventura County and adjacent areas ended in early January 1847. Mexican forces fought combined US Army and Navy forces in the Battle of the San Gabriel River on January 8 and in the Battle of La Mesa on January 9 (Nevin 1978). American victory in both of these battles confirmed the capture of Los Angeles by American forces (Rolle 2003). On January 10, leaders of the Pueblo of Los Angeles surrendered peacefully after Mexican General Jose Maria Flores withdrew his forces. Shortly thereafter, newly appointed Mexican Military Commander of California Andrés Pico surrendered all of Alta California to US Army Lieutenant Colonel John C. Fremont in the Treaty of Cahuenga (Nevin 1978).

## American Period (1848–Present)

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for the conquered territory, including California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. Settlement of southern California continued to increase during the early American Period. Many ranchos in the county were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns.

The discovery of gold in northern California in 1848 led to the California Gold Rush (Guinn 1977; Workman 1935:26). The presence of commercial grade oil in what became Ventura County was discovered in 1852 at Rancho Ojai (Franks and Lambert 1985). By 1853, the population of California

exceeded 300,000. Ventura County was officially divided from Santa Barbara County on January 1, 1873. Thousands of settlers and immigrants continued to pour into the state, particularly after the completion of the transcontinental railroad in 1869 and into the real estate "boom of the Eighties" (Dumke 1944). The Saugas to Santa Barbara Branch (or Santa Paula Branch) of the Southern Pacific Railroad was constructed in the mid-1880s, encouraging travel through and settlement of the Santa Clara River Valley, as well as a large distribution network for its citrus and other products (Sperry 2006).

## City of Moorpark

The geographic area that encompasses the current-day city of Moorpark was historically part of the 113,000-acre Rancho San José de Nuestra Senora de Altagracia y Simi (commonly known as Rancho Simi) which was granted by Govoner Diego de Borica to Javier, Patricio, and Miguel Pico in 1795. Rancho Simi remained rural in the decades after its granting, primarily utilized for the grazing of cattle. Completed in 1861 and following an extant Chumash trail, a road was established through the Simi Valley to accommodate overland mail delivery. Although rudimentary, the road additionally enabled wagon transport in an area previously inaccessible to such travel and made further development of the region possible (Appleton 2009).

Rancho Simi was transferred several times including an acquisition by the Philadelphia and California Petroleum Company for the exploration of oil. However, oil extraction failed to produce sufficient quantities and by1887, Rancho Simi was subdivided and sold. Robert W. Poindexter, secretary of the Simi Land and Water Company, eventually purchased the land which became Moorpark. Prior to the coming of the Southern Pacific Railroad in 1900, two communities has been established in the vicinity of current-day Moorpark; Poindexter had established Fremontville, located to the west of current-day Moorpark and a group of Methodist ministers had settled Epworth, northwest of current-day Moorpark. During this period, settlers engaged in dry-land farming producing beans, hay and apricots (Winters 2016).

In 1900, Poindexter founded the town of Moorpark under anticipation of the Southern Pacific's arrival. The community was named for the Moorpark apricot, which grew successfully throughout the Simi Valley region (City of Moorpark 2015). From this point forward, beginning with the construction of the original Southern Pacific Railroad Depot, the subject parcel has been in continual use. Following the arrival of the Railroad, further growth within the Moorpark area was enabled. The economy continued to be based in agriculture; however profitability was increased with the option of exporting goods already being quite successfully produced in the Valley. As the system of irrigation became more sophisticated, the variety of crops being produced increased to include citrus and walnuts (Winters 2016).

Agriculture continued to be the backbone of the economy in Moorpark throughout the World War II years. The poultry industry, which arrived in the Valley in the 1920s, also made significant contributions. Moorpark was home to a number of poultry ranches during the period, including Egg City, which was the largest producer of eggs during the 1970s. Consistent with trends throughout Southern California, in particular in areas within close proximity to Los Angeles, following the Second World War, the Simi Valley region saw an increase in large scale suburban development of formally agricultural lands. This trend impacted Moorpark, although less so than in other areas in the region. Moorpark became the first town in the United States to run exclusively off of nuclear power, provided by the Simi Hills sodium reactor, in 1957 (Barnett 2003). The City of Moorpark was incorporated on July 1, 1983.

# 5 Background Research

## 5.1 California Historical Resources Information System

On May 29, 2018, Rincon cultural resources personnel conducted a search of cultural resource records housed at the California Historical Resources Information System (CHRIS), South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. The search was conducted to identify all previously conducted cultural resources work as well as identify any previously recorded cultural resources within a one-half mile radius of the project APE. The CHRIS search included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. The records search also included a review of all available historic US Geological Survey 7.5- and 15-minute quadrangle maps.

### 5.1.1 Previously Conducted Cultural Resource Studies

The SCCIC records search identified 31 previous studies within a 0.5-mile radius of the project site (Table 1), one of which included the project APE (VN-01102). Seven were located adjacent to the project APE (VN-00572, VN-01153, VN-01265, VN-02053, VN-2504, VN-03094, VN-03210) (Appendix A).

**Table 1 Previously Conducted Studies within 0.5-Mile of the Project Site**

| SCCIC Report No. | Author | Year | Study | Proximity to Project APE |
|---|---|---|---|---|
| VN-00112 | Desautels, R. | 1978 | Archaeological Survey Report on a 600+/-Acre Parcel of Land Located in the Moorpark Area of the County of Ventura, California | Outside |
| VN-00191 | Lopez, R. | 1979 | An Archaeological Reconnaissance of Korwasser Estates, Tract 3271, Moorpark, Ventura County, California (m-2774.3) | Outside |
| VN-00549 | Callison, S. | 1979 | Cultural Resource Survey for Cup 3600 | Outside |
| VN-00557 | Callison, S. | 1980 | Cultural Resource Survey for Pm-3496 | Outside |
| VN-00558 | Callison, S. | 1979 | Cultural Resources Survey for Pm-3408 | Outside |
| VN-00572 | Dames and Moore | 1988 | Phase 1 Cultural Resources Survey Fiber Optic Cable Project, Burbank to Santa Barbara, California for US Sprint Communications Company | Adjacent |
| VN-01019 | Callison, S. | 1979 | Cultural Resources Survey of: Tr-2723 | Outside |
| VN-01102 | Singer, C. | 1977 | Preliminary Cultural Resource Survey and Potential Impact Assessment for 13 Areas in Southern Ventura County, California | **Within** |

| SCCIC Report No. | Author | Year | Study | Proximity to Project APE |
|---|---|---|---|---|
| VN-01153 | Peak and Associates, Inc. | 1991 | Class 3 Cultural Resource Assessment of the Proposed Carpinteria and Southern Reroutes, Santa Barbara, Ventura, and Los Angeles counties, California | Adjacent |
| VN-01265 | Reed, L. | 1992 | Consolidated Report: Cultural Resources Studies for the Proposed Pacific Pipeline Project | Adjacent |
| VN-01329 | Whitley, D. and J. Simon | 1994 | Phase 1 Archaeological Survey and Cultural Resources Assessment for the Levy Specific Plan Study Area, Ventura County, California | Outside |
| VN-01377 | Knell, E. | 1995 | Cultural Resource Reconnaissance of Moorpark Specific Plan #2 EIR, Moorpark ,Ventura County, California | Outside |
| VN-01548 | Anonymous | 1997 | Phase 1 Archaeological Survey and Cultural Resources Assessment for the Moorpark Street Improvements Project Study Area, Ventura County, California | Outside |
| VN-01619 | Unknown | 1998 | Phase I Archaeological Survey and Cultural Resources Assessment of the Burnette Property, Moorpark, Ventura County, California | Outside |
| VN-01680 | Maxon, P. | 1998 | Archaeological Test Excavation of CA-VEN-1574 on the Suncal Development, Tentative Tract 5130, Moorpark, Ventura County, California | Outside |
| VN-02052 | Whitley, D. and J. Simms | 2000 | Phase I Archaeological Survey of the Gisler Fields Project Study Area, Moorpark, Ventura County, California | Outside |
| VN-02053 | Whitley, D. and J. Simms | 1999 | Phase I Archaeological Survey of the Charles Street Affordable Housing Project Study Area, Moorpark, Ventura County, California | Adjacent |
| VN-02314 | Whitley, D. and J. Simon | 2003 | Phase I Archaeological Survey of Hitch Ranch, Moorpark, Ventura County, California | Outside |
| VN-02315 | Whitley, D. and J. Simon | 2003 | Phase I Archaeological Survey of a 15 Acres Study Area in Moorpark, Ventura County, California | Outside |
| VN-02320 | Stone, D. | 2004 | Phase 1 Archaeological Resources Report, Birkenshaw Site, 251 Moorpark Avenue, Moorpark, California | Outside |
| VN-02345 | Whitley, D. | 2004 | Limited Archaeological Testing at Sites CA-VEN-1265H, -1267H and -1269H, Moorpark Highlands, Moorpark, Ventura County, California | Outside |

| SCCIC Report No. | Author | Year | Study | Proximity to Project APE |
|---|---|---|---|---|
| VN-02390 | Jordan, S. and J. Patterson | 2006 | Archaeological Survey Report for the Southern California Edison Company Replacement of 30 Deteriorated Poles Private and Public Inholdings, Ventura, Los Angeles, and Santa Barbara counties, California | Outside |
| VN-02504 | Arrington, C. and N. Sikes | 2006 | Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volumes I and II | Adjacent |
| VN-02521 | Schmidt, J. | 2007 | DWO 6335-6792; AI 6-1190: Essex Properties Overhead Relocation Project, Moorpark Area, Ventura County. | Outside |
| VN-02852 | Whitley, D. | 2004 | Phase I Archaeological Survey for TTM 5505, Moorpark, Ventura County, California | Outside |
| VN-02853 | Whitley, D. | 2003 | Phase I Archaeological Survey for the Moorpark Human Services Complex, Moorpark, Ventura County, California | Outside |
| VN-02981 | Maxon, P. | 2008 | Moorpark Vistas & North Hills Parkway Extension Archaeology | Outside |
| VN-03094 | Foster, J. | 2002 | Historic Resource Evaluation Report-Mason Avenue At-Grade Crossing and Safety Improvements Project, Los Angeles, California | Adjacent |
| VN-03210 | Carmack, S., B. Campbell, and C. Duran | 2015 | Housing Authority of Ventura County Moorpark Affordable Housing Project | Adjacent |
| VN-03251 | Simon, J. and R. Rechtman | 2014 | Phase I Archaeological Survey for TTM 5505, Moorpark, Ventura County, California | Outside |
| VN-03266 | Stone, D. and K. Victorino | 2014 | Archaeological Survey Report Vistas at Moorpark Ventura County, California | Outside |

Source: South Central Coastal Information Center 2018

#### *5.1.1.1 VN-01102*

Study VN-01102, *Preliminary Cultural Resource Survey and Potential Impact Assessment for Thirteen Areas in Southern Ventura, California*, conducted by Clay A. Singer in 1977 encompassed the current project APE. The study surveyed 13 areas in southern Ventura including downtown Moorpark, the County Road Division yard, and the reservoir area off of Walnut Canyon Drive. No archaeological sites or historical resources were identified during this study.

### 5.1.2 Previously Recorded Cultural Resources

The SCCIC records search identified 11 previously recorded cultural resources within a 0.5-mile radius of the project APE (Table 2) (Appendix A). All the resources are outside of the project site.

**Table 2 Previously Recorded Cultural Resources within 0.5 Mile of the Proposed Project Site**

| Primary Number | Trinomial | Description | NRHP/CRHR Eligibility Status | Recorded By and Year | Relationship to APE |
|---|---|---|---|---|---|
| P-56-000791 | CA-VEN-000791 | Prehistoric site; possible large habitation site | 6Y Determined ineligible for the NR by consensus through Section 106 process- Not evaluated for CR or Local Listing | Kuhn, M. 1984; Dudek 2014 | Outside |
| P-56-001266 | CA-VEN-001266H | Historic site; road | No evaluated | Knell, E. and K. Becker 1995 | Outside |
| P-56-001268 | CA-VEN-001268H | Historic site; water conveyance system | No evaluated | Knell, E. 1995 | Outside |
| P-56-001269 | CA-VEN-001269H | Historic site; foundation | No evaluated | Knell, E. 1995; Whitley, D. 2004 | Outside |
| P-56-001270 | CA-VEN-001270H | Historic site; road | No evaluated | Knell, E. 1995 | Outside |
| P-56-001503 | CA-VEN-001503 | Prehistoric site; lithic scatter | NRHP Status Code 5S3 (appears to be individually eligible for local listing or designation through survey evaluation) | Holguin, B. and L. Nichols 2014 | Outside |
| P-56-001574 | CA-VEN-001574 | Prehistoric site; lithic scatter | 6Y Determined ineligible for the NR by consensus through Section 106 process- Not evaluated for CR or Local Listing ( | Maxon, P. 1998; Vitorino, K. 2014 | Outside |
| P-56-100050 | N/A | Prehistoric isolate; lithic | Not eligible | Knell, E. and K. Becker 1995 | Outside |
| P-56-152817 | N/A | Historic building; public utility building; Tanner Corner | CRHR eligible | Velazquez, C. and C. Velazquez 2000 | Outside |
| P-56-153133 | N/A | Historic building; Fire Station No. 42 | 6Z (Found ineligible for NR, CR or Local designation through survey evaluation) | Carmack, S. 2015 | Outside |
| P-56-153134 | N/A | Historic building; 798 Moorpark Avenue | 6Z (Found ineligible for NR, CR or Local designation through survey evaluation) | Carmack, S. 2015 | Outside |

Source: South Central Coastal Information Center 2018

## 5.2 Historic Aerial and Topo Review

A review was conducted of available online historic aerial photographs and topographic maps on June 6, 2018. According to historic aerial photographs, the project site appears to be in the early stages of development in 1947, with tree plantings visible along the northern boundary (NETRonline 2018). By 1969, structures are visible on the project site with increasing development in the vicinity. The earliest available topographic map of the project site depicts a road at the current location of Moorpark Avenue and a structure near the southwest corner of the project site (Camulos 1903).

Three additional structures are visible south of the railroad to the southeast of the project site (U.S. Geological Survey 1903).

## 5.3 Native American Heritage Commission

Rincon contacted the NAHC on May 30 and 31, 2018 to request a review of the SLF and to request a list of Native American contacts in accordance with AB 52. On June 4, 2018 the NAHC responded stating that the SLF search was completed with negative results, and included in their response a list of six Native American contacts that may have knowledge of cultural resources in the project area. The SLF results and list of Native American contacts was received by Rincon on June 6, 2018 and was forwarded to the City for use in its AB 52 consultation (Appendix A).

## 5.4 Archival Research

Rincon completed additional background and archival research in support of the current study in early June 2018. Methods included a review of relevant City of Moorpark documents including but not limited to the City of Moorpark General Plan (1992), the Downtown Specific Plan (1998), and the City's Municipal Code, in particular Chapter 15.36, which deals with historic preservation. Several Phase I Environmental Site Assessment Reports of the subject property were prepared previously and utilized as a source of additional background information for the site.

A variety of primary and secondary source materials were also consulted, including but not limited to historical maps, aerial photographs, and written histories of the area. The following repositories were accessed to identify known historical land uses and the location of research materials pertinent to the project site:

- Office of the Assessor, County of Ventura, County View Geographic Information System
- Historic aerial photographs accessed via NETR Online
- Historic aerial photographs accessed via UC Santa Barbara Library FrameFinder
- Historic U.S. Geological Survey topographic maps
- City of Moorpark Building Permits
- Historical newspaper clippings via Newspapers.com, ProQuest Historical Newspapers.com, and the California Digital Newspaper Collection
- Various historical records via Ancestry.com
- Historic photographs via a variety of sources including but not limited to the Online Archive of California and the Library of Congress

## 5.5 Survey Methods

Rincon Architectural Historian Rachel Perzel conducted an intensive cultural resource field survey of the proposed project site on June 7, 2018. The field survey consisted of a visual inspection of all built environment features on the affected properties, including buildings, structures, and associated features to assess their overall condition and integrity, and to identify and document potential character-defining features. Ms. Perzel documented the field survey with field notes and digital photographs. The interiors of the affected properties were not accessible at the time of the field survey and observations were limited to those that could be made from the public right-of-way. A windshield survey was also completed of the surrounding neighborhood to identify similar property types. Ms. Perzel visited the City of Moorpark Building Department and obtained copies of

building permits that correspond to the proposed project site. Copies of the field notes and digital photographs from the field survey are on file at Rincon Consultants' Ventura, California office.

# 6 Findings

As a result of the background research and intensive-level architectural survey, five built environment resources were identified within the proposed project boundary. Much of the project site is developed and covered with asphalt; therefore no archaeological survey was conducted. The property was recorded on California DPR 523 series forms and evaluated for listing in the NRHP, CRHR, and for local designation. The complete set of DPR 523 series forms for the property can be found in Appendix B of this report. The sections that follow include a physical description the property, a summary of its developmental history, and an evaluation of its historical significance.

## 6.1 Physical Description

The subject parcel is a narrow rectangular property, approximately 2.15-acres in size. It is bound to the north by the sidewalk lining High Street (Figure 3) and to the south by the railroad right-of-way; to its east is a small corner parcel containing one building and to its west is a parcel featuring open space and a large paved parking lot. Boundaries of the parcel are lined with mature trees; the pepper trees situated in the public right-of-way that border the northern project area boundary are known to have been planted by early Moorpark settlers John Nubee and John Barrett in 1904. The peeper trees lining High Street from Walnut Street to Magnolia Avenue are designated as County of Ventura Historical Landmark (Landmark # 72) (County of Ventura 2016). The parcel includes five buildings with dates of construction spanning from 1956-1979 (Figure 4). It is surrounded with a chain-link fence.

**Figure 3 Subject Parcel from the Public Right-of Way (Photograph Taken Facing Southwest)**



**Figure 4 Built Environment Resources Located on the Subject Parcel**



Centrally located and lining the parcel's southern boundary are two large, rectangular massed buildings constructed on the subject parcel circa 1956 for the purpose of storing grain (chicken feed). The buildings feature a similar utilitarian design. They are one-story structures with tall ceilings, to accommodate large storage silos historically located inside.

## Building No. 1

The foundation of Building No.1 is not highly visible, but it appears to be partially composed of formed concrete. Walls of the building are wood- framed; exterior wall surfaces are clad in a combination of corrugated metal and horizontal wood tongue and groove siding (Figure 5). The building's southwest corner is taller than the rest of the building, rising to form a tower-like section (Figure 6). The building contains no windows; entry is via one large, sliding, barn-style door on the north elevation. The building's side gabled roof is framed with a combination of wood and metal. It features a minimal overhang and is clad with corrugated metal panels. It is punctured with several vents.

**Figure 5 Building No. 1 (South, Track-Side Elevation)**



**Figure 6 Building No. 1 (Southwest Corner)**



## Building No. 2

Building No.2 rests on a concrete block foundation. Its exterior wall surfaces are clad with corrugated metal panels and are void of window openings (Figure 7; Figure 8 ). On the wall of its south, track-side elevation, the words 'Peterson's Hay & Grain Whse' are faintly visible. The building is topped with a side gabled-roof with a minimal overhang, clad with corrugated metal. A metal-clad awning shelters a portion of the building's north elevation.

**Figure 7 Building No. 2 (South, Track-Side Elevation)**



**Figure 8 Building No. 2 (North Elevation)**



## Buildings No. 3

Constructed in 1960, Building No. 3 is a one-story, rectangular-plan building located at the northeastern end of the property (Figure 9). The building does not clearly embody a particular architectural style and has been used as a restaurant throughout the decades. The building features a partially enclosed (low-lying, wood-framed, lattice-infilled enclosure) outdoor area that extends from its north façade at approximately one-third of the building's width. The building includes two public entrances in the form of single aluminum doors, both located on the north facade. The simple building features a variety of cladding materials, including plywood and vinyl lap siding laid both horizontally and vertically. Windows throughout are primarily aluminum: on the front facade, single –light, on secondary facades, slider units. The building is topped with a flat or slightly out-sloped roof covered with rolled asphalt roofing. A parapet wall is located on the front façade, screening rooftop mechanical equipment

**Figure 9 Building No. 3 (North Elevation)**



## Buildings No. 4

Added to the parcel in 1964, Building No. 4 is a one-story, rectangular massed building at the northwest of the subject property (Figure 10, Figure 11). Facing north towards High Street, the building does not clearly embody a particular architectural style. Most recently used as a second-hand store, the building features a pair of centrally placed wood doors flanked on either side with large vinyl window units. The building is clad with wood, board and batten siding on its north façade and corrugated metal panels on the rest of its elevations. It is topped with a side-gabled roof covered with corrugated metal, on top of which mechanical equipment is located.

**Figure 10 Building No. 4 (North Elevation)**




**Figure 11 Building No. 4 (West Elevation)**



### Buildings No. 5

Building No. 5 is an additional grain storage building constructed on the subject parcel in 1979. The structure is centrally located on the parcel, significantly set back from High Street behind a grass lawn (Figure 12). In order to soften the visual appearance of the industrial building, its exterior elevations were designed in the style of the no longer extant Southern Pacific Moorpark railroad depot. The building features one- and two-story segments with walls clad in wood, horizontal tongue and groove siding. The building features faux openings with two-over-two windows and wood trim suggestive of the Western Stick Style. It is topped with side- gabled and intersecting gabled roofs, covered with asphalt shingles.

**Figure 12 Building No. 5 (North Elevation)**




## 6.2 Developmental History

Similar to many communities throughout California, the history of Moorpark is linked to the growth and expansion of the railroad. Moorpark's original depot was constructed by the Southern Pacific Railroad Company concurrent with others throughout Ventura County and by 1900, there was daily train service to the community. The presence of the railroad allowed the largely agricultural community of Moorpark to transport both people and goods at rates not possible prior, enabling substantial economic and population growth. A fire destroyed Moorpark's original railroad depot in 1909 and Southern Pacific constructed a replacement in 1910. The second generation depot spanned two current-day parcels, which include the subject parcel and the one to its immediate west (currently occupied by the Chamber of Commerce). By the 1950s, popularity of the commuter trains waned and the Moorpark Depot became a flag stop. In 1958, Southern Pacific announced the depot's closure (Press Courier 1958). The Moorpark Depot was deconstructed by the Railroad in the

mid-1960s. The 1947 aerial image below shows the proposed project boundary outlined in red. Moorpark's Railroad depot can be seen spanning the subject parcel. There were no other large-scale developments on the subject parcel at that time.

**Figure 13 1947 Aerial Image Featuring the Subject Parcel Outlined in Red**

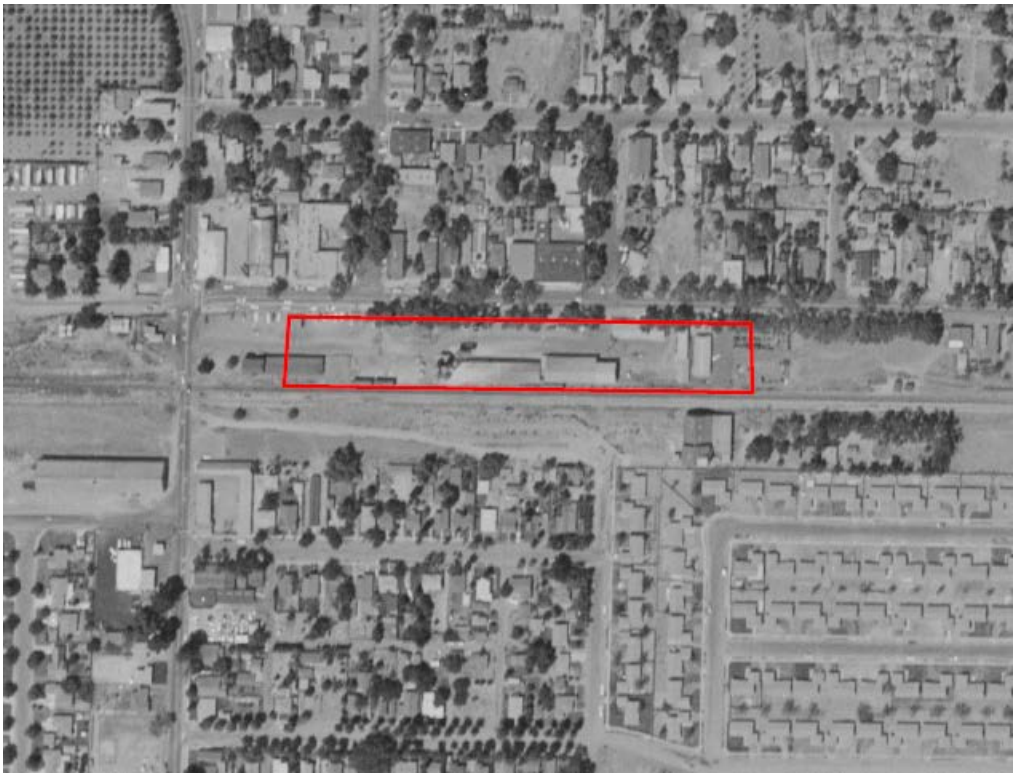


Aside from a portion of the Moorpark Depot, several buildings have been constructed and removed from the subject property throughout the decades.

Of the five extant buildings on the subject parcel, the first to appear are those that line the parcel's southern boundary. These two buildings were constructed in 1956, one by Dennis Johnson and one by Peterson Hay & Grain (County of Ventura Application and Permit 1956). Permit records indicate that at the time of their construction both buildings featured metal wall and roof cladding and were to be used for 'feed storage' and 'storage.' Early in their history, the buildings were expanded and by 1959, they featured a floorplan roughly consistent with that extant today. According to an Accident Prevention Report and Electrical Permit Application from 1969, by that time, it appears that the buildings were owned by S & K Egg Ranch and associated with Fairview Milling, Inc. with Dennis Johnson as a partner (County of Ventura Application and Permit 1969).

Also extant by 1959, the rectangular-planned commercial building was in place, in the northeast of the parcel. Throughout its history, the building appears to have been utilized for various commercial enterprises including a hardware store, electronics store, rental and sales shop, senior citizen meeting space, sheet metal shop, and most recently as a thrift store. Alterations to the building over the years include the replacement of some of its windows and a small addition on its rear elevation (visual observations).

**Figure 14 1959 Aerial Image Featuring the Subject Parcel Outlined in Red**



In 1960, an application and permit were requested from the County of Ventura for the construction of an 850-square foot, wood-framed building with a flat roof, to serve as an 'ice cream and sandwich store.' The owners of the parcel were stated to be Jerry E. and J.A Stewart (County of Ventura Building Permit Application 1960). Over the decades, the small building appears to have turned over regularly and includes occupations by food-service providers Eppie's Frosti, The Donut Shop, La Playita, and most recently Maria's. A review of city directories indicates that the space was utilized in retail application including as stereo and sporting goods shops at different times throughout its history. Alterations to the building include several small additions to its rear (visual observation).

In 1979, S&K Ranch applied for a building permit to construct an additional grain storage facility on the subject property. The most recent to be added to the parcel, the building served the purpose of 'truck tunnel and hopper housing' (County of Ventura Building Permit Application 1979). This additional grain storage building was located to the immediate northeast of those already on the parcel. Its façade was designed in a manner consistent with Southern Pacific Railroad Depots in an effort to lessen the industrial appearance of the site.

**Figure 15 1985 Aerial Image Featuring the Subject Parcel Outlined in Red**



## 6.3 Significance Evaluation

The subject property does not appear eligible for listing in the NRHP, CRHR, or as a City of Moorpark historical landmark.

### NRHP-A/CRHR-1

The subject property does not appear eligible for historic designation for associations with significant events. The subject property was first developed circa 1900 with the Moorpark Railroad Depot, a no longer extant building. Since 1900, many structures have occupied and been removed from the site; five buildings are currently extant.

Serving the historical function of grain storage, three of the buildings located on the subject parcel are associated with the poultry industry, which contributed to the economy of the Moorpark area beginning in the 1920s. Although the development of the poultry industry is an important component of the Moorpark area's historical development, the buildings extant on the subject property do not appear to be significant representations of that development. While the grain storage buildings are associated with the poultry industry, they are representative of support structures to the larger industry. The principle activities of the poultry industry, and certainly those of significance, took place primarily on ranches outside of Moorpark's downtown area.

In addition to the grain storage buildings, the subject parcel includes two commercial buildings, the management of which changed fairly regularly throughout the decades. Archival research failed to indicate these commercial buildings may be associated with significant historical events. For the above stated reasons, the subject property appears ineligible for historic designation under Criterion A/1.

## NRHP-B/CRHR-2

The subject property does not appear eligible for historic designation for associations with significant persons. The parcel's grain storage buildings are associated with those that constructed, operated, and utilized them. The various buildings have known associations with Peterson Hay & Grain, Dennis Johnson, Fairview Milling Inc., S&K Egg Ranch, and Egg City. While some of these individuals and entities were clearly noteworthy within the context of the regional development of the poultry industry, their contributions are not sufficient to warrant eligibility under this criterion.

The commercial buildings located on the subject property are associated with several decades of owners and employees, in addition to those who patronized them. Archival research failed to indicate that any of the individuals with direct associations to the buildings have made specific contributions to national, state, or local history. For these reasons, the subject property appears ineligible for historic designation under Criterion B/2.

## NRHP-C/CRHR-3

The subject property does not appear eligible for historic designation under any of the applicable criteria related to architectural merit. The circa-1956 grain storage buildings located on the subject property are examples of simple, utilitarian buildings; the commercial buildings on the parcel are similarly simple in their design. All of the buildings on the site have been substantially altered throughout their history and none exhibit a particular type, style, or period of architecture or method of construction, nor do they possess a significant degree of detailing. They are not known to be one of the few remaining examples of an architectural type specimen. They do not represent the work of a known master or possess high artistic value.

The circa-1979 grain storage building on the subject parcel was designed in the fashion of a turn-of the-century Southern Pacific railroad depot, loosely exhibiting the qualities of the Western Stick style of architecture. As a resource that is not yet 50 years of age, the building must be of "exceptional importance" to warrant eligibility. The building is a contemporary reproduction of a historical-era structure and does not appear to be of exceptional importance within the context of architectural history.

For the reasons stated above the subject property appears ineligible for historic designation under any criteria related to architectural merit.

## NRHP-D/CRHR-4

Archival research failed to indicate that the subject property is likely to yield information deemed important to history or prehistory and therefor appears ineligible for historic designation under Criterion D/4.

## City of Moorpark MHL Criterion 1-11

The subject property does not appear eligible for historic designation as a City of Moorpark Historical Landmark under any of the applicable significance criteria. As mentioned in the NRHP/CRHR significance evaluation above, the subject property includes three buildings that historically functioned as ancillary support structures to the poultry industry in addition to two commercial buildings. None of these five buildings appear to be associated with events significant in local, state or national history; nor do they appear to reflect a particular period of national, state or local history (*Criterion 1-2*). While associated with individuals and/or entities that were impactful in the local poultry industry, their contributions do not appear sufficient to merit designation (*Criterion*

*4*). As utilitarian buildings, none of those on the subject parcel appear eligible for historic designation under any of the criteria related to architecture (*Criterion 3, Criterion 5-7,* and *Criterion 9-10*). While Building No. 5 was designed to embody the characteristics of a railroad depot, it remains a contemporary rendition of an historical-era building and does not appear significant with the context of architectural history. The subject parcel does not appear to represent an established familiar visual feature of a neighborhood, community, or the area (*Criterion 8*); nor does it appear to contribute to the historical or scenic heritage of the area (*Criterion 11*).

The subject building additionally does not appear to be a contributor to any potential or existing historic district.

# 7 Recommendations

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Section 21084.1). Based on the results of the cultural resources records search, Native American scoping, review of historical maps and aerials, and field survey, no known cultural resources were identified at the project site. The subject property, containing three granary structures and two commercial buildings, was evaluated for listing in the NRHP, the CRHR, and as a City of Moorpark Landmark. Rincon finds that the subject property is not eligible for listing in the NRHP or the CRHR and does not satisfy the criteria for designation as a City of Moorpark Landmark due to a lack of historic significance and numerous alterations that have reduced the integrity of the structures. Therefore, the subject property is not considered an historical resource for the purposes of CEQA.

Although the project site is not considered an historical resource in accordance with CEQA, the proposed project site is bound to the north by a segment of Ventura County Landmark # 72, which consists of a row of pepper trees planted by early Moorpark settlers John Nubee and John Barrett in 1904. Although the proposed project does not include any adjacent street trees, due to their proximity to the project area, they may be vulnerable to damage during project construction. Trees located near mechanized equipment can be susceptible to bark removal, branch breakage, or surface grading, all of which can result in significant damage or death of the tree. Therefore, CUL-1 should be implemented to minimize impacts to this historical resource during construction activities. No archaeological resources were identified during the records search. CUL-2 and CUL-3 are recommended in case of unanticipated discoveries.

If implemented, the following would result in a ***less than significant impact to historical resources*** under CEQA for the current project.

## CUL-1 Avoidance of Impacts to Ventura County Landmark # 72

Avoidance of impacts to Ventura County Landmark # 72 shall be accomplished through the implementation of the City of Moorpark's Tree Preservation Guidelines (Moorpark Municipal Code 12.12.060). In order to protect trees during construction, a physical barrier (flagging or safety fencing) should be installed around any adjacent pepper trees that are situated near mechanized equipment. Completion of this mitigation measure shall be monitored and enforced by the City of Moorpark.

## CUL-2 Unanticipated Discovery or Cultural Resources

If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) must be contacted immediately to evaluate the find. If the discovery proves to be significant under NHPA, additional work such as data recovery excavation may be warranted.

## CUL-3 Unanticipated Discovery of Human Remains

If human remains are found, state of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In accordance with this code, in the event of an unanticipated discovery of human remains, the Ventura County Coroner would be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify an MLD. The MLD would complete the inspection of the APE within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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# Appendix A

Cultural Resource Records Search & Native American Correspondence

## Sacred Lands File & Native American Contacts List Request

**NATIVE AMERICAN HERITAGE COMMISSION**
1550 Harbor Blvd, Suite 100
Sacramento, CA 95814
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

*Information Below is Required for a Sacred Lands File Search*

Project: Moorpark Railroad Depot Mixed Use Development

County: Ventura County, California

USGS Quadrangle Name: Moorpark Quadrangle

Township: 02N  Range: 19W  Section(s): 04

Company/Firm/Agency: Rincon Consultants, Inc.

Contact Person: Lindsay A. Porras

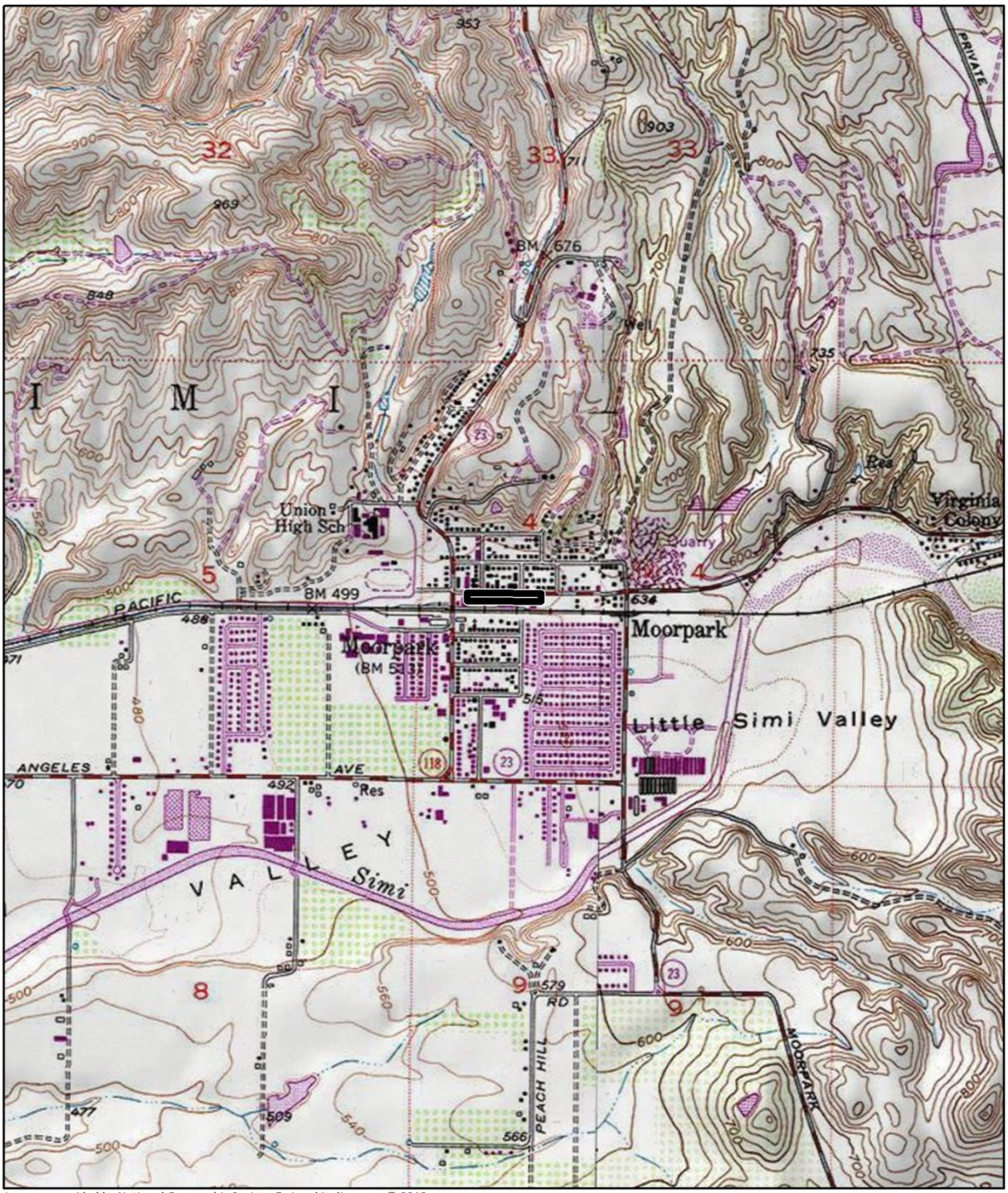
Street Address: 301 9th Street, Suite 310

City: Redlands  Zip: 92374

Phone: 909-435-0978

Email: lporras@rinconconsultants.com

Project Description: The project site encompasses 2.15 acres and includes the old granary and other industrial buildings next to the metro link parking lot. The proposed development would include 77 residential units, 6,200 square feet of commercial development, approximately 880 sf of amenity space, and associated parking. This project is subject to the California Environmental Quality Act (CEQA).




*Imagery provided by National Geographic Society, Esri and its licensors © 2018. Moorpark Quadrangle. T02N R19W S04. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.*

Area of Potential Effect

Half-Mile Buffer

N

0 1,000 2,000

Feet

CRRecords Search Map

**NATIVE AMERICAN HERITAGE COMMISSION**
**Environmental and Cultural Department**
**1550 Harbor Blvd., ROOM 100**
**West SACRAMENTO, CA 95691**
**(916) 373-3710**
**Fax (916) 373-5471**

June 4, 2018

Lindsay Porras

Rincon Consultants

Sent by Email: lporras@rinconconsultants.com

Re: Moorpark Railroad Depot Mixed Use, Ventura County

Dear Ms. Porras,

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not preclude the presence of cultural resources in any project area. Other sources for cultural resources should also be contacted for information regarding known and/or recorded sites.

Enclosed is a list of Native Americans tribes who may have knowledge of cultural resources in the project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these tribes, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at 916-573-1033 or frank.lienert@nahc.ca.gov.

Sincerely,

Frank Lienert
Associate Governmental Program Analyst

**Native American Heritage Commission**
**Native American Contacts**
**6/4/2018**

Santa Ynez Band of Chumash Indians
Kenneth Kahn. Chairperson
P.O. Box 517 Chumash
Santa Ynez , CA 93460
kkahn@santaynezchumash.org
(805) 688-7997

(805) 686-9578 Fax

Barbareno/Ventureno Band of Mission Indians
Julie Lvnn Tumamait-Stenslie. Chair
365 North Poli Ave Chumash
Oiai , CA 93023
itumamait@hotmail.com
(805) 646-6214

Barbareno/Ventureno Band of Mission Indians
Patrick Tumamait
992 El Camino Corto Chumash
Oiai , CA 93023
(805) 216-1253 Cell

Coastal Band of the Chumash Nation
Mia Lopez
, Chumash
No Contact Information
(805) 324-0135

Barbareno/Ventureno Band of Mission Indians
Eleanor Arrellanes
P.O. Box 5687 Chumash
Ventura , CA 93005
(805) 701-3246

Barbareno/Ventureno Band of Mission Indians
Raudel Joe Banuelos. Jr.
331 Mira Flores Court Chumash
Camarillo , CA 93012
(805) 427-0015

**This list is current only as of the date of this document and is based on the information available to the Commission on the date it was pr oduced.**

**Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting local Native American Tribes with regard to cultural resources assessments for the proposed**
**Moorpark Railroad Depot Mixed Use, Ventura County**

# Report List

**Moorpark RR #18-05844**

| Report No. | Other IDs | Year | Author(s) | Title | Affiliation | Resources |
|---|---|---|---|---|---|---|
| VN-00112 | | 1978 | Desautels, Roger J. | Archaeological Survey Report on a 600+/- Acre Parcel of Land Located in the Moorpark Area of the County of Ventura, California | Scientific Resource Surveys, Inc. | |
| VN-00191 | | 1979 | Lopez, Robert | An Archaeological Reconnaissance of Korwasser Estates, Tract 3271, Moorpark, Ventura County, California (m-2774.3). | Robert Lopez, Archaeological Consultant | |
| VN-00549 | | 1979 | Callison, Sheila | Cultural Resource Survey for Cup 3600 | Ventura County | |
| VN-00557 | | 1980 | Callison, Sheila | Cultural Resource Survey for Pm-3496 | Ventura County | |
| VN-00558 | | 1979 | Callison, Sheila | Cultural Resources Survey for Pm-3408 | Ventura County | |
| VN-00572 | | 1988 | Dames and Moore | Phase 1 Cultural Resources Survey Fiber Optic Cable Project, Burbank to Santa Barbara, California for Us Sprint Communications Company | Dames & Moore | 56-000027, 56-000196, 56-000202, 56-000240, 56-000241, 56-000341, 56-000342, 56-000550, 56-000643, 56-000644, 56-000655, 56-000729, 56-000789, 56-000895, 56-000896, 56-000916, 56-000917, 56-000918 |
| VN-01019 | | 1979 | Callison, Sheila | Cultural Resources Survey Of: Tr-2723. | Ventura County | |
| VN-01102 | | 1977 | Singer, Clay A. | Preliminary Cultural Resource Survey and Potential Impact Assessment for Thirteen Areas in Southern Ventura County, California | ARI | 56-000003, 56-000004, 56-000005, 56-000013, 56-000014, 56-000031, 56-000032, 56-000033, 56-000075, 56-000076, 56-000077, 56-000087, 56-000135, 56-000136, 56-000137, 56-000138, 56-000140, 56-000142, 56-000148, 56-000149, 56-000150, 56-000158, 56-000163, 56-000164, 56-000165, 56-000458, 56-000478, 56-000479, 56-000481, 56-000490 |
| VN-01153 | | 1991 | Peak and Associates, Inc. | Class 3 Cultural Resource Assessment of the Proposed Carpinteria and Southern Reroutes, Santa Barbara, Ventura, and Los Angeles Counties, California | Peak & Associates | 56-001089 |
| VN-01265 | | 1992 | Reed, L.W. | Consolidated Report: Cultural Resources Studies for the Proposed Pacific Pipeline Project | Peak and Associates | 19-000007, 19-000021, 19-000034, 19-000089, 19-000251, 19-000357, 19-000385, 19-000389, 19-000390, 19-000407, 19-000409, 19-000668, 19-000781, 19-000830, 19-000887, 19-000901, 19-000963, 19-001097, 19-001112, 19-001124, 19-001575, 19-001620 |

# Report List

**Moorpark RR #18-05844**

| Report No. | Other IDs | Year | Author(s) | Title | Affiliation | Resources |
|---|---|---|---|---|---|---|
| VN-01329 | | 1994 | Whitley, David S. and Joseph M. Simon | Phase 1 Archaeological Survey and Cultural Resources Assessment for the Levy Specific Plan Study Area, Ventura County, California | W & S Consultants | |
| VN-01377 | | 1995 | Knell, Edward J. | Cultural Resource Reconnaissance of Moorpark Specific Plan #2 - Eir, Moorpark , Ventura County, California | RMW Paleo Associates, Inc. | 56-001264, 56-001265, 56-001266, 56-001267, 56-001268, 56-001269, 56-001270, 56-100048, 56-100049, 56-100050 |
| VN-01548 | | 1997 | Anonymous | Phase 1 Archaeological Survey and Cultural Resources Assessment for the Moorpark Street Improvements Project Study Area, Ventura County, California | W & S Consultants | |
| VN-01619 | | 1998 | Unknown | Phase I Archaeological Survey and Cultural Resources Assessment of the Burnette Property, Moorpark, Ventura County, California | W & S Consultants | |
| VN-01680 | | 1998 | Maxon, Patrick O. | Archaeological Test Excavation of CA-VEN-1574 on the Suncal Development, Tentative Tract 5130, Moorpark, Ventura County, California | RMW Paleo Associates, Inc. | 56-001574 |
| VN-02052 | | 2000 | Whitley, David S. and Joseph Simms | Phase I Archaeological Survey of the Gisler Fields Project Study Area, Moorpark, Ventura County, California | W&S Consultants | |
| VN-02053 | | 1999 | Whitley, David S. and Joseph Simms | Phase I Archaeological Survey of the Charles Street Affordable Housing Project Study Area, Moorpark, Ventura County, California | W&S Consultants | |
| VN-02314 | | 2003 | Whitley, David S. and Joseph M. Simon | Phase I Archaeological Survey of Hitch Ranch, Moorpark, Ventura County, California | W & S Consultants | |
| VN-02315 | | 2003 | Whitley, David S. and Joseph M. Simon | Phase I Archaeological Survey of a 15 Acres Study Area in Moorpark, Ventura County, California | W & S Consultants | |
| VN-02320 | | 2004 | Stone, David | Phase 1 Archaeological Resources Report, Birkenshaw Site, 251 Moorpark Avenue, Moorpark, California | Stone Archaeological Consulting | |
| VN-02345 | | 2004 | Whitley, David S. | Limited Archaeological Testing at Sites CA-VEN-1265h, -1267h and -1269h, Moorpark Highlands, Moorpark, Ventura County, California | W & S Consultants | 56-001265, 56-001267, 56-001269 |

# Report List

**Moorpark RR #18-05844**

| Report No. | Other IDs | Year | Author(s) | Title | Affiliation | Resources |
|---|---|---|---|---|---|---|
| VN-02390 | | 2006 | Jordan, Stacey C. and Patterson, Joshua D. | Archaeological Survey Report for the Southern California Edison Company Replacement of 30 Deteriorated Poles Private and Public Inholdings, Ventura, Los Angeles, and Santa Barbara Counties, California | Mooney, Jones & Stokes | 19-000729, 19-000730, 19-000731, 19-001266, 56-000141, 56-000550, 56-000562, 56-000901, 56-000902, 56-000980, 56-001110, 56-001124, 56-001125 |
| VN-02504 | | 2006 | Arrington, Cindy and Nancy Sikes | Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volumes I and Ii | SWCA Environmental Consultants, Inc. | |
| VN-02521 | | 2007 | Schmidt, James J. | Dwo 6335-6792; Ai 6-1190: Essex Properties Overhead Relocation Project, Moorpark Area, Ventura County. | Compass Rose Archaeological, Inc. | |
| VN-02852 | | 2004 | Whitley, David S. | Phase I Archaeological Survey for TTM 5505, Moorpark, Ventura County, California | W&S Consultants | 56-000671, 56-000791, 56-001264, 56-001270, 56-001573, 56-001574 |
| VN-02853 | | 2003 | Whitley, David S. | Phase I Archaeological Survey for the Moorpark Human Services Complex, Moorpark, Ventura County, California | W & S Consultants | |
| VN-02981 | | 2008 | Maxon, Patrick | Moorpark Vistas & North Hills Parkway Extension Archaeology | Chambers Group | 56-000791, 56-001574 |
| VN-03094 | | 2002 | Foster, John A. | Historic Resource Evaluation Report- Mason Avenue At-Grade Crossing and Safety Improvements Project, Los Angeles City, California | Greenwood and Associates | |
| VN-03210 | | 2015 | Carmack, Shannon, Breana Campbell, and Christopher Duran | Housing Authority of Ventura County Moorpark Affordable Housing Project | Rincon Consultants | 56-000791, 56-001268, 56-001269, 56-001270, 56-001503, 56-001574, 56-100050, 56-152817, 56-153133, 56-153134 |
| VN-03251 | | 2014 | Simon, Jospeh M. and Robert B. Rechtman | Phase I Archaeological Survey for TTM 5505, Moorpark, Ventura County, California | W & S Consultants | |
| VN-03266 | | 2014 | Stone, David and Ken Victorino | ARCHAEOLOGICAL SURVEY REPORT VISTAS AT MOORPARK VENTURA COUNTY, CALIFORNIA | DUDEK | 56-000791, 56-001503, 56-001574 |

# Resource List

**Moorpark RR #18-05844**

| Primary No. | Trinomial | Other IDs | Type | Age | Attribute codes | Recorded by | Reports |
|---|---|---|---|---|---|---|---|
| P-56-000791 | CA-VEN-000791 | Resource Name - Moorpark 1 | Site | Prehistoric | AP02 (Lithic scatter); AP15 (Habitation debris) | 1984 (M. W. Kuhn); 2014 (Ken Victorino, Dudek) | VN-02745, VN-02852, VN-02981, VN-03210, VN-03266 |
| P-56-001266 | CA-VEN-001266H | Resource Name - MP-S3H | Site | Historic | AH07 (Roads/trails/railroad grades) | 1995 (KNELL/BECKER, RMW Paleo Associates) | LA-07849, VN-01377, VN-02325, VN-02386, VN-02745 |
| P-56-001268 | CA-VEN-001268H | Resource Name - MP-S5H | Site | Historic | AH06 (Water conveyance system); HP21 (Dam) | 1995 (Edward J. Knell, RMW Paleo Associates) | VN-01377, VN-02745, VN-03210 |
| P-56-001269 | CA-VEN-001269H | Resource Name - MP-S6H | Site | Historic | AH02 (Foundations/structure pads); AH05 (Wells/cisterns); AH11 (Walls/fences); AH15 (Standing structures) | 1995 (Edward J. Knell, RMW Paleo Associates); 2004 (D. Whitley, W&S Consultants) | VN-01377, VN-02345, VN-02745, VN-03210 |
| P-56-001270 | CA-VEN-001270H | Resource Name - MP-S7H | Site | Historic | AH07 (Roads/trails/railroad grades) | 1995 (Edward J. Knell, RMW Paleo Associates) | VN-01377, VN-02745, VN-02852, VN-03210 |
| P-56-001503 | CA-VEN-001503 | Resource Name - VAM-1 | Site | Prehistoric | AP02 (Lithic scatter) | 2014 (Brian Holguin and Lucas Nichols, Dudek) | VN-03210, VN-03266 |
| P-56-001574 | CA-VEN-001574 | Resource Name - SunCal 1 | Site | Prehistoric | AP02 (Lithic scatter) | 1998 (P. Maxon, RMW Paleo Associates); 2014 (Ken Victorino, Dudek) | VN-01680, VN-02745, VN-02852, VN-02890, VN-02981, VN-03210, VN-03266 |
| P-56-100050 | | Resource Name - MP-I3 | Other | Prehistoric | AP02 (Lithic scatter) | 1995 (Edward J. Knell an Kenneth M. Becker, RMW Paleo Associates) | VN-01377, VN-03210 |
| P-56-152817 | | OHP Property Number - 125224; Resource Name - Tanner Corner; Voided - 19-187094 | Building | Historic | HP06 (1-3 story commercial building) | 2000 (Colin and Victoria Velazquez) | VN-03210 |
| P-56-153133 | | Resource Name - Fire Station No. 42 | Building | Historic | HP09 (Public utility building) | 2015 (Shannon Carmack, Rincon) | VN-03210 |
| P-56-153134 | | Resource Name - 798 Moorpark Ave | Building | Historic | HP06 (1-3 story commercial building) | 2015 (Shannon Carmack, Rincon) | VN-03210 |

# Appendix B

Resource Records-DPR 523 Series Forms

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

# PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code | Reviewer | Date



***Resource Name or #:** County of Ventura Assessor Parcel Number (APN): 512-0-090-115

**P1. Other Identifier:**

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Moorpark Quadrangle **Date:** 2018 **T** 02N; **R** 19W ; **¼ of ¼ of Sec** 04 **;** S.B. **B.M.**

c. Address: City: Moorpark Zip: 93021

d. UTM: Zone: ; mE/ mN (G.P.S.)

e. Other Locational Data: APN: 512-0-090-115 Elevation: Approximately 515 feet above sea level

***P3a. Description:** The subject parcel is a narrow rectangular property, approximately 2.15-acres in size. It is bound to the north by the sidewalk lining High Street and to the south by the railroad right-of-way; to its east is a small corner parcel containing one building and to its west is a parcel featuring open space and a large paved parking lot. Boundaries of the parcel are lined with mature trees; the pepper trees situated in the public right-of-way that border the northern project area boundary are known to have been planted by early Moorpark settlers John Nubee and John Barrett in 1904. The peeper trees lining High Street from Walnut Street to Magnolia Avenue are designated as County of Ventura Historical Landmark (Landmark # 72) (County of Ventura 2016). The parcel includes five buildings with dates of construction spanning from 1956-1979. It is surrounded with a chain-link fence.

Centrally located and lining the parcel's southern boundary are two large, rectangular massed buildings constructed on the subject parcel circa 1956 for the purpose of storing grain (chicken feed). The buildings feature a similar utilitarian design. They are one-story structures with tall ceilings, to accommodate large storage silos historically located inside. See Continuation Sheet (page 4 of 10)

***P3b. Resource Attributes:** HP6 (2); HP8 (3)

***P4. Resources Present:** ■Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: View of subject parcel, taken from the west with 3 of 5 subject buildings visible. Photograph taken on 6/7/2018.

***P6. Date Constructed/Age and Sources:** ■Historic ☐Prehistoric ☐Both
Dates of construction span from 1956-1980 (See *B6 Construction History).

***P7. Owner and Address:**
N/A

***P8. Recorded by:**
Rachel Perzel
Rincon Consultants, Inc.
180 N. Ashwood
Ventura, CA 93003

***P9. Date Recorded:** 6/7/2018

***P10. Survey Type:** Intensive

***P11. Report Citation:** Perzel, Rachel and Lindsay Porras, Chris Duran, Shannon Carmack. 2018. *Cultural Resources Assessment Report for Moorpark Railroad Depot Mixed Use Development*. Rincon Consultants Project No. 18-05844.

***Attachments:** ☐NONE ■Location Map ☐Sketch Map ■Continuation Sheet ■Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

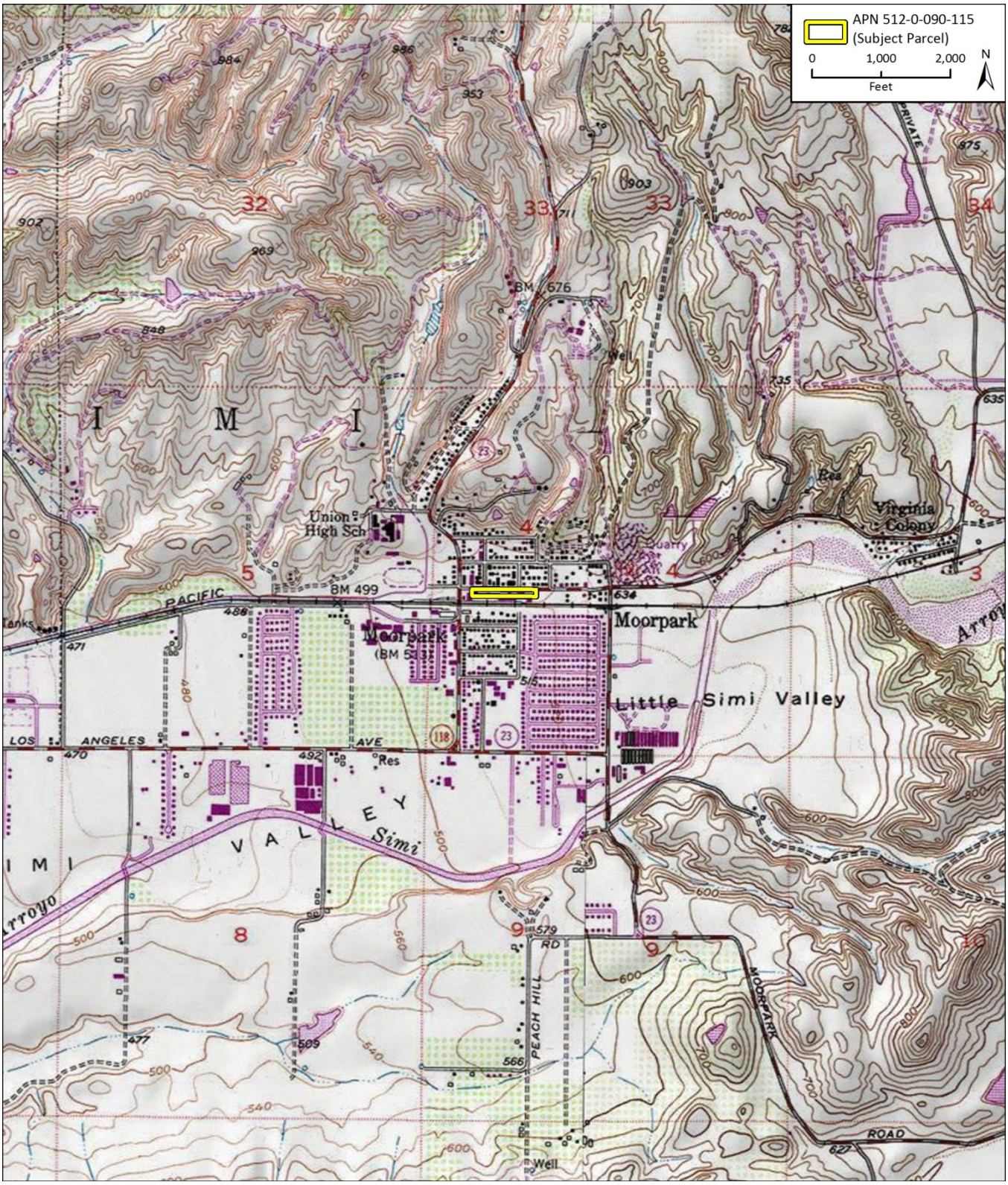
State of California ♦ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

# LOCATION MAP

Primary #
HRI#
Trinomial

**Page** 2 **of** 10 *** Resource Name:** County of Ventura Assessor Parcel Number (APN): 512-0-090-115

*** Map Name:** Moorpark Quadrangle *** Scale:** 1:24,000 ***Date of map:** 2018






*** Required information**

# BUILDING, STRUCTURE, AND OBJECT RECORD

*** Resource Name or #** County of Ventura Assessor Parcel Number (APN): 512-0-090-115 *** NRHP Status Code** 6Z
**Page** 3 **of** 10

B1. Historic Name: N/A
B2. Common Name: N/A
B3. Original Use: Moorpark Railroad Depot (Demolished circa 1965) B4. Present Use: Vacant
*** B5. Architectural Style:** None of the buildings on the subject parcel clearly embody a particular architectural style

*** B6. Construction History:** Over the decades, several buildings have been constructed and removed from the subject property. Until recently, that which is currently one parcel (the subject parcel), was several parcels accompanied with various street addresses including 68, 104, 192 and 220 High Street. The initial development of the parcel began in 1900, when Southern Pacific Railroad constructed a depot on or near the subject parcel. The depot burned down and was replaced early in its history; the second generation railroad depot, located partially on the subject parcel, was demolished circa 1965. The large, rectangular planned grain-storage buildings lining the parcel's southern boundary were constructed on the parcel in 1956, that to the west by Dennis Johnson, and that to the east by Peterson Hay and Grain (County of Ventura Application and Permit 1956). Early in their history, both buildings were expanded and by 1959 they featured a floorplan roughly consistent with that extant today. The two commercial buildings on the subject parcel were added in 1959 (northeast of parcel) and 1960 (northwest of parcel). They have both been utilized for various commercial enterprises over the years. In 1979, S & K Ranch applied for a building permit for the construction of an additional grain storage facility to be located on the subject property. The most recent to be added to the parcel, the building served the purpose of 'truck tunnel and hopper housing' (County of Ventura Building Permit Application 1979). The additionally grain storage building was located to the immediate northeast of those which were already on the parcel. Its facade was designed in a consistent manner with Southern Pacific Railroad Depots in an effort to lessen the industrial nature of the site.

*** B7. Moved?** ■No □Yes □Unknown **Date:** **Original Location:**
*** B8. Related Features:** N/A
B9a. Architect: various b. Builder: various
*** B10. Significance: Theme** Commercial Development & Industrial Development **Area** City of Moorpark
**Period of Significance** 1950s **Property Type** Commercial/Industrial **Applicable Criteria**

Similar to many communities throughout California, the history of Moorpark is linked to the growth and expansion of the railroad. Moorpark's original depot was constructed by the Southern Pacific Railroad Company concurrent with others throughout Ventura County and by 1900, there was daily train service to the community. The presence of the railroad allowed the largely agricultural community of Moorpark to transport both people and goods at rates not possible prior, enabling substantial economic and population growth. A fire destroyed Moorpark's original railroad depot in 1909 and Southern Pacific constructed a replacement in 1910. The second generation depot spanned two current-day parcels, which include the subject parcel and the one to its immediate west (currently occupied by the Chamber of Commerce). By the 1950s, popularity of the commuter trains waned and the Moorpark Depot became a flag stop. In 1958, Southern Pacific announced the depot's closure (Press Courier 1958). The Moorpark Depot was deconstructed by the Railroad in the mid-1960s. The 1947 aerial image below shows the proposed project boundary outlined in red. Moorpark's Railroad depot can be seen spanning the subject parcel. There were no other large-scale developments on the subject parcel at that time. See Continuation Sheet (page 5 of 10)




B11. Additional Resource Attributes:
*** B12. References:** See Continuation Sheet (page 7 of 10)
B13. Remarks: N/A
*** B14. Evaluator:** R. Perzel, Rincon Consultants
*** Date of Evaluation:** June 6, 2018

(This space reserved for official comments.)

***P3a. Description Continued (from page 1 of 10):**

**Building No. 1**
The foundation of Building No.1 is not highly visible, but it appears to be partially composed of formed concrete. Walls of the building are wood- framed; exterior wall surfaces are clad in a combination of corrugated metal and horizontal wood tongue and groove siding. The building's southwest corner is taller than the rest of the building, rising to form a tower-like section. The building contains no windows; entry is via one large, sliding, barn-style door on the north elevation. The building's side gabled roof is framed with a combination of wood and metal. It features a minimal overhang and is clad with corrugated metal panels. It is punctured with several vents.

**Building No. 2**
Building No.2 rests on a concrete block foundation. Its exterior wall surfaces are clad with corrugated metal panels and are void of window openings. On the wall of its south, track-side elevation, the words 'Peterson's Hay & Grain Whse' are faintly visible. The building is topped with a side gabled-roof with a minimal overhang, clad with corrugated metal. A metal-clad awning shelters a portion of the building's north elevation.

**Buildings No. 3**
Constructed in 1960, Building No. 3 is a one-story, rectangular-plan building located at the northeastern end of the property. The building does not clearly embody a particular architectural style and has been used as a restaurant throughout the decades. The building features a partially enclosed (low-lying, wood-framed, lattice-infilled enclosure) outdoor area that extends from its north façade at approximately one-third of the building's width. The building includes two public entrances in the form of single aluminum doors, both located on the north facade. The simple building features a variety of cladding materials, including plywood and vinyl lap siding laid both horizontally and vertically. Windows throughout are primarily aluminum: on the front facade, single –light, on secondary facades, slider units. The building is topped with a flat or slightly out-sloped roof covered with rolled asphalt roofing. A parapet wall is located on the front façade, screening rooftop mechanical equipment

**Buildings No. 4**
Added to the parcel in 1964, Building No. 4 is a one-story, rectangular massed building at the northwest of the subject property. Facing north towards High Street, the building does not clearly embody a particular architectural style. Most recently used as a second-hand store, the building features a pair of centrally placed wood doors flanked on either side with large vinyl window units. The building is clad with wood, board and batten siding on its north façade and corrugated metal panels on the rest of its elevations. It is topped with a side-gabled roof covered with corrugated metal, on top of which mechanical equipment is located.

**Buildings No. 5**
Building No. 5 is an additional grain storage building constructed on the subject parcel in 1979. The structure is centrally located on the parcel, significantly set back from High Street behind a grass lawn. In order to soften the visual appearance of the industrial building, its exterior elevations were designed in the style of the no longer extant Southern Pacific Moorpark railroad depot. The building features one- and two-story segments with walls clad in wood, horizontal tongue and groove siding. The building features faux openings with two-over-two windows and wood trim suggestive of the Western Stick Style. It is topped with side- gabled and intersecting gabled roofs, covered with asphalt shingles.

*** B10. Significance:** (Continued from page 3)
Aside from a portion of the Moorpark Depot, several buildings have been constructed and removed from the subject property throughout the decades.

Of the five extant buildings on the subject parcel, the first to appear are those that line the parcel's southern boundary. These two buildings were constructed in 1956, one by Dennis Johnson and one by Peterson Hay & Grain (County of Ventura Application and Permit 1956). Permit records indicate that at the time of their construction both buildings featured metal wall and roof cladding and were to be used for 'feed storage' and 'storage.' Early in their history, the buildings were expanded and by 1959, they featured a floorplan roughly consistent with that extant today. According to an Accident Prevention Report and Electrical Permit Application from 1969, by that time, it appears that the buildings were owned by S & K Egg Ranch and associated with Fairview Milling, Inc. with Dennis Johnson as a partner (County of Ventura Application and Permit 1969).

Also extant by 1959, the rectangular-planned commercial building was in place, in the northeast of the parcel. Throughout its history, the building appears to have been utilized for various commercial enterprises including a hardware store, electronics store, rental and sales shop, senior citizen meeting space, sheet metal shop, and most recently as a thrift store. Alterations to the building over the years include the replacement of some of its windows and a small addition on its rear elevation (visual observations).

In 1960, an application and permit were requested from the County of Ventura for the construction of an 850-square foot, wood-framed building with a flat roof, to serve as an 'ice cream and sandwich store.' The owners of the parcel were stated to be Jerry E. and J.A Stewart (County of Ventura Building Permit Application 1960). Over the decades, the small building appears to have turned over regularly and includes occupations by food-service providers Eppie's Frosti, The Donut Shop, La Playita, and most recently Maria's. A review of city directories indicates that the space was utilized in retail application including as stereo and sporting goods shops at different times throughout its history. Alterations to the building include several small additions to its rear (visual observation).

In 1979, S&K Ranch applied for a building permit to construct an additional grain storage facility on the subject property. The most recent to be added to the parcel, the building served the purpose of 'truck tunnel and hopper housing' (County of Ventura Building Permit Application 1979). This additional grain storage building was located to the immediate northeast of those already on the parcel. Its façade was designed in a manner consistent with Southern Pacific Railroad Depots in an effort to lessen the industrial appearance of the site.

The subject property does not appear eligible for listing in the NRHP, CRHR, or as a City of Moorpark historical landmark.

**NRHP-A/CRHR-1**

The subject property does not appear eligible for historic designation for associations with significant events. The subject property was first developed circa 1900 with the Moorpark Railroad Depot, a no longer extant building. Since 1900, many structures have occupied and been removed from the site; five buildings are currently extant.

Serving the historical function of grain storage, three of the buildings located on the subject parcel are associated with the poultry industry, which contributed to the economy of the Moorpark area beginning in the 1920s. Although the development of the poultry industry is an important component of the Moorpark area's historical development, the buildings extant on the subject property do not appear to be significant representations of that development. While the grain storage buildings are associated with the poultry industry, they are representative of support structures to the larger industry. The principle activities of the poultry industry, and certainly those of significance, took place primarily on ranches outside of Moorpark's downtown area.

In addition to the grain storage buildings, the subject parcel includes two commercial buildings, the management of which changed fairly regularly throughout the decades. Archival research failed to indicate these commercial buildings may be associated with significant historical events. For the above stated reasons, the subject property appears ineligible for historic designation under Criterion A/1.

**NRHP-B/CRHR-2**

The subject property does not appear eligible for historic designation for associations with significant persons. The parcel's grain storage buildings are associated with those that constructed, operated, and utilized them. The various buildings have known associations with Peterson Hay & Grain, Dennis Johnson, Fairview Milling Inc., S&K Egg Ranch, and Egg City. While some of these individuals and entities were clearly noteworthy within the context of the regional development of the poultry industry, their contributions are not sufficient to warrant eligibility under this criterion.

The commercial buildings located on the subject property are associated with several decades of owners and employees, in addition to those who patronized them. Archival research failed to indicate that any of the individuals with direct associations to the buildings have made specific contributions to national, state, or local history. For these reasons, the subject property appears ineligible for historic designation under Criterion B/2.

**NRHP-C/CRHR-3**

The subject property does not appear eligible for historic designation under any of the applicable criteria related to architectural merit. The circa-1956 grain storage buildings located on the subject property are examples of simple, utilitarian buildings; the commercial buildings on the parcel are similarly simple in their design. All of the buildings on the site have been substantially altered throughout their history and none exhibit a particular type, style, or period of architecture or method of construction, nor do they possess a significant degree of detailing. They are not known to be one of the few remaining examples of an architectural type specimen. They do not represent the work of a known master or possess high artistic value.

The circa-1979 grain storage building on the subject parcel was designed in the fashion of a turn-of the-century Southern Pacific railroad depot, loosely exhibiting the qualities of the Western Stick style of architecture. As a resource that is not yet 50 years of age, the building must be of "exceptional importance" to warrant eligibility. The building is a contemporary reproduction of a historical-era structure and does not appear to be of exceptional importance within the context of architectural history.

For the reasons stated above the subject property appears ineligible for historic designation under any criteria related to architectural merit.

**NRHP-D/CRHR-4**

Archival research failed to indicate that the subject property is likely to yield information deemed important to history or prehistory and therefor appears ineligible for historic designation under Criterion D/4.

**City of Moorpark MHL Criterion 1-11**

The subject property does not appear eligible for historic designation as a City of Moorpark Historical Landmark under any of the applicable significance criteria. As mentioned in the NRHP/CRHR significance evaluation above, the subject property includes three buildings that historically functioned as ancillary support structures to the poultry industry in addition to two commercial buildings. None of these five buildings appear to be associated with events significant in local, state or national history; nor do they appear to reflect a particular period of national, state or local history (Criterion 1-2). While associated with individuals and/or entities that were impactful in the local poultry industry, their contributions do not appear sufficient to merit designation (Criterion

*** B12. References:** (Continued from page 3)

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Additional Photographs:



Track (South) Elevation of Building No.1



Track (South) Elevation of Building No.2



North Elevation of Building No.2




Front (north) Elevation of Building No.3



West Elevation of Building No. 4



Front (North) Elevation of Building No. 5

# Appendix F

Energy Calculations

# City of Moorpark High Street Station Mixed Use Development

Last Updated: December 12, 2019

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

| | | | |
|---|---|---|---|
| HP: 0 to 100 | 0.0588 | HP: Greater than 100 | 0.0529 |

*Values above are expressed in gallons per horsepower-hour/BSFC.*

**CONSTRUCTION EQUIPMENT**

| Construction Equipment | # | Hours per Day | Horsepower | Load Factor | Construction Phase | Fuel Used (gallons) |
|---|---|---|---|---|---|---|
| Graders | 1 | 8 | 187 | 0.41 | Site Prep | 97.26 |
| Scrapers | 1 | 8 | 367 | 0.48 | Site Prep | 223.48 |
| Tractors/Loaders/Backhoes | 1 | 7 | 97 | 0.37 | Site Prep | 44.29 |
| Concrete/Industrial Saws | 1 | 8 | 81 | 0.73 | Demo | 555.96 |
| Tractors/Loaders/Backhoes | 3 | 8 | 97 | 0.37 | Demo | 1,012.34 |
| Rubber Tired Dozer | 1 | 8 | 247 | 0.40 | Demo | 835.59 |
| Graders | 1 | 8 | 187 | 0.41 | Grading | 194.53 |
| Rubber Tired Dozer | 1 | 8 | 247 | 0.40 | Grading | 250.68 |
| Tractors/Loaders/Backhoes | 2 | 7 | 97 | 0.37 | Grading | 177.16 |
| Cranes | 1 | 8 | 231 | 0.29 | Building | 6,232.20 |
| Forklifts | 2 | 7 | 89 | 0.20 | Building | 3,221.69 |
| Generator Sets | 1 | 8 | 84 | 0.74 | Building | 6,428.90 |
| Tractors/Loaders/Backhoes | 1 | 6 | 97 | 0.37 | Building | 2,783.94 |
| Welders | 3 | 8 | 46 | 0.45 | Building | 6,422.69 |
| Cement and Mortar Mixers | 1 | 8 | 9 | 0.56 | Paving | 23.69 |
| Pavers | 1 | 8 | 130 | 0.42 | Paving | 230.89 |
| Paving Equipment | 1 | 8 | 132 | 0.36 | Paving | 200.95 |
| Rollers | 2 | 8 | 80 | 0.38 | Paving | 285.83 |
| Tractors/Loaders/Backhoes | 1 | 8 | 97 | 0.37 | Paving | 168.72 |
| Air Compressors | 1 | 6 | 78 | 0.48 | Arch Coating | 1,702.90 |
| | | | | | **Total Fuel Used (Diesel)** | **31,093.71** |
| | | | | | | **(Gallons)** |

| Construction Phase | Days of Operation |
|---|---|
| Site Preparation Phase | 3 |
| Demolition Phase | 20 |
| Grading Phase | 6 |
| Building Phase | 220 |
| Paving Phase | 10 |
| Architectural Coating Phase | 129 |

| WORKER TRIPS | | | | |
|---|---|---|---|---|
| **Constuction Phase** | **MPG [2]** | **Trips** | **Trip Length (miles)** | **Fuel Used (gallons)** |
| Demolition | 24.0 | 13.0 | 10.8 | 117 |
| Site Prep Phase | 24.0 | 8 | 10.8 | 10.8 |
| Grading Phase | 24.0 | 10 | 10.8 | 27 |
| Building Phase | 24.0 | 90 | 10.8 | 8910 |
| Paving Phase | 24.0 | 15 | 10.8 | 67.5 |
| Architectural Coating Phase | 24.0 | 18 | 10.8 | 1044.9 |
| | | | **Total Fuel Used (Gasoline)** | **10177.20** |

| HAULING AND VENDOR TRIPS | | | | |
|---|---|---|---|---|
| **Trip Class** | **MPG [2]** | **Trips** | **Trip Length (miles)** | **Fuel Used (gallons)** |
| Vendor Trips | 7.4 | 20 | 7.3 | 4340.541 |
| Hauling Trips | 7.4 | 107 | 20 | 289.189 |
| | | | **Total Fuel Used (Diesel)** | **4,629.73** |

| | |
|---|---|
| **GRAND TOTAL (DIESEL)** | **35,723.44** |

**Sources:**

**[1]** United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b* . July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

**[2]** United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf.

# City of Moorpark High Street Station Mixed Use Development

Last Updated: February 1, 2019

**Populate one of the following tables (Leave the other blank):**

| Annual VMT | | OR | Daily Vehicle Trips | |
|---|---|---|---|---|
| Annual VMT: | 2206014 | | Daily Vehicle Trips: | |
| | | | Average Trip Distance: | |

| Fleet Class | Fleet Mix | Fuel Consumption (MPG) | |
|---|---|---|---|
| Light Duty Auto (LDA) | 0.588665 | Passenger Vehicles | 24.0 |
| Light Duty Truck 1 (LDT1) | 0.041515 | Light-Med Duty Trucks | 17.4 |
| Light Duty Truck 2 (LDT2) | 0.188382 | Heavy Trucks/Other | 7.4 |
| Medium Duty Vehicle (MDV) | 0.110464 | Motorcycles | 43.9 |
| Light Heavy Duty 1 (LHD1) | 0.019030 | | |
| Light Heavy Duty 2 (LHD2) | 0.006351 | | |
| Medium Heavy Duty (MHD) | 0.019720 | | |
| Heavy Heavy Duty (HHD) | 0.017925 | | |
| Other Bus (OBUS) | 0.001164 | | |
| Urban Bus (UBUS) | 0.001012 | | |
| School Bus (SBUS) | 0.000380 | | |
| Motorhome (MH) | 0.001490 | | |
| Motorcycle (MCY) | 0.003904 | | |

**Fleet Mix**

| Vehicle Type | Percent | Fuel Type | Annual VMT: VMT | Vehicle Trips: VMT | Fuel Consumption (Gallons) |
|---|---|---|---|---|---|
| Passenger Vehicles | *58.87%* | *Gasoline* | 1298603.23 | 0.00 | 54108.47 |
| Light-Medium Duty Trucks | *34.04%* | *Gasoline* | 750841.13 | 0.00 | 43151.79 |
| Heavy Trucks/Other | *6.71%* | *Diesel* | 147961.77 | 0.00 | 19994.83 |
| Motorcycle | *0.39%* | *Gasoline* | 8612.28 | 0.00 | 196.18 |

| | |
|---|---|
| gasoline | 97456.44 |
| diesel | 19994.83 |

# Appendix G

Preliminary Geohazard Report

# PRELIMINARY GEOHAZARD REPORT
# VARIOUS CITY-OWNED PROPERTIES
# MOORPARK, CALIFORNIA

Prepared for:
City of Moorpark

January 2018
Job No. 030.004

Oakridge Geoscience, Inc.

PO Box 2540, Camarillo, California 93011
www.Oakridgegeo.com
805-603-4900

January 19, 2018
Project No. 030.004

City of Moorpark
799 Moorpark Avenue
Moorpark, California 93021

Attention: Ms. Jessica Sandifer

Subject: Preliminary Geohazard Report, Various City-Owned Properties, Moorpark, California

Dear Ms. Sandifer:

Oakridge Geoscience, Inc. (OGI) is pleased to provide this preliminary geohazard report for various City-owned properties in Moorpark, California. The purpose of the preliminary geohazard study was to evaluate if seismic related geohazards including liquefaction, dry seismic settlement, and hydroconsolidation (collapse) potential are present at the City-owned properties and discuss potential methods to mitigate the earthquake-induced ground shaking.

This report summarizes the geotechnical data review, field exploration, geotechnical laboratory testing, our evaluations, and our opinions of the site conditions based on the work performed.

**Closure**

Thank you for the opportunity to provide geotechnical services to the City of Moorpark for this project. Please contact us if you have any questions on the information presented herein or if we can be of further assistance on this project.

SINCERELY,
OAKRIDGE GEOSCIENCE, INC.

REGISTERED GEOLOGIST
LORI E. PRENTICE
EG NO. 2312
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA
7/31/18

Lori E. Prentice, CEG
President

REGISTERED GEOTECHNICAL ENGINEER
RORY A. ROBINSON
No. 2491
Exp. 09/30/2019
GEOTECHNICAL
STATE OF CALIFORNIA

Rory "Tony" Robinson, GE
Principal Geotechnical Engineer

Copies Submitted: (1 electronic copy (pdf) via email)

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APPENDIX A FIELD EXPLORATION
APPENDIX B LABORATORY TESTING
APPENDIX C LIQUEFACTION EVALUATIONS

# 1.0 INTRODUCTION

## 1.1 PROPOSED PROJECT AND PURPOSE

The purpose of this study is to perform a screening-level geotechnical evaluation of the potential for seismic-related geohazards consisting of liquefaction, dry seismic settlement, and hydroconsolidation (collapse) potential at eight locations in the City of Moorpark, and if the potential exists, provide a preliminary estimate of the amount of settlement that could result from the design-level earthquake. In addition, the City requested the study evaluate the potential for stormwater infiltration on the southern side of High Street Site (Remainder High Street site) to cause hydroconsolidation of the onsite soil which could impact proposed improvements to the parking lot as well as future buildings on the existing and adjacent parcels.

Several previous geotechnical studies in the downtown Moorpark area have identified the potential for liquefaction, dry seismic settlement, and hydroconsolidation to occur in the upper 60 feet of the sites. The City requested that OGI evaluate the potential for seismic related geohazards at eight locations (Plate 1) which we have combined into the three general areas listed below:

1) Downtown Moorpark area along High Street;
2) Two sites on Moorpark Avenue and Los Angeles Avenue; and
3) Eight lots on Walnut Canyon Road north of City Hall.

## 1.2 WORK PERFORMED AND AUTHORIZATION

The work performed for this study consisted of data review, project coordination, field exploration, laboratory testing, and geotechnical evaluation and reporting. The work was performed in general accordance with our revised proposal dated July 6, 2017 and was authorized by receipt of a Professional Services Agreement from the City, dated August 24, 2017.

### 1.2.1 Data Review and Project Coordination

We reviewed and summarized pertinent data for three existing geotechnical reports provided by the City for three previous projects in the Downtown Moorpark area:

1) Area Housing Authority (AHA) on Moorpark Avenue (Geotechnologies, Inc., 2016);
2) Moorpark Apartments site (Gorian and Associates, 2013a); and
3) Proposed Moorpark Library site on Moorpark Avenue and High Street (OGI, 2017).

The approximate locations of the three previous studies are sites are shown on Plate 1. A summary of pertinent data from each site is presented in Section 2 of this report. Prior to field exploration, we performed a site reconnaissance to locate and mark the exploration locations for coordination with Underground Service Alert.

### 1.2.2 Field Exploration

To evaluate the subsurface site conditions, OGI advanced 13 cone penetration tests (CPTs) and eight drill holes to define the subsurface stratigraphy and provide data to estimate potential seismic-related hazards. The explorations are summarized in Table 1 below and detailed site maps with CPT and drill hole locations are included in Plates 2a through 2g. The CPT and drill hole logs are included in Appendix A.

**Table 1. Summary of Explorations**

| Location | Approx. Lot Dimensions (feet) | Approx. Area (square feet) | No. of CPTs | No. of Drill Holes |
|---|---|---|---|---|
| **Area 1 - High Street** | | | | |
| Apricot Lane Farms | 150 x 100 | 15,000 | 1 | 1 |
| Lot 467 | 150 x 150 | 22,500 | 1 | 1 |
| Lot 450 | 190 x 100 | 19,000 | 1 | 1 |
| Remainder High Street Site | 550 x 100 | 55,000 | 2 | 1 |
| **Area 2 – Moorpark Avenue and Los Angeles Avenue** | | | | |
| 347 Moorpark Avenue | 120 x 150 | 18,000 | 1 | 1 |
| 500 Los Angeles Avenue | 200 x 375 | 75,000 | 2 | 1 |
| **Area 3 - Walnut Canyon Road** | | | | |
| Southern Block - Lots 1063, 1073, 1083, 1095, 113, 1123 | 50 x 175 per lot | 3,750 per lot | 3 | 1 |
| Northern Block – Lots 1293 (double lot) and 1331 | 50 x 175 per lot | 3,750 per lot | 2 | 1 |
| | | **Total Explorations:** | **13** | **8** |

**CPTs.** Thirteen CPTs were advanced to depths of up to 80 feet each on September 27 and 28, 2017 by Gregg Drilling. The CPT is mounted on a 30-ton 3-axle truck and consists of an about 1.4-inch-diameter rod fitted with a cone at the base. The cone is sequentially connected to 1-meter-long rods and pushed into the subsurface at a constant rate by hydraulic rams using the weight of the truck as resistance. Additional rods are added to the rod length as the depth increases. The cone is equipped with electronic load cells which measure point (tip) resistance to the penetration and frictional resistance between the soils and the cylinder side (sleeve) of the cone. The subsurface stratigraphy and engineering parameters of the penetrated materials are inferred based on correlations of the recorded tip and sleeve properties. The CPT collects nearly continuous data (2-centimeter intervals) and allows for efficient evaluation of seismic-related hazards, engineering properties, and stratigraphy.

Additionally, the CPT was equipped with a piezo-cone which measures excess pore pressure as a result of the penetration to further aid in evaluation of the depth to groundwater at the testing locations. Pore-pressure dissipation tests were performed in CPT-500LAA1, CPT-500LAA2, and CPT-WCRS2. Additionally, shear wave velocities were measured in one location, CPT-RHS1 at the Remainder High Street site. The shear wave velocity data are presented in Appendix A.

Following the completion of each CPT, the rods were withdrawn, and the small-diameter holes were backfilled to the ground surface with fine bentonite chips.

**Drill Holes.** Eight hollow-stem-auger drill holes were advanced near the locations shown on the detailed site maps (Plates 2a to 2g) by S/G Drilling on September 19 to 21, 2017 using a CME-85 drill rig equipped with 8-inch-diameter augers and a 140-pound automatic trip hammer. The drill holes were advanced to depths of 50 feet or refusal to help in evaluation of the subsurface conditions, to "ground truth" the CPT data, and to collect samples for laboratory testing and evaluation of liquefaction consistent with the guidelines published by the California Division of Mines and Geology (CDMG, now California Geologic Survey [CGS]), Special Publication 117A (CGS, 2008).

The drill holes were sampled at about 5-foot intervals to total depth using a combination of driven modified California and standard penetration test (SPT) samplers. In addition, bulk samples were collected from the near surface materials recovered from the auger flights. Our field geologist logged the recovered samples in general accordance with ASTM D2488 for visual soil classification. Groundwater depths encountered during drilling were measured and recorded on the drilling logs.

Following completion of drilling and sampling at each location, the drill holes were backfilled to the surface with the drill cuttings mixed with cement to create soil-cement and tamped.

### 1.2.3 Laboratory Testing

Geotechnical laboratory testing was performed on selected earth materials sampled in the drill holes to characterize the materials and estimate relevant preliminary engineering design parameters. The testing consisted of moisture/density relationships, grainsize, Atterberg limits (plasticity), and hydroconsolidation (collapse) potential. The laboratory test results are presented on the drill hole logs (Appendix A) and in Appendix B.

### 1.2.4 Geotechnical Evaluation and Reporting

We evaluated the field and laboratory geotechnical data, developed preliminary geotechnical engineering recommendations for the project, and prepared this report to summarize our findings, opinions and recommendations. Our report includes the following:

- Summary of soil and groundwater conditions encountered;
- Logs of CPT and drill hole explorations;
- Laboratory test data;
- Summary regional geohazard and local site specific geohazard studies;
- Evaluation of seismic-related hazards including fault rupture, liquefaction, dry seismic settlement and lateral spreading; and
- Potential need for ground improvement.

# 2.0 FINDINGS

## 2.1 BACKGROUND

Pertinent data from three geotechnical studies in the Downtown Moorpark area are summarized below. The locations of the three sites are shown on Plate 1 and include:

1. AHA site (Geotechnologies, Inc., 2016);
2. Moorpark Apartments (Gorian and Associates, 2013a); and
3. Proposed Moorpark Library (OGI, 2017).

### 2.1.1 AHA Site

At the AHA site, Geotechnologies, Inc. reported zones of medium dense granular soils ranging from less than one-foot to about 18-feet thick between depths of 15 to 75 feet. Their report indicated those soils could liquefy in response to the design earthquake event with settlements ranging from about two- to six-inches. On that basis, Geotechnologies recommended ground improvement to a depth of 30 feet to reduce total settlement to less than two inches and differential settlement to less than one inch. Their report indicated the structure could be supported on shallow spread footings following the recommended ground improvement. Alternatively, if the ground improvement could not reduce the total settlement to less than two inches, the structure could be supported on a mat foundation. The report indicated the "most feasible ground improvement techniques could consist of a mixture of soil mixing, stone columns, aggregate piers or earthquake drains." The final ground improvement design was to be performed by a specialized ground improvement contractor.

### 2.1.2 Moorpark Apartments Site

Gorian and Associates (Gorian, 2006; 2013a; 2013b) prepared a geotechnical study for the Moorpark Apartments site directly west and northwest of the proposed Library Site (Plate 1). Gorian's evaluation of the subsurface conditions indicated the potential for up to nine inches of seismic-related settlement (liquefaction and dry seismic settlement) based on a groundwater level of 15 to 25 feet below the ground surface and an earthquake ground acceleration of 0.68g. Exploration by Gorian was limited to a depth of 50 feet, therefore, subsurface data are not available to evaluate if liquefaction could also occur at deeper depths for that site. We note Gorian (2006) indicates up to 15 inches of dry seismic settlement were estimated from their CPT-3A, but the calculated value was not considered accurate and the soils in the upper portion of the CPT exploration would be mitigated as part of site grading. Gorian recommended ground improvement consisting of overexcavation and recompaction of soils to a depth of 13 to 22 feet below the existing grade to mitigate soils susceptible to seismic-related settlement; the proposed mitigation reduced the estimated vertical seismic settlement to about one-and-a-half to four inches. Gorian also recommended the proposed structures be supported on a "strong mat" type foundation to reduce the potential for differential settlement.

### 2.1.3 Proposed Moorpark Library Site

OGI, (2017) advanced five CPTs and two drill holes to evaluate the site conditions at the proposed library site on the northwest corner of Moorpark Avenue and High Street. The soil conditions encountered at the site consists primarily of sand and silty sand soil in the upper 40

feet underlain by thinly interbedded silt, clay, and clayey sand from 40 to 75 feet (maximum depth explored). SPT N-values from the upper 25 feet of the drill holes range from 2 to 15 blows per foot (bpf), indicating the granular soils are very loose to medium dense in that zone. The SPT N-values from 25 to 75 feet range from 12 to 22 bpf, indicating the granular soils are medium dense and the fine-grained silt and clay soils are medium stiff within that zone. Groundwater was encountered at a depth of about 37 feet during exploration at the library site. Historic high groundwater levels in the Moorpark area reportedly are about 15 feet below the ground surface.

The project analyses for the library site indicated:

- The site is not located within a fault rupture hazard zone as defined by the State of California, California Geological Survey.
- The site is located in a seismically active area of Ventura County and has an estimated peak ground acceleration $PGA_M$ of 1.03g.
- The combined liquefaction and dry seismic settlement estimated using the program GeoLogisMiki and the procedures developed by Robertson (2009) and Boulanger and Idriss (2014) ranges from about 12 to 34 inches, with an average of about 19 inches in the upper 75 feet at the site.
- A majority of the estimated seismically induced settlement occurs in the granular soil layers in the upper 50 feet of the site; less than two to four inches of settlement is estimated to occur below 50 feet. Based on the liquefaction analyses, the fine-grained silt and clay soil layers do not contribute to liquefaction settlement.
- Estimated hydroconsolidation (collapse) potential ranges from 0.05 to 2.3 percent based on laboratory testing performed on three samples.
- Based on the evaluation, ground improvement using vibro-replacement (stone columns) or cement deep soil mixing (DSM) was recommended to reduce the seismic settlement to less than 2 inches in accordance with California Building Code (CBC) guidelines.

CGS Special Publication 117A (CGS, 2008) and the CBC (2016) typically require projects to have total seismic settlement of no more than two inches and differential settlement of one inch. Sites with estimated settlements of more than two inches are normally required to mitigate settlement to about two inches with ground improvement.

## 2.2 GEOLOGIC SETTING

The downtown Moorpark area is located within the Transverse Ranges geologic/geomorphic province of California. That province is characterized by generally east-west-trending mountain ranges composed of sedimentary and volcanic rocks ranging in age from Cretaceous to Recent. Major east-trending folds, reverse faults, and left-lateral strike-slip faults reflect regional north-south compression and are characteristic of the Transverse Ranges. Several authors including Dibblee (1992), Weber (1973), and CGS (2000) have mapped the Moorpark area.

As mapped by Dibblee (1992), the earth materials in the downtown Moorpark area consist of alluvial sediments described as “silt, sand, and gravel deposits”. Mapping by the CGS (2000a; 2000b) differentiates the alluvium into several different geologic units including:

$Qya_{1,2}$ - Holocene Age alluvium

$Qyf_{1,2}$ - Holocene Age alluvial fan deposits

The subscript number following the geologic unit denotes the relative age of the deposit. Units with a subscript of 1 are interpreted to be younger than units with a subscript of 2 or 3. Younger geologic units are typically less dense and potentially more susceptible to liquefaction and settlement during a strong earthquake. As described in Section 2.3 below, the CGS indicates all of the Holocene age units are susceptible to liquefaction. As mapped by the CGS, the study sites for this project are mapped as underlain by the following geologic units:

**Table 2. Summary of Mapped Geologic Units**

| Location | Geologic Unit |
|---|---|
| High Street and 347 Moorpark Avenue | $Qya_1$ |
| 500 Los Angeles Avenue | $Qyf_2$ |
| Walnut Canyon North and South sites | $Qya_2$ |

## 2.3 REGIONAL GEOLOGIC HAZARDS

Mapping by the CDMG, (now CGS, 2000: Plate 3) indicates the proposed study sites are located in a potential liquefaction area based on a regional evaluation of geologic and geotechnical conditions. Proposed habitable developments within this zone are required to have a site-specific liquefaction evaluation performed in accordance with CGS Special Publication 117A (CGS, 2008). We note that single family residential developments with less than four units can be excluded from the liquefaction evaluation requirement by the governing agency.

## 2.4 SITE CONDITIONS

The site locations are shown on Plate 1 and Plates 2a through 2g. A summary of the site conditions is provided in the following table:

**Table 3. Summary of Site Conditions**

| Area Designation | Site Conditions |
|---|---|
| High Street (Apricot Lane Farms, Lot 450, Lot 467, and Remainder High Street) | The sites on High Street are in a relatively level area with elevations ranging from about +515 feet at the Apricot Farms site on the western end of High Street to +535 feet at 467 High Street. The area slopes to the southwest at about 1 percent. The ground surface at the sites consists of soil on most sites with partial asphalt concrete pavement on portions of the Lot 450 and the Remainder of High Street sites from previous site development. |
| Moorpark Avenue and Los Angeles Avenue | The 347 Moorpark Avenue and 500 Los Angeles Avenue sites are relatively level lots located in the central part of Moorpark. The ground surface elevation at the sites is about 511 and 495 feet respectively. The ground surface is soil at 347 Moorpark Avenue, and asphalt pavement and soil at 500 Los Angeles Avenue. |
| Walnut Canyon Road North and South (WCRN and WCRS) | The lots are located on the western side of Walnut Canyon Road about 1,000 to 2,000 feet north of City Hall. Walnut Canyon trends generally northeast-southwest along this section and is about 250 to 300 feet wide in an east-west direction. The ground surface consists of soil with some remaining foundations and concrete pads on several of the locations. Elevations range from about +610 feet to +573 feet on WCRN and WCRS, respectively. The ground surface slopes to the southeast at about 3 percent. The Walnut Canyon drainage is channelized within a 5+ foot deep earthen lined channel on the western side of the WCRS lots. |

## 2.5 EARTH MATERIALS

Descriptions of soil conditions presented herein are based on visual classification of samples obtained from our field exploration combined with the results of laboratory testing. As depicted on the drill hole and CPT logs in Appendix A, the subsurface earth materials consist of interbedded granular alluvial deposits of sand, silty to clayey sand, silt, and clay from the ground surface to about 30 to 80 feet (maximum depths explored). As shown on the CPT logs in Appendix A, the sand, silt, and clay layers range from thinly to thickly bedded (several inches to 10+ feet in thickness). Earth materials interpreted to be weathered sandstone bedrock of the Saugus Formation was encountered below the alluvium in several locations, including 467 High Street and Walnut Canyon Road North (Appendix A). In addition, CPTs at 450 High Street, Remainder High Street and Apricot Farms sites refused on dense granular materials that may be Saugus Formation materials or dense granular soil.

The surficial earth materials at each of the sites are mapped as alluvium, however, based on the subsurface exploration performed for this study, the soil stratigraphy and engineering properties of the alluvial sediments varies between the sites. Additionally, the stratigraphy varies between exploration locations on sites with multiple explorations (467 High Street, 500 Los Angeles Avenue, and Walnut Canyon Road North and South). The data suggest the materials

were deposited in an active alluvial environment. The following table briefly summarizes the general soil units at the study sites.

**Table 4. Summary of Site Stratigraphy**

| Project Site | Generalized Soil Description |
|---|---|
| Apricot Farms | 0 – 37 ft.: sand and silty sand, loose to medium dense<br>37 - 66 ft.: interbedded silt and clay with minor clayey sand lenses, stiff<br>66 – 72 ft.: dense sand, possibly Saugus Formation |
| Remainder High Street | Variable lithology between explorations;<br>0 – 50 ft.: variable, interbedded sand, silt and clay to primarily sand and silty sand, loose to medium dense<br>50 – 66 ft.: interbedded silt and clay with minor clayey sand lenses, stiff<br>66 – 72 ft.: dense sand, possibly Saugus Formation |
| 450 High Street | 0 – 42 ft.: interbedded sand, silty to clayey sand, loose to medium dense<br>42 – 57 ft.: interbedded sandy silt and clayey sand, medium dense<br>57 – 72 ft.: medium dense sand<br>72 – 76 ft.: dense sand, possibly Saugus Formation |
| 467 High Street | 0 – 23 ft.: interbedded sandy silt and silty to clayey sand, loose to medium dense<br>23 – 30 ft.: very dense clayey sand, possibly Saugus Formation |
| 347 Moorpark Avenue | 0 – 18 ft.: interbedded sandy to clayey silt, loose to medium dense<br>18 – 75 ft.: sand and sand with gravel, medium dense |
| 500 Los Angeles Avenue | Variable lithology between explorations;<br>0 – 37 ft.: interbedded silty to clayey sand, loose to medium dense<br>37 – 60 ft.: interbedded sand, silty and clayey sand, medium dense<br>60 – 75 ft.: sand, medium dense to very dense, with thinly interbedded soft to stiff silt and clay |
| Walnut Canyon Road North | Variable lithology between explorations;<br>0 – 18 ft.: sand, silty to clayey sand, loose to medium dense with thinly interbedded silt and clay lenses<br>18 – 30/42 ft.: sand to silty sand, loose to medium dense<br>30 - 42 ft. to maximum depth explored 30 to 50 ft.: dense sand and silt, possibly Saugus Formation |
| Walnut Canyon Road South | Variable lithology between explorations;<br>0 – 10 ft.: interbedded silty to clayey sand, very loose to lose<br>10 – 30 ft.: sand to silty sand, loose to medium dense<br>30 – 53/62 ft.: sand with interbedded silt, dense to very dense, possibly Saugus Formation |

## 2.6 ENGINEERING PROPERTIES

A summary of the general engineering parameters for the earth materials encountered in the explorations advanced for this study consists of:

- Field SPT N-values are presented on the drill hole logs (Appendix A) and vary based on lithology, depth, and groundwater level. Overall, the N-values indicate the granular soils were very loose to medium dense from the ground surface to a depth of about 25 feet, and medium dense from depths of about 25 to 50 feet (Appendix A). N-values interpreted from the CPTs show a similar profile with estimated N-values in granular soils below 50 feet of 20 to 50 indicating those soils are medium dense to dense.
- The moisture content above the groundwater for the granular and fine-grained alluvium generally ranged from about 3 to 8 percent and 11 to 18 percent, respectively. Below the groundwater, the moisture content ranged from about 14 to 20 percent for the granular soils and 20 to 34 percent for the fine-grained soils. As described in Section 2.7 below, groundwater was encountered at depths of about 20 to 38 feet in explorations advanced on High Street, Moorpark Avenue, and Los Angeles Avenue (Appendix A).
- Dry densities of the earth materials tested for this study are presented on the drill hole logs in Appendix A. In general, the dry densities of the tested soil materials in the upper 35 feet of the sites ranged from about 89 to 110 pounds per cubic foot (pcf).
- The results of grainsize analyses indicate fines contents (percent passing No. 200 sieve) ranging from about 3 to 40 percent for the tested granular soil samples and from about 53 to 79 percent for tested cohesive materials.
- Atterberg limits tests (plasticity tests) indicate the tested fine-grained sandy clay layers have liquid limits of 31 to 50 and plasticity indexes of 12 to 19. Those soils classify as low plasticity sandy clay and clay (Appendix B).
- The hydroconsolidation (collapse) potential was measured for 13 samples from depths of 4 to 30 feet in accordance with ASTM D4546, Method B. The test results are presented in Appendix B and are summarized in Table 11. The samples were selected for testing based on unit weight, degree of saturation, void ratio, and fines content (percent passing No. 200 sieve). The test results indicate hydroconsolidation potentials of less than 0.1 percent to 6.9 percent (Appendix B). Additional discussion of collapse potential is provided in Section 3.0 of this report.
- Shear wave velocities measured in CPT-RHS1 (Remainder High Street site) ranged from 610 to 1,524 feet per second (ft/sec). The data are presented in Appendix A and evaluation of the data is presented in Appendix C. The average shear wave velocity in the upper 70 feet of the site is 840 ft/sec, which is consistent with a Site D soil classification (shear wave velocity between 600 ft/sec to 1,200 ft/sec) per ASTM and CBC procedures.

## 2.7 GROUNDWATER CONDITIONS

Groundwater was encountered at depths of about 20 to 38 feet in the drill holes advanced for this study (Appendix A) and are summarized in Table 5. Dissipation tests were performed in three of the CPTs advanced for this study (CPT-500LAA1, CPT-500LAA3, and CPT-WCRS2). The data are presented in Appendix A and indicate groundwater levels consistent with those measured in the respective sites drill holes. Historically high groundwater levels reported by the CGS (2000) indicate the groundwater levels in the downtown Moorpark area have been within about 15 to 20 feet of the ground surface (Plate 4).

**Table 5. Summary of Depths to Groundwater**

| Location | Latitude/ Longitude | $PGA_M$ | Ground Surface Elevation (approx., feet) | Depth to Groundwater Encountered During Exploration (feet) | Historic High Groundwater Depth (feet) |
|---|---|---|---|---|---|
| Apricot Farms | 34.2851 -118.8811 | 1.030 | 515 | 33 | 15 |
| Remainder High Street | 34.2852 -118.8788 | 1.028 | 518 | 33 | 15 |
| 450 High Street | 34.2851 -118.8763 | 1.025 | 528 | 38 | 15 |
| 547 High Street | 34.2856 -118.8756 | 1.027 | 535 | Not Encountered to 30 feet | 20 |
| 347 Moorpark Avenue | 34.2822 -118.8824 | 1.016 | 511 | 28 | 15 |
| 500 Los Angeles Ave. | 34.2782 -118.8875 | 1.001 | 495 | 20 | 15 |
| Walnut Canyon Road South | 34.2904 -188.8829 | 1.060 | 573 | Not Encountered to 50 feet | Unknown (greater than 15 feet) |
| Walnut Canyon Road North | 34.2928 -118.8808 | 1.063 | 610 | Not Encountered to 50 feet | Unknown (greater than 15 feet) |

## 2.8 DATA INTERPRETATION AND ANALYSES

Data interpretation for utilized the CPTs and the SPT N-values from the drill holes advanced for this study (Appendix A). Analyses of the CPT data were performed using the computer program GeoLogisMiki. Selected computer printouts from the GeoLogisMiki analyses are presented in Appendix C. A complete pdf file of the analyses can be provided upon request. SPT data were evaluated using an in-house Excel spreadsheet; printouts of the analyses are also provided in Appendix C.

The field SPT N-values presented on the drill hole logs in Appendix A were normalized to 1 ton per square foot (tsf) and corrected for rig efficiency, hammer type, sampler type (no liner), and rod length as described in the Recommended Procedures for Implementation of CGS Special

Publication 117A (CGS, 2008). We also utilized blowcounts measured for the modified California sampler (MCS) in the analyses by dividing the MCS blowcounts by 1.6 to provide an equivalent SPT N-value. The SPT N-value correction factors are summarized in Table 6.

**Table 6. SPT N-Value Correction Factors**

| Correction Factor | Value | Comment |
|---|---|---|
| Hammer Efficiency ($C_E$) | 1.3 | Auto trip hammer 80% efficiency |
| Rod Length ($C_R$) | L<15'=0.75<br>L<20'=0.85<br>L<35'=0.95<br>L>35'=1.0 | L= Rod Length (feet) |
| Sampling Method ($C_S$) | 1.2 | -- |
| Modified California Sampler (MCS) blowcounts | MCS/1.6 = SPT N-value | Equivalent SPT N-Value |

## 2.9 POTENTIAL VARIATION OF SUBSURFACE MATERIALS

There is a potential for variation in the consistency, density, and strength/hardness of the materials from what was encountered in our explorations. The potential exists to encounter perched water, zones of poorly consolidated soils, or other conditions not indicated on the exploration logs.

# 3.0 SEISMIC PARAMETERS AND GEOHAZARDS

## 3.1 FAULTS

The downtown Moorpark area is located in a seismically active portion of southern California and the site vicinity most likely will be subjected to strong earthquake ground motion during its lifetime. As summarized in the following table, numerous active or potentially active faults are known or postulated to exist within about 15 miles of the High Street area.

**Table 7. Nearby Faults**

| Fault | Approximate Distance (miles)[1] | Maximum Moment Magnitude (Mmax) |
|---|---|---|
| Simi-Santa Rosa | 2.0 | 6.9 |
| Oak Ridge | 6.1 | 7.5 |
| San Cayetano | 9.3 | 7.5 |

[1] Earthquake distances and magnitudes obtained from the USGS website (2017) from central portion of High Street (Remainder High Street Site).

## 3.2 GROUND RUPTURE POTENTIAL

The sites are not located within a State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zone) and no known active or potentially active faults cross or trend toward the downtown Moorpark area. The potential for fault rupture to affect the project area is considered low.

## 3.3 SEISMIC PARAMETERS FOR 2016 CBC

We estimated the probabilistic seismic ground acceleration at the downtown Moorpark area using the USGS web application (USGS; 2017). On the basis of the web-based analyses, the peak horizontal ground acceleration (pga) at the study sites ranges from 1.016 to 1.063g for an earthquake with a 2,475-year return period (2 percent probability of exceedance in 50 years) assuming Site Class D soil conditions. The following table summarizes the probabilistically estimated strong ground motion parameters for the project site.

**Table 8. Summary of USGS Probabilistic Seismic Hazard Deaggregation Results**

| Return Period (years) | Mean Magnitude (Mw) | Mean Source Distance (miles) | Peak Horizontal Ground Acceleration |
|---|---|---|---|
| 2,475 | 6.9 | 6.1 | 1.016g to 1.063g |

### 3.3.1 CBC Site Classification

The CBC site classification per ASTM 7-10 procedures is based on the average shear wave velocity, shear strength ($S_u$), and SPT N-value in the upper 100 feet of the site. Subsurface data for this study extends to a maximum depth of 80 feet as shown in Appendix A. ASCE 7-10 guidelines indicate a stiff soil (Site D classification) has the following parameters:

1. Average shear wave velocity of 600 to 1,200 feet/sec,
2. Average shear strength, Su, of 1,000 to 2,000 psf, and
3. Average SPT N-value of 15 to 50.

The average shear wave velocity in the upper 70 feet of CPT-RHS1 is 840 feet/second. CPT-RHS1 has similar estimated shear wave velocities, shear strengths and N-values to other sites evaluated as part of this study. Shear strengths measured in the field with pocket penetrometers and torvanes indicate a shear strength, Su, of 500 to 4,000 psf with an average value of 1,250 psf. Interpreted shear strengths based on CPT data range from about 600 to over 4,000 psf, with most values in the range of 1,000 to 3,000 psf. The average estimated SPT N-value in the upper 100 feet of each site using the procedure identified in ASCE 7-10 ranges from 8 to 22 as summarized on the following table. Based on a majority of the data, the study sites classify as a Type D soil profile. For this study, we assumed a Site Class D; however, additional studies may be required at several of the sites which have average SPT N-values of less than 15.

**Table 9. Average SPT N-Value by Site**

| Location | Average SPT N-Value |
|---|---|
| Apricot Farms | 14 |
| Remainder High Street | 13 |
| 450 High Street | 8 |
| 467 High Street | 24 |
| 347 Moorpark Avenue | 22 |
| 500 Los Angeles Avenue | 9 |
| Walnut Canyon Road North | 28 |
| Walnut Canyon Road South | 16 |

## 3.4 LIQUEFACTION AND DRY SEISMIC SETTLEMENT POTENTIAL

Liquefaction is described as the sudden loss of soil strength because of a rapid increase in soil pore water pressures due to cyclic loading during a seismic event. In order for liquefaction to occur, three general geotechnical characteristics must be present[1]: 1) groundwater must be present within the potentially liquefiable zone; 2) the potentially liquefiable soil must meet certain grainsize and classification characteristics; and 3) the potentially liquefiable granular soil must be of low to moderate relative density. If those criteria are met and strong ground motion occurs, then those soils may liquefy, depending upon the intensity and cyclic nature of the strong ground motion. Liquefaction that produces surface effects generally occurs in the upper 40 to 50 feet of the soil column, although the phenomenon is not restricted to depths of less than 50 feet.

As described in the Earth Materials section above, the soil profile consists primarily of interbedded granular alluvial deposits of sand, silty to clayey sand, silt and clay. Groundwater was encountered at depths of about 20 to 38 feet during field exploration for this study. Historic high groundwater levels summarized by the CGS (2000) are about 15 to 20 feet below the ground surface. SPT N-values used in the analyses are reported on the drill hole logs.

Research by Boulanger and Idriss[2] (2006) has indicated fine-grained silt and clay soils with Plasticity Index (PI) values of 6 or less can be susceptible to liquefaction and research by Bray and Sancio (2006) indicates low plasticity silt with a PI of up 12 can liquefy during strong earthquake ground shaking. Clay soils with PI of greater than 18 generally exhibit a clay-like behavior and are considered non-liquefiable based on the criteria developed by Bray and Sancio (2006). The fine-grained sandy clay and sandy to silty clay soil layers tested for this study (Appendix B) have fines contents (percent passing the number 200 sieve) of 53 to 79 percent and PI's of above 12, suggesting that the fine-grained soil layers tested are not susceptible to liquefaction in response to strong earthquake ground shaking. Additional site-specific testing

[1] Based on studies by Seed and Idriss (1971) and Youd and Idriss (2000), liquefaction occurs primarily in clean granular soils that classify as sand (SP) and sand with silt (SP-SM). Dense granular soils with fines contents greater than 35% (silty sand - SM and clayey sand - SC) are less likely to liquefy. Liquefaction susceptibility criteria developed by Boulanger and Idriss (2006) indicates that fine-grained soils with a PI of 6 or less can be susceptible to liquefaction. Studies by Bray and Sancio (2006) indicates silty soils with a PI of 12 or less could potentially liquefy.

should be performed to further evaluate the liquefaction susceptibility of the fine-grained soils if the parcels are developed.

Analyses of the CPT data were performed using the program GeoLogisMiki. The input values are summarized below and selected graphics from the analyses are presented in Appendix C:

- The seismic ground motion, PGAM, for the sites ranged from 1.01g to 1.06g for a 2 percent probability of exceedance in 50 years for the project site.
- Historic high groundwater level of 15 to 20 feet below the ground surface.
- CPT evaluation using the procedure recommended by Robertson (2009).
- SPT data evaluation using the procedure recommended by Seed and Idriss (1982).

As depicted on the plots in Appendix C, the CPT-based analyses using the GeoLogisMiki program which incorporates the evaluation procedures developed by (Robertson, 2009) indicates a strain rate (settlement) in the soil up to 5 percent. The primary factors in the evaluation include the soil density, ground acceleration, and soil lithology (clean sands versus clayey sand with high fines content). The estimated vertical liquefaction settlements based on the CPT analyses are summarized in Table 10.

The SPT-based analyses developed by Seed and Idriss (1982) suggest a maximum strain value of 2 percent as summarized in the table below and presented on the Excel datasheets in Appendix C. We note the maximum strain values from the SPT-based analyses produces lower estimated liquefaction settlements than the CPT-based analyses.

Seismically induced settlement or collapse (dry seismic settlement) can occur in soils that are loose, soft, or that are moderately dense, but weakly cemented. The onsite very loose to loose granular and silty soils above the groundwater are susceptible to seismically induced settlement. The estimated seismically induced settlement in the upper 15 to 20 feet of the sites is summarized in Table 10. We note the groundwater is assumed to be at depths of 15 to 20 feet; therefore, soils below that depth are subject to liquefaction potential in the analyses even though the groundwater depth encountered by our explorations was up to about 38 feet below the ground surface.

Overall, the analyses indicate the very loose to medium dense granular soils at the sites are susceptible to liquefaction below the groundwater and dry seismic settlement above the groundwater level. The estimated vertical liquefaction and dry seismic settlements for the sites are summarized in Table 10.

## Table 10. Summary of Estimated Vertical Seismic Settlement

| Exploration Location | Estimated Liquefaction Settlement based on CPT Analyses[1] (inches) | Estimated Liquefaction Settlement based on SPT Analyses[2] (inches) | Estimated Dry Seismic Settlement[3] (inches) | Total Estimated Seismic Settlement (inches) |
|---|---|---|---|---|
| CPT-AF | 5-1/2 | -- | 4-1/2 | 10 |
| DH-AF | -- | 1-1/2 | 3 | 4-1/2 |
| CPT-RHS1 | 7-1/2 | -- | 7 | 14-1/2 |
| CPT-RHS2 | 7 | -- | 7 | 14 |
| RHS1 Shear Wave | 11 | -- | -- | 11 |
| DH-RHS | -- | 5 | 2-1/2 | 7-1/2 |
| CPT-450HS | 13 | -- | | 13 |
| DH-450HS | -- | 6 | 1-1/2 | 7-1/2 |
| CPT-467HS | 3/4 | -- | 3-1/2 | 4-1/4 |
| DH-467HS | -- | 0 | 3-1/2 | 3-1/2 |
| CPT-347MA | 4 | -- | 3-1/3 | 7-1/3 |
| DH-347MA | -- | 4 | 3-1/3 | 7-1/3 |
| CPT-500LAA1 | 11 | -- | 4-1/3 | 15-1/3 |
| CPT-500LAA2 | 8 | -- | 4-1/3 | 12-1/3 |
| DH-500LAA | -- | 6-1/3 | 4-1/3 | 10-2/3 |
| CPT-WCRN1 | -- | -- | 11 | 11 |
| CPT-WCRN2 | -- | -- | 8 | 8 |
| DH-WCRN | -- | -- | 3-1/2 | 3-1/2 |
| CPT-WCRS1 | -- | -- | 12 | 12 |
| CPT-WCRS1 | -- | -- | 15 | 15 |
| CPT-WCRS1 | -- | -- | 18 | 18 |
| DH-WCRS | -- | -- | 10 | 10 |

[1] Appendix C; GeoLogisMiki
[2] Appendix C; excel spreadsheet analyses
[3] Appendix C; upper 15 to 20 feet of drill holes

## 3.5 SEISMIC SETTLEMENT EVALUATION SUMMARY

Review of the data in Appendix C indicates a range of liquefaction and dry seismic settlement values at the tested sites as summarized below:

### 3.5.1 South Side of High Street (Apricot Farms, Remainder High Street, and 450 High Street sites)

The estimated liquefaction and dry seismic settlements on the south side of High Street ranges from 7-1/2 to 14-1/2 inches. The analyses are based on CPT, SPT, and shear wave velocity measurements. The analyses indicate liquefaction could occur to depths of about 60 feet at Apricot Farms site and 70 feet at 450 High Street.

### 3.5.2 467 High Street

The 467 High Street site has about 22 feet of soil above very dense sand/sandstone of the Saugus Formation based on the explorations. The sandstone/very dense sand of the Saugus Formation is non-liquefiable. The estimated historic high groundwater at the site is 20 feet. The estimated dry seismic settlement at the site is 3-1/2 to 4-1/4 inches.

### 3.5.3 347 Moorpark Avenue

The granular soil at 347 Moorpark Avenue is medium dense to depths of 75 feet with a corresponding lower estimated liquefaction and dry seismic settlement of about 7 inches. The analyses indicate seismic settlement would occur above a depth of 40 feet.

### 3.5.4 500 Los Angeles Avenue

The explorations at 500 Los Angeles Avenue encountered variable soil units. The estimated seismic settlement ranges from about 10 to 15 inches, with nearly all of the liquefaction occurring above a depth of 50 feet.

### 3.5.5 Walnut Canyon Road North and South

The explorations for the sites in Walnut Canyon (WCRN and WCRS) encountered primarily granular soil and no groundwater to refusal depths of 60 feet. Historic high groundwater levels are unknown but are likely below a depth of 50 feet. On that basis, liquefaction is not considered an issue for the WCRN and WCRS sites. However, dry seismic settlement of the granular soils is estimated to be 3 to 18 inches based on both the SPT and CPT analyses. In our opinion, the SPT-based settlement estimates of 3 inches for the WCRN and 10 inches for the WCRS sites provide reasonable estimates of potential dry seismic settlement. The SPT-based analyses suggest settlement to a depth of about 20 feet at the WCRN sites and 40 feet at the WCRS sites. The CPT-based analyses indicate estimated settlements of 8 to 18 inches, with potential settlement occurring to the maximum depths explored (40 to 60 feet).

## 3.6 LATERAL MOVEMENT

The occurrence of lateral spreading is generally associated with sites where liquefaction is possible and: 1) the ground surface is sloping, or 2) there is a free-face condition such as a road cut or riverbank. Existing analytical methods of assessing potential deformations caused by lateral spreading are based on a small number of case histories and generally involve layers of liquefiable soils of greater than about three feet (one meter). The procedures are generally

considered reasonable in assessing risks where significant lateral deformations are possible (deformations of three feet or greater). The ability to reasonably predict small lateral spreading deformations is, however, considered significantly limited.

As depicted on the regional geologic/topographic map for the Moorpark Quadrangle (Dibblee, 1992), with the exception of the sites along Walnut Canyon Road, the ground surface in the vicinity of the project sites slopes to the southwest at a gradient of less than 1 percent. Based on the relatively level surface and lack of nearby free-face, the potential for lateral movement is considered low. The Walnut Canyon sites are not susceptible to liquefaction because groundwater is below 50 feet; therefore, the potential for lateral displacement of the soil at those sites is also considered low. For reference, CGS Special Publication 117A (CGS, 2008) defines large-scale ground displacements as areas that exceed one to three feet horizontally and four to six inches vertically. Site specific studies during design should address the potential for lateral displacement.

## 3.7 HYDROCONSOLIDATION (COLLAPSE) POTENTIAL

Research by several authors including and Houston et al. (1997; 2001) and Purdue University (Howayek, 2012) indicates hydroconsolidation (collapse) typically occurs in silty and granular soil materials with densities below 105 pcf, degrees of saturation of less than 25 percent, and high void ratios. In the Ventura County area, our experience indicates hydroconsolidation is commonly associated with silty soils with visible pores/voids and high void contents deposited in debris-flow type environments. The depositional environment with high collapse potential previously observed in Ventura, Camarillo, and Simi Valley consists of Holocene- to Late Pleistocene-age alluvial fan deposits above the groundwater. As described above, the proposed study area is underlain by younger to older alluvial/alluvial fan deposits consisting of Holocene- to Late Pleistocene-age sediments.

Based on evaluations of the laboratory index properties (soil density, moisture content, void ratio, and fines content), 13 samples were selected for collapse testing per ASTM D4546, Method B. The results of those tests are presented in Appendix B and are summarized in Table 11 below. Based on published criteria (ASTM D5333), a collapse index of two percent or less is classified as slight, two to six percent is moderate, six to 10 percent is moderately severe, and above 10 percent is severe. Based on the results from the tested samples, the amount of hydroconsolidation ranges from 0.1 to 6.9 percent. The values of less than two percent are considered slight by ASTM D5333 classification and within background levels for soils in Ventura County based on our previous experience. Five samples (two from the Apricot Farms site, two from 467 High Street, and one from Walnut Canyon Road) had potential collapse related settlements above background levels that would warrant additional evaluation and mitigation.

The data for the Remainder High Street site indicate the fine-grained soils encountered in drill hole DH-RHS have 0.3 percent or less of collapse potential. One sample from 19 feet swelled upon addition of water, indicating potential expansive soil conditions. The potential for significant hydroconsolidation/collapse settlement at the Remainder High Street site appears low.

The typical procedure to mitigate shallow collapse potential is to overexcavate and recompact the soil. If ground improvement is performed at the site, the near-surface soils would likely be densified as part of the ground improvement process.

## Table 11. Summary of Hydroconsolidation (Collapse) Potential of Onsite Soils

| DH Location | Soil Type[1] | Depth (feet) | Dry Density (pcf) | Moisture Content (%) | Degree of Saturation (S), (%) | Void Ratio | Fines Content (%) | Measured Hydro-consolidation (%) |
|---|---|---|---|---|---|---|---|---|
| High St Apricot Farms | Sandy Silt (ML) | 4 | 95 | 2.7 | 10 | 0.74 | | 3.5 |
| High St Apricot Farms | Sand w/ Silt (SP-SM) | 14 | 99 | 4.1 | 16 | 0.68 | 6 | 6.7 |
| Remainder High St | Clayey Silt (ML) | 9 | 88 | 16 | 48 | 0.87 | | 0.2 |
| Remainder High St | Clay (CL) | 19 | 99 | 18 | 71 | 0.67 | 54 | -0.1 (swell) |
| Remainder High St | Clayey Sand (SC) | 29 | 112 | 10.8 | 60 | 0.48 | | 0.3 |
| 450 High St | Silty Sand (SM) | 9 | 100 | 8.3 | 33 | 0.66 | 20 | 0.4 |
| 450 High St | Silty Fine Sand (SM) | 29 | 104 | 6 | 27 | 0.59 | 40 | - |
| 467 High St | Sandy Silt (ML) | 4 | 99 | 5.4 | 22 | 0.67 | | 4.9 |
| 467 High St | Sandy Silt (ML) | 14 | 105 | 4.3 | 20 | 0.57 | | 1.9 |
| 347 Moorpark Ave | Sandy Silt (ML) | 4 | 102 | 4 | 17 | 0.62 | | 0.1 |
| 347 Moorpark Ave | Sandy Silt (ML) | 14 | 99 | 16 | 63 | 0.67 | | <0.1 |
| 347 Moorpark Ave | Sand (SP) | 24 | 116 | 3 | 19 | 0.43 | 3 | -- |
| 500 LA Ave | Silty Fine Sand (SM) | 4 | 97 | 8.8 | 33 | 0.71 | 27 | 1.0 |
| 500 LA Ave | Clayey Sand (SC) | 14 | 107 | 11 | 53 | 0.55 | 27 | -- |
| Walnut Cyn Road North | Sand w/ Silt (SP-SM) | 4 | 110 | 3 | 16 | 0.50 | | 2.3 |
| Walnut Cyn Road North | Clayey Sand (SC) | 14 | 117 | 8 | 51 | 0.41 | | -- |

| DH Location | Soil Type[1] | Depth (feet) | Dry Density (pcf) | Moisture Content (%) | Degree of Saturation (S), (%) | Void Ratio | Fines Content (%) | Measured Hydro-consolidation (%) |
|---|---|---|---|---|---|---|---|---|
| Walnut Cyn Road North | Clayey Sand (SC) | 24 | 123 | 6 | 46 | 0.34 | 32 | -- |
| Walnut Cyn Road North | Silty Sand (SM) **Saugus Fm.** | 34 | 107 | 6 | 29 | 0.55 | - | -- |
| Walnut Cyn Road South | Sand (SP) to Clayey Sand (SC) | 4 | 107 | 8 | 39 | 0.55 | 16 | -- |
| Walnut Cyn Road South | Sand (SP) | 14 | 101 | 7.1 | 30 | 0.64 | | 1.1 |
| Walnut Cyn Road South | Sand (SP) | 24 | 106 | 4 | 19 | 0.56 | | -- |
| Walnut Cyn Road South | Clayey Sand (SC) | 34 | 112 | 7 | 39 | 0.48 | 28 | -- |

[1] Alluvial soil materials, except where noted.

# 4.0 OPINIONS AND RECOMMENDATIONS

## 4.1 SUMMARY OF FINDINGS

The geotechnical conditions at the eight sites evaluated for this study indicate:

- The sites are underlain by interbedded very loose to medium dense granular soils and generally medium stiff fine-grained silt and clay soil. Dense granular soil/sandstone of the Saugus Formation was encountered beneath the alluvial soils in the Walnut Canyon Road North and 467 High Street sites. CPTs advanced at the Apricot Farms, Remainder High Street, and 450 High Street sites met refusal at depths of 70+feet on dense granular material that may be Saugus Formation.
- Groundwater was encountered at depths of about 20 to 38 feet during explorations at most sites excluding Walnut Canyon. Groundwater was not encountered to depths explored of 60 feet in Walnut Canyon. Historic high groundwater levels in the Downtown Moorpark area are about 15 to 20 feet below the ground surface.
- The sites are not located within a fault rupture hazard zone as defined by the State of California, California Geological Survey.
- The sites are located in a seismically active area of Ventura County and have estimated peak ground accelerations, $PGA_M$, of 1.01 to 1.06g.
- CPT and shear wave velocity data were evaluated to estimate liquefaction and dry seismic settlement using the program GeoLogisMiki and the procedures developed by Robertson (2009) and Boulanger and Idriss (2014; Appendix C). SPT data were

evaluated using an in-house Excel spreadsheet based on the procedures developed by Seed and Idriss (1982). The combined liquefaction and dry seismic settlement estimated for the sites ranges from about 7 to 18 inches (Table 10).

- A majority of the estimated seismically induced settlements occur in the granular soil layers in the upper 40 to 50 feet of the sites; however, the CPT-based analyses indicate the liquefaction could occur as deep as 70 feet. Based on the liquefaction analyses, the fine-grained silt and clay soil layers do not contribute to liquefaction settlement.
- Estimated hydroconsolidation (collapse) potential ranges from 0.1 to 6.9 percent based on the laboratory testing on 13 samples. Eight of the values are below 2 percent and are considered background level of hydroconsolidation/collapse of the soil. Hydroconsolidation estimates below 2 percent do not typically require mitigation. Five tested samples from the Apricot Farms, 467 High Street, and Walnut Canyon sites had measured hydroconsolidation values above 2 percent; those estimated values were limited to the upper 15 feet of the soil profiles. The typical mitigation for hydroconsolidation is to remove and replace the soil with compacted fill.
- CGS Special Publication 117A (CGS, 2008) and the California Building Code (CBC) typically require projects to have seismic settlement of no more than two inches total and one inch of differential settlement. Sites with estimated seismic settlements of more than two inches are normally required to mitigate settlement to about two inches with ground improvement. As summarized in Table 10, all of the sites have estimated liquefaction or dry seismic settlements in excess of two inches and likely would require mitigation through ground improvement. Potential ground improvement options are discussed in the following sections. We note the governing agency can choose to exclude single family residential developments with less than four units from the ground improvement requirement.

## 4.2 GROUND IMPROVEMENT OPTIONS

As discussed above, ground improvement of the soils at the study sites likely will be required to mitigate the amount of estimated settlement to near two inches of total settlement and one inch of differential settlement. Potential ground improvement options could include:

- Overexcavation and recompaction for areas with shallow mitigation requirements and no groundwater such as 467 High Street.
- Vibro replacement, deep soil mixing, rapid impact compaction, and aggregate piers for sites requiring mitigation of liquefaction and dry seismic settlement to depths of 50 feet or more. It also may be cost effective to combine mitigation methods depending on the scale and depth of the improvements.
- Other ground improvement methods such as grouting could be considered by a ground improvement contractor.

Several ground improvement methods to mitigate seismically induced settlements to a depth of about 50 feet are: 1) vibro replacement (VR, also referred to as “stone columns”), and 2) deep soil mixing (DSM). The VR procedure consists of advancing a 30-inch diameter steel

mandrel to the selected depth (approximately 50 feet) using a combination of the weight of the mandrel and vibration. Once the mandrel reaches the selected depth, ¾-inch crushed rock is used to backfill the hole. The gravel is vibrated and "rammed" into the soft soil. The stone columns are placed on a grid pattern with a spacing typically in the range of six to nine feet on center. The soil displaced by the mandrel is "pushed" laterally into the adjacent soil, densifying the soil mass at the site to the point where it will resist liquefying and settlement in response to earthquake ground shaking. CPTs are advanced between columns after the VR is performed to evaluate the increase in soil strength/resistance to liquefaction. VR is an effective method of densifying granular soils to a depth of about 50 feet, but the process does not significantly improve the density of fine-grained silt and clay soils or highly interbedded fine-grained and granular soils.

DSM uses a large diameter auger mounted to a large drill rig or crane to advance the auger to the target depth. Cement is mixed into the soil at a regulated rate of around 10 percent and mixed by the auger using several up and down passes of the auger. The amount of cement added to the soil is determined by laboratory testing to optimize the soil strength versus amount of cement utilized. Once the cement and soil are uniformly mixed, the auger is withdrawn and moved to the next location. The DSM columns can be placed in a variety of patterns (grid, tangent, overlapping) depending on the project requirements. The column configuration will depend on the column diameter selected (typically three to six feet), cement percentage, soil type, and amount of soil improvement required. Once the columns are completed, a grade-beam type foundation can be installed on top of the DSM columns to support the structure. Other column configurations such as tangent columns, overlapping columns, etc. can be utilized depending on project requirements. The advantages of the DSM method are that it can installed to depths of greater than 50 feet and it can improve the strength of fine-grained soils.

## 4.3 STORMWATER INFILTRATION

Recent regulatory agency requirements mandate stormwater generated on a new project site be infiltrated into the onsite soils. While this concept may have merit from an environmental standpoint, it increases the potential to cause foundation damage to onsite improvements due to higher groundwater levels, reduced soil strength, hydroconsolidation of onsite soils, and moisture infiltration into buried structures. If onsite stormwater disposal is implemented at the sites, the design needs to consider the locations of existing and proposed structures, and impacts to offsite improvements.

The liquefaction analyses performed for this study indicates up to about 12+ inches of liquefaction related settlement could occur in response to the design seismic event. Infiltration of stormwater could increase groundwater levels beneath the site and reduce the shear strength of the soils which would increase the potential for liquefaction related settlement. In addition, the study indicated the potential for hydroconsolidation (collapse) of the onsite soil as high as 6.7 percent in areas not mitigated by ground improvement. A collapse of 2 percent over a depth of 20 to 38 feet (depth above current groundwater level) is equivalent to a collapse settlement of about 5 to 9 inches. Previous experience with collapse related settlements indicates concentrated water infiltration can cause hydroconsolidation of soils with collapse potential. Those concentrated settlements are typically associated with leaking water or sewer pipelines, but in our opinion, concentrated stormwater infiltration in a discrete basin has the potential to cause hydroconsolidation of the soils. Settlement contours from soil hydroconsolidation related

settlement measured in previous forensic studies in the Ventura area documented a radial settlement pattern extending up to about 100 feet from the water infiltration source.

If storm water is infiltrated at the proposed sites, we suggest the project civil engineer consider the above factors in the design process. If concentrated stormwater infiltration is proposed in a discrete basin, that basin should be located away from project structural elements and offsite improvements (including buried utilities) that could be impacted by settlement. A setback distance of at least 100 feet from a discrete infiltration location is likely a reasonable starting point for infiltration design. Another alternative would be a diffuse infiltration system that does not concentrate infiltration in a specific location.

# 5.0 LIMITATIONS

## 5.1 REPORT USE

This preliminary report has been prepared for the exclusive use of the City of Moorpark for evaluation of the liquefaction potential and need for ground improvement to mitigate potential settlements that may occur as a result of earthquake-induced ground shaking at various sites within the Downtown Moorpark area. This preliminary report is intended to provide a summary of the site conditions, geohazard assessment, and describe potential ground improvement mitigations. A site specific geotechnical design report will be required prior to site development based on the proposed structure and site conditions at the time of construction. The geotechnical design study should identify the proposed ground improvement option and foundation design.

The findings, conclusions, and recommendations presented herein were prepared in accordance with generally accepted geotechnical engineering practices of the project region. No other warranty, express or implied, is made.

Although information contained in this report may be of some use for other purposes, it may not contain sufficient information for other parties or uses. If any changes are made to the project as described in this report, the conclusions and recommendations in this report shall not be considered valid unless the changes are reviewed and the conclusions and recommendations of this report are modified or validated in writing by OGI.

## 5.2 HAZARDOUS MATERIALS

This report does not provide information regarding the presence of hazardous/toxic materials in the soil, surface water, groundwater, or atmosphere.

## 5.3 LOCAL PRACTICE

In performing our professional services, we have used generally accepted geologic and geotechnical engineering principles and have applied the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical engineers currently practicing in this or similar localities. No other warranty, express or implied, is made as to the professional advice included in this report.

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# PLATES




**PROPERTY LOCATIONS**

1 - Apricot Lane Farms
2 - Remainder High Street
3 - 450 High Street
4 - 467 High Street
5 - 347 Moorpark Avenue
6 - 500 Los Angeles Avenue
7 - Walnut Canyon Road North
8 - Walnut Canyon Road South

N

0 500'
Approx. Scale (feet)

**LOCATION MAP**
**Moorpark Geohazards Study**
**Moorpark, California**

**PLATE 1**




**APRICOT LANE FARMS SITE**
**Moorpark Geohazards Study**
**Moorpark, California**

**PLATE 2a**




**REMAINDER HIGH STREET SITE**
**Moorpark Geohazards Study**
**Moorpark, California**

**PLATE 2b**




**450 and 467 HIGH STREET SITES**
**Moorpark Geohazards Study**
**Moorpark, California**

**PLATE 2c**




**347 MOORPARK AVENUE**
**Moorpark Geohazards Study**
**Moorpark, California**

**PLATE 2d**




**500 LOS ANGELES AVENUE**
**Moorpark Geohazards Study**
**Moorpark, California**

**PLATE 2e**




Approx. CPT location

Approx. drill hole location

**WALNUT CANYON ROAD NORTH SITE**
**Moorpark Geohazards Study**
**Moorpark, California**

**PLATE 2f**



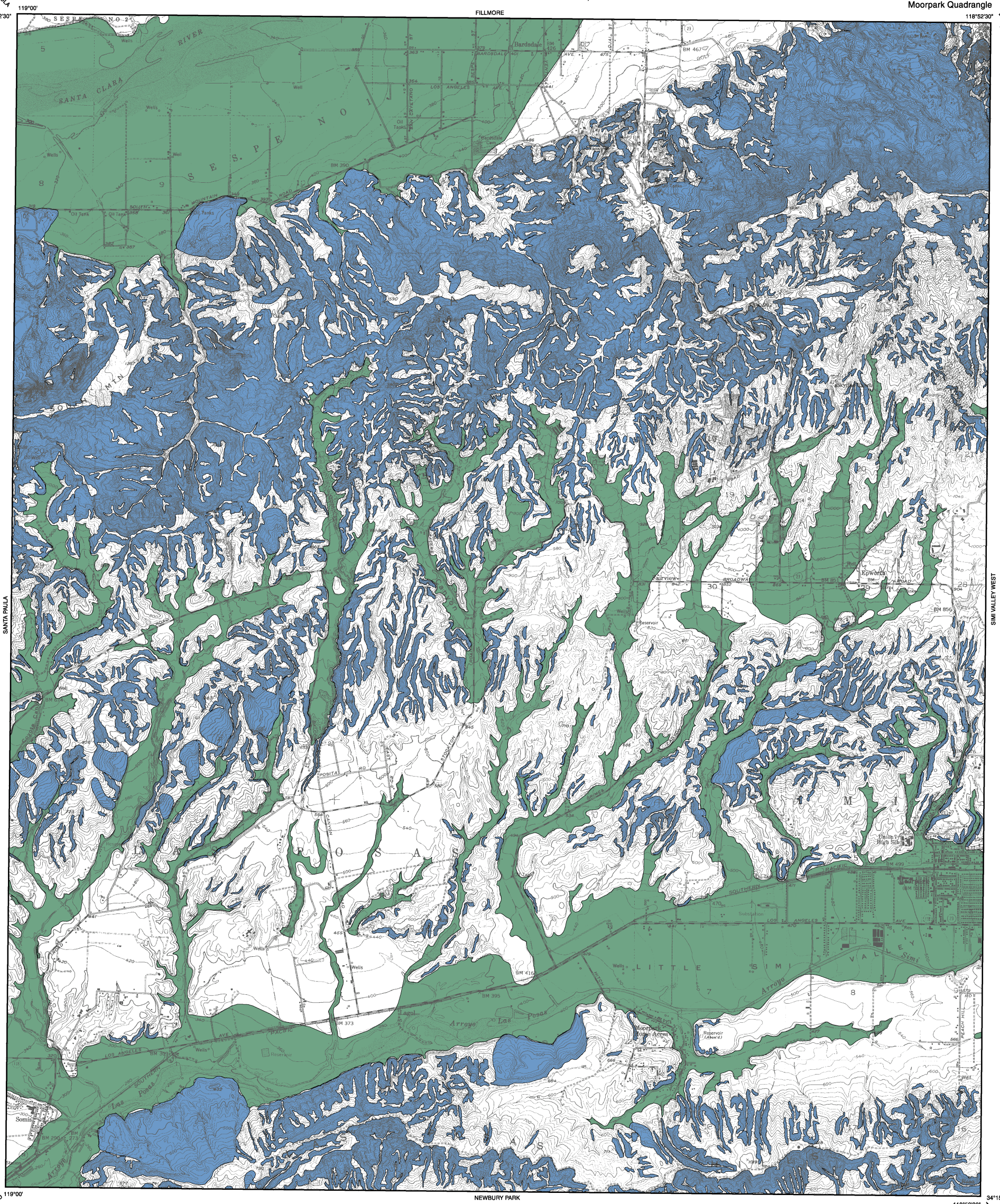

**WALNUT CANYON ROAD SOUTH SITE**
**Moorpark Geohazards Study**
**Moorpark, California**

**PLATE 2g**

DIVISION OF MINES AND GEOLOGY
JAMES F. DAVIS, STATE GEOLOGIST

STATE OF CALIFORNIA-GRAY DAVIS, GOVERNOR
THE RESOURCES AGENCY-MARY D. NICHOLS, SECRETARY
DEPARTMENT OF CONSERVATION-DARRYL W. YOUNG, DIRECTOR

# SEISMIC HAZARD ZONES MAP
## Moorpark Quadrangle




Base Map prepared by U.S. Geological Survey, 1951, photorevised 1969

SCALE 1:24,000

1 .5 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

### PURPOSE OF MAP

*This map will assist cities and counties in fulfilling their responsibilities for protecting the public safety from the effects of earthquake-triggered ground failure as required by the Seismic Hazards Mapping Act (Public Resources Code Sections 2690-2699.6).*

*For information regarding the scope and recommended methods to be used in conducting the required site investigations, see DMG Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California.*

*For a general description of the Seismic Hazards Mapping Program, the Seismic Hazards Mapping Act and regulations, and related information, please refer to the draft User's Guide (see http://www.consrv.ca.gov/dmg/shezp/userguid/).*

*Production of this map was funded by the Federal Emergency Management Agency's Hazard Mitigation Program and the Department of Conservation in cooperation with the Governor's Office of Emergency Services.*

### IMPORTANT - PLEASE NOTE

*1) This map may not show all areas that have the potential for liquefaction, landsliding, strong earthquake ground shaking or other earthquake and geologic hazards. Also, single earthquake capable of causing liquefaction or triggering landslide failure will not uniformly affect the entire area zoned.*

*2) Liquefaction zones may also contain areas susceptible to the effects of earthquake-induced landslides. This situation typically exists at or near the toe of existing landslides, downslope from rockfall or debris flow source areas, or adjacent to steep stream banks.*

*3) This map does not show Alquist-Priolo earthquake fault zones, if any, that may exist in this area. Please refer to the latest official map of earthquake fault zones for disclosures and other actions that are required by the Alquist-Priolo Earthquake Fault Zoning Act. For more information on this subject and an index to available maps, see DMG Special Publication 42.*

*4) Landslide zones on this map were determined, in part, by adapting methods originally developed by the U.S. Geological Survey (USGS). Landslide hazard maps prepared by the USGS typically use experimental approaches to assess earthquake-induced and other types of landslide hazards. Although aspects of these new methodologies may be incorporated in future CDMG seismic hazard zone maps, USGS maps should not be used as substitutes Official SEISMIC HAZARD ZONES maps.*

*5) U.S. Geological Survey base map standards provide that 90 percent of cultural feature be located within 40 feet (horizontal accuracy) at the scale of this map. The identification and location of liquefaction and earthquake-induced landslide zones are based on available data. However, the quality of data used is varied. The zone boundaries depicted have been drawn as accurately as possible at this scale.*

*6) Information on this map is not sufficient to serve as a substitute for the geologic and geotechnical site investigations required under Chapters 7.5 and 7.8 of Division 2 of the Public Resources Code.*

*7) DISCLAIMER: The State of California and the Department of Conservation make no representations or warranties regarding the accuracy of the data from which these maps were derived. Neither the State nor the Department shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any with claim by any user or any third party on account of or arising from the use of this map.*

### STATE OF CALIFORNIA

# SEISMIC HAZARD ZONES

**Delineated in compliance with**
**Chapter 7.8, Division 2 of the California Public Resources Code**
**(Seismic Hazards Mapping Act)**

# MOORPARK QUADRANGLE

## OFFICIAL MAP

Released: November 17, 2000

STATE GEOLOGIST

### MAP EXPLANATION

### Zones of Required Investigation:

**Liquefaction**

Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

**Earthquake-Induced Landslides**

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

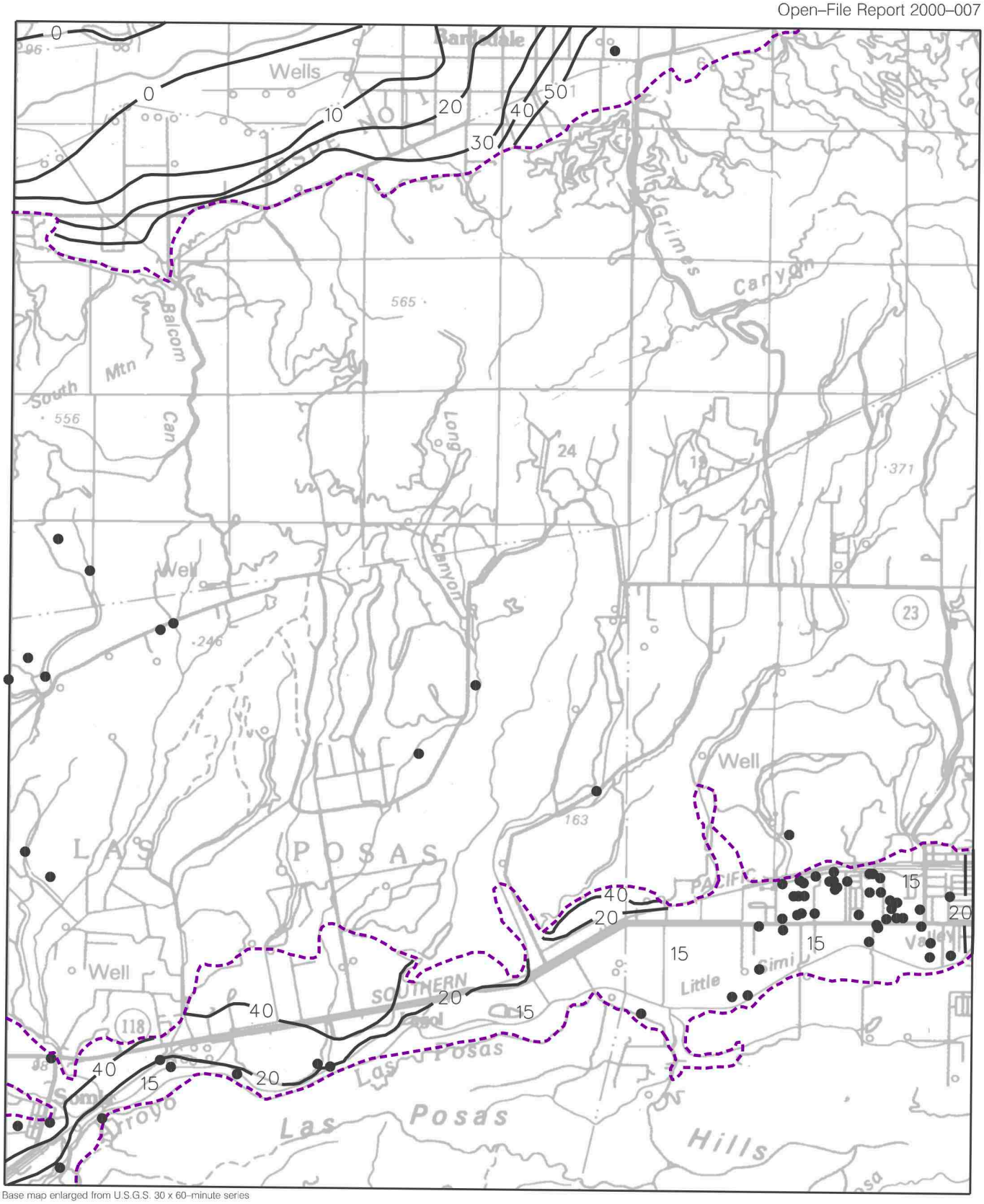
DATA AND METHODOLOGY USED TO DEVELOP
THIS MAP ARE PRESENTED IN THE FOLLOWING:

Seismic Hazard Evaluation of the Moorpark 7.5 minute quadrangle, Ventura County, California: California Division of Mines and Geology, Open-File Report 2000-007.

For additional information on seismic hazards in this map area, the rationale used for zoning, and additional references consulted, refer to DMG's World Wide Web site (http://www.consrv.ca.gov/dmg/ ).

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Division of Mines and Geology. All rights reserved.

**PLATE 3**




Base map enlarged from U.S.G.S. 30 x 60–minute series

Plate 1.2 Historically shallow ground–water depths and borehole data points in alluviated valley areas of the Moorpark Quadrangle.

Alluviated Valley

20 Historically shallow ground–water depth contours (in feet)

Borehole Site

15 Historically shallow ground–water depth where same value occurs over a broad area (in feet)

**PLATE 4**

ONE MILE

Scale

# APPENDIX A

## LOG OF DRILL HOLE DH-AF

LOCATION: High Street, east of Moorpark Avenue (Apricot Farms Site)

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **ARTIFICIAL FILL (af)**<br>3" base materials at surface<br>Sandy SILT (ML): dry to damp, moderate brown, with gravel | | | | | |
| 4 | | | 1 | (6) | **ALLUVIUM (Qal)**<br>Sandy SILT (ML): very loose, moderate brown, damp, with scattered coarse sand and with few fine voids | 95 | 3 | | | |
| 10 | | | 2 | 10 | SAND with Silt (SP-SM): loose, moderate yellowish brown, damp, with minor caliche veining | | 3 | | 6 | |
| 14 | | | 3 | (28) | - medium dense, with gradational lenses of coarse sand, at 14' | 99 | 4 | | | |
| 18 | | | 4 | 27 | Silty Fine SAND (SM): medium dense, pale yellowish brown, damp, with scattered gravel | | 2 | | 17 | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 33' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 20, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-1a**

## LOG OF DRILL HOLE DH-AF (continued)

LOCATION: High Street, east of Moorpark Avenue (Apricot Farms Site)
SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Fine SAND with Silt (SP-SM): medium dense, moderate yellowish brown, damp | | | | | |
| 22 | | | | | | | | | | |
| 24 | | | 5 | (39) | - pale yellowish brown, with about 3" to 4"-thick gradational coarse sand to fine gravel lens, at 24-1/2' | | | | | |
| 26 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| | | | 6 | 31 | SAND with Gravel (SP): dense, pale yellowish brown, damp; blowcounts affected by gravel content | | | | | |
| 30 | | | | | - coarse gravel to about 3" dia. returned to surface by auger flights, below 30' | | | | | |
| 32 | | | | | - water measured at 33' after sampling at 34' | | | | | |
| 34 | | | | | Silty SAND (SM): medium dense, moderate brown, wet | | 19 | | 24 | |
| | | | 7 | 15 | - sampler full; blowcounts likely affected by full sampler | | | | | |
| 36 | | | | | | | | | | |
| 38 | | | | | - clay on inner bit after pulling for sampling at 39' | | | | | |
| | | | | | CLAY (CL): stiff, moderate yellowish brown, wet, with fine sand | | | | | |
| | | | 8 | 12 | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | | TOTAL DEPTH (ft): 50.5' |
| METHOD: | 8-in. Hollowstem Auger | NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time. | WATER DEPTH (ft): 33' |
| BACKFILL: | Cuttings with Portland | | LOGGED BY: L Prentice |
| DATE: | September 20, 2017 | | CHECKED BY: C Prentice |

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-1b**

## LOG OF DRILL HOLE DH-AF (continued)

LOCATION: High Street, east of Moorpark Avenue (Apricot Farms Site)

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | - with sand in sampler shoe, at 40-1/2' | | | | | |
| 42 | | | | | | | | | | |
| 44 | | | | | Sandy CLAY (CL): soft to medium stiff, moderate yellowish brown, | | | | | PP0.2 |
| | | | 9 | 6 | wet, slightly micaceous | | 28 | 31/12 | 79 | PP0.2 |
| 46 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| | | | | | - soft, with very loose clayey sand lenses with gradational contacts, at 49' | | | | | |
| 50 | | | 10 | 4 | | | | | | |
| 52 | | | | | | | | | | |
| 54 | | | | | | | | | | |
| 56 | | | | | | | | | | |
| 58 | | | | | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 33' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 20, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-1c**

## LOG OF DRILL HOLE DH-RHS

LOCATION: High Street, SE of Bard Street

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | **ARTIFICIAL FILL (af)** | | | | | |
| | | | | PMB base materials and wood chips at surface | | | | | |
| | | 1 | -- | Clayey SAND (SC): moderate brown, damp | | | | | |
| 2 | | | | | | | | | |
| 4 | | | | **ALLUVIUM (Qal)** | | | | | |
| | | 2 | 4 | Clayey SAND (SC): very loose, moderate brown, moist | | 13 | | 35 | |
| 6 | | | | | | | | | |
| 8 | | | | | | | | | |
| | | | | Silty Fine SAND (SM): loose, pale yellowish brown, damp to moist | | | | | |
| 10 | | 3 | (9) | Clayey SILT (ML): medium stiff, moderate yellowish brown, moist, finely laminated | 88 | 27 | | | |
| 12 | | | | | | | | | |
| 14 | | | | Fine Sandy SILT (ML), loose, pale yellowish brown, interbedded with | | | | | |
| | | 4 | 6 | medium stiff, moderate brown, moist, slightly micaceous Clayey SILT (ML) and loose pale yellowish brown Silty Fine SAND (SM) | | 25 | | 73 | |
| 16 | | | | | | | | | |
| 18 | | | | | | | | | |
| | | | | SAND (SP): medium dense, pale yellowish brown, damp | | | | | |
| | | 5 | (17) | CLAY (CL): stiff, moderate brown, moist, with fine caliche veins | 103 | 16 | | | PP3.5 |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 33.2' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 20, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-2a**

## LOG OF DRILL HOLE DH-RHS (continued)

LOCATION: High Street, SE of Bard Street

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | PP4.0 TV1.8 |
| 22 | | | | | | | | | |
| 24 | | 6 | 8 | Sandy Clayey SILT (ML): medium stiff, moderate brown, moist, slightly micaceous | | 16 | | 54 | |
| 26 | | | | | | | | | |
| 28 | | | | | | | | | |
| 30 | | 7 | (14) | Clayey SAND (SC): loose, moderate brown, moist to wet, few scattered rounded gravel to 1/2" dia. | 112 | 11 | | | |
| 32 | | | | | | | | | |
| 34 | | | | - measured water at 33.2' before sampling at 34' | | | | | |
| | | 8a | 6 | Fine SAND (SP): loose, pale yellowish brown, wet | | | | | |
| | | 8b | | Sandy CLAY (CL): medium stiff, moderate brown, wet | | 31 | | 66 | |
| 36 | | | | | | | | | |
| 38 | | | | | | | | | |
| | | | | - added water to augers | | | | | |
| | | | | Fine SAND (SP): loose, moderate yellowish brown, wet | | | | | |
| | | 9 | 11 | Silty Fine SAND (SM): loose, moderate brown, wet, slightly micaceous | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 33.2' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-2b**

## LOG OF DRILL HOLE DH-RHS (continued)

LOCATION: High Street, SE of Bard Street

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | SAND with Gravel (SP): medium dense, moderate yellowish brown, wet | | | | | |
| 42 | | | | | | | | | | |
| 44 | | | 10 | 14 | SAND (SP): medium dense, pale yellowish brown, wet, medium grained | | | | | |
| 46 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| 50 | | | 11 | 3 | Clayey SAND (SC): very loose, moderate brown, wet<br>- sample possibly disturbed by drilling process | | 15 | | 26 | |
| 52 | | | | | | | | | | |
| 54 | | | | | | | | | | |
| 56 | | | | | | | | | | |
| 58 | | | | | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 33.2' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-2c**

## LOG OF DRILL HOLE DH-450HS

LOCATION: 450 High Street
SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **ARTIFICIAL FILL (af)**<br>3" a.c. over 9" base materials<br>Clayey to Sandy SILT (ML): moderate to dark brown, damp | | | | | |
| 4 | | | 1 | WOH | **ALLUVIUM (Qal)**<br>Sandy to Clayey SILT (ML): very soft, dark brown, damp | | 16 | | 54 | |
| 10 | | | 2 | (11) | Silty Fine SAND (SM): loose, pale yellowish brown, damp | 99 | 8 | | | |
| 14 | | | 3 | 8 | - with 3"-thick medium stiff, moderate brown clayey silt lens, at 15' | | 22 | | 67 | |
| | | | 4 | (55) | SAND (SP): dense, pale yellowish brown, damp, with gravel and angular rock fragments to 1-1/4" dia. | | 3 | | 4 | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 38.1' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-3a**

## LOG OF DRILL HOLE DH-450HS (Continued)

LOCATION: 450 High Street

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | - blowcounts likely affected by gravel content | | | | | |
| 22 | | | | | | | | | | |
| 24 | | | 5 | 7 | Silty to Clayey Fine SAND (SM to SC): loose, moderate brown, moist, slightly micaceous | | 13 | | 40 | |
| 26 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 30 | | | 6 | (29) | Silty Fine SAND (SM) interbedded with Clayey SAND (SC): medium dense, pale yellowish brown and moderate brown, moist | 104 | 6 | | | |
| 32 | | | | | | | | | | |
| 34 | | | 7 | 19 | SAND (SP): medium dense, moderate yellowish brown, moist, medium to coarse, with fine gravel | | | | | |
| 36 | | | | | | | | | | |
| 38 | | | | | - measured water at 38.1' after sampling at 39' | | | | | |
| | | | 8 | 2 | Clayey SAND (SC): very loose, moderate brown, wet, grades to silt | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 38.1' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-3b**

## LOG OF DRILL HOLE DH-450HS (Continued)

LOCATION: 450 High Street

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Fine SAND with Silt (SP-SM): very loose, moderate brown, wet | | | | | |
| 42 | | | | | | | | | | |
| | | | | | - added water to augers | | | | | |
| 44 | | | | | Clayey SAND (SC): loose, moderate brown, wet, with scattered fine | | | | | |
| | | | 9 | 8 | subangular gravel | | 18 | | 37 | |
| 46 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| | | | | | - medium dense, at 49' | | | | | |
| 50 | | | 10 | 14 | | | | | | |
| 52 | | | | | | | | | | |
| 54 | | | | | | | | | | |
| 56 | | | | | | | | | | |
| 58 | | | | | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 38.1' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-3c**

## LOG OF DRILL HOLE DH-467HS

LOCATION: 467 High Street
SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **ARTIFICIAL FILL (af)**<br>Sandy SILT (ML): dark brown, dry to damp, with clay | | | | | |
| 4 | | | 1 | (9) | **ALLUVIUM (Qal)**<br>Sandy to Clayey SILT (ML): medium stiff, moderate to dark brown, damp, fine sand with few scattered coarse sand to fine gravel, with fine voids | 99 | 5 | | | |
| 10 | | | 2 | 5 | Clayey SAND (SC): loose, moderate brown, damp, with few scattered gravel - with 1-1/2"-thick dark brown clay lens, at 9-3/4' | | 5 | | 17 | |
| 14 | | | 3 | (18) | Sandy SILT (ML): medium dense, moderate yellowish brown, damp, with scattered subangular to subrounded gravel to about 3/4"-dia, and few fine voids | 95 | 2 | | | |
| | | | 4 | 30 | Clayey SAND (SC): medium dense, dry to damp, with scattered gravel | | 4 | | 32 | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 30' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | Not Encountered |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-4a**

## LOG OF DRILL HOLE DH-467HS (Continued)

LOCATION: 467 High Street
SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| 22 | | | | | - harder drilling below about 23' | | | | | |
| | | | | | **SAUGUS FORMATION (QTs)** | | | | | |
| 24 | | | | | Clayey SAND (SC): very dense, moderate brown, damp, with gravel | | | | | |
| | | | 5 | 32/18:1 | - sampler bouncing at 25' | | 2 | | 13 | |
| 26 | | | | | - very hard drilling below about 26-1/2' | | | | | |
| 28 | | | | | | | | | | |
| | | | 6 | 16/50:5 | SAND with Gravel (SP): very dense, damp, gravel to 1"-dia. in sampler | | | | | |
| 30 | | | | | - refusal to sampling at about 30' | | | | | |
| | | | | | NOTE: Two teeth worn off of auger bit after pulling augers from hole. | | | | | |
| 32 | | | | | | | | | | |
| 34 | | | | | | | | | | |
| 36 | | | | | | | | | | |
| 38 | | | | | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 30' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | Not Encountered |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-4b**

## LOG OF DRILL HOLE DH-347MA

LOCATION: 347 Moorpark Avenue

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | -- | **ARTIFICIAL FILL (af)**<br>Clayey SILT (ML): pale yellowish brown, with fine sand, and with roots in upper 6" to 8" | | | | | |
| 2 | | | | | | | | | | |
| 4 | | | 2 | (10) | **ALLUVIUM (Qal)**<br>Sandy SILT (ML): loose, pale yellowish brown, damp, with scattered fine gravel, few caliche veins, and few fine voids | 102 | 4 | | | |
| 6 | | | | | | | | | | |
| 8 | | | | | - with gravel/cobbles noted during drilling, at about 8' | | | | | |
| 10 | | | 3 | 11 | SAND with Silt (SP-SM): loose to medium dense, pale yellowish brown, damp, medium grained | | 2 | | 5 | |
| 12 | | | | | | | | | | |
| 14 | | | | | Fine Sandy SILT (ML): loose, pale brown, damp, grades to silty sand | | | | | |
| | | | 4 | (12) | Silty Fine SAND (SM): loose, light brown, damp, finely laminated with sandy silt | 99 | 16 | | | |
| 16 | | | | | Clayey SILT (ML): medium stiff, moderate brown, damp, with common fine iron oxide veins<br>- with medium sand at tip of sample, at 15-1/2' | | | | | |
| 18 | | | | | | | | | | |
| | | | 5 | 39 | SAND with Gravel (SP): medium dense, pale brown, damp, gravel fragments to >1-1/2" dia.; blowcounts affected by gravel content | | 5 | | 4 | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 28.2' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 19, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-5a**

## LOG OF DRILL HOLE DH-347MA (continued)

LOCATION: 347 Moorpark Avenue

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | - gravel/cobbles noted during drilling at about 20' to 20-1/2' | | | | | |
| 22 | | | | | | | | | | |
| 24 | | | | | - subrounded gravel 1/2" to 1-1/4" dia., at 24' | | | | | |
| | | | 6 | (44) | - blowcounts affected by gravel content | 116 | 3 | | | |
| 26 | | | | | | | | | | |
| 28 | | | | | - wet, at 29' | | | | | |
| | | | | | - measured water at 28.2' after sampling at 29' | | | | | |
| | | | | | SAND (SP): medium dense, moderate yellowish brown, wet, medium | | | | | |
| 30 | | | 7 | 20 | to coarse sand, few scattered fine gravel | | 15 | | 3 | |
| | | | | | - subangular to subrounded gravel to 3-1/4" dia. returned to surface by auger flights, below about 30' | | | | | |
| 32 | | | | | | | | | | |
| 34 | | | | | | | | | | |
| | | | 8 | 21 | | | 7 | | | |
| 36 | | | | | | | | | | |
| 38 | | | | | | | | | | |
| | | | | | - medium sand, at 39' | | | | | |
| | | | 9 | 21 | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 28.2' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 19, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-5b**

## LOG OF DRILL HOLE DH-347MA (continued)

LOCATION: 347 Moorpark Avenue

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| 42 | | | | | | | | | | |
| 44 | | | 10 | 48 | SAND with Gravel (SP): dense, pale yellowish brown, wet, subangular to subrounded gravel to about 1/2" dia.<br>- blowcounts affected by gravel content | | 10 | | | |
| 46 | | | | | | | | | | |
| 48 | | | | | - with pale yellowish brown clayey sand on inner rod bit prior to sampling at 49' | | | | | |
| 50 | | | 11 | 26 | SAND (SP): medium dense, pale yellowish brown, wet, medium grained, with scattered fine subrounded gravel | | 15 | | 3 | |
| 52 | | | | | | | | | | |
| 54 | | | | | | | | | | |
| 56 | | | | | | | | | | |
| 58 | | | | | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 28.2' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 19, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-5c**

## LOG OF DRILL HOLE DH-500LAA

LOCATION: 500 Los Angeles Avenue

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **ARTIFICIAL FILL (af)** | | | | | |
| | | | | | SAND with gravel base materials at surface | | | | | |
| | | | | | Silty SAND (SM): moderate yellowish brown, moist | | | | | |
| 2 | | | | | | | | | | |
| 4 | | | | | **ALLUVIUM (Qal)** | | | | | |
| | | | 1 | (3) | Silty Fine SAND (SM): very loose, moderate brown, damp | 97 | 9 | | | |
| 6 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| | | | 2 | 4 | Clayey SAND (SC): very loose, moderate brown, damp, with scattered coarse sand/fine gravel | | 8 | | 27 | |
| 10 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 14 | | | | | - loose, damp to moist, at 14' | | | | | |
| | | | 3 | (14) | | 107 | 11 | | | |
| 16 | | | | | | | | | | |
| 18 | | | | | | | | | | |
| | | | 4 | 12 | SAND with Silt (SP-SM): medium dense, moderate yellowish brown, wet, medium grained | | 18 | | 5 | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 20.7' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 19, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-6a**

## LOG OF DRILL HOLE DH-500LAA (continued)

LOCATION: 500 Los Angeles Avenue
SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | - measured water at 20.7' prior to sampling at 24'; added water to augers | | | | | |
| 22 | | | | | | | | | | |
| 24 | | | 5 | (31) | | | 20 | | | |
| 26 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 30 | | | 6 | 6 | - only recovered 1-1/2" of sample at 29' | | | | | |
| 32 | | | | | | | | | | |
| 34 | | | 7 | 31 | Sand (SP): dense, moderate yellowish brown, wet, medium to coarse<br>- with gravel fragments to about 1-1/2" dia., at 35-1/4' | | 12 | | 3 | |
| 36 | | | | | | | | | | |
| 38 | | | 8 | 12 | - flowing sands, plugged augers, inner rods stuck in augers, pulled augers from hole to free inner rod; mixed bentonite drill mud and pumped to bottom of hole with tremie pipe; run back in hole with augers to sample and continue drilling; blowcounts may be affected by work to re-establish bottom of hole after pulling augers | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | | TOTAL DEPTH (ft): 50.5' |
| METHOD: | 8-in. Hollowstem Auger | NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time. | WATER DEPTH (ft): 20.7' |
| BACKFILL: | Cuttings with Portland | | LOGGED BY: L Prentice |
| DATE: | September 19, 2017 | | CHECKED BY: C Prentice |

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-6b**

## LOG OF DRILL HOLE DH-500LAA (continued)

LOCATION: 500 Los Angeles Avenue

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| 42 | | | | | | | | | | |
| 44 | | | | | - clayey sand on inner rod before sampling at 44' | | | | | |
| | | | | | Sandy SILT (ML): loose, moderate yellowish brown, wet | | | | | |
| | | | 9 | 9 | Sandy CLAY (CL/CH): stiff, moderate yellowish brown, wet, finely laminated | | 34 | 50/30 | 53 | |
| 46 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| | | | | | CLAY (CL): soft, moderate yellowish brown, wet | | | | | |
| 50 | | | 10 | 2 | | | | | | PP0.5<br>PP0.5 |
| 52 | | | | | | | | | | |
| 54 | | | | | | | | | | |
| 56 | | | | | | | | | | |
| 58 | | | | | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | 20.7' |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 19, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-6c**

## LOG OF DRILL HOLE DH-WCRN

LOCATION: Walnut Canyon Road, Lot 1293

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **ARTIFICIAL FILL (af)**<br>Sandy SILT (ML): grayish brown, damp, with scattered gravel | | | | | |
| 4 | | | 1 | (9) | **ALLUVIUM (Qal)**<br>SAND with Silt (SP-SM): loose, moderate brown, damp, with scattered fine subrounded gravel | 110 | 3 | | | |
| 10 | | | 2 | 15 | SAND with Gravel (SP): medium dense, pale yellowish brown, damp, medium grained sand<br>- with 1-1/2"-thick moderate brown clayey sand lens, at 10-1/4' | | 3 | | 5 | |
| 14 | | | 3 | (17) | Clayey SAND (SC): medium dense, moderate brown, damp to moist, with scattered subrounded to rounded gravel to 3/4"-dia. and few fine voids | 117 | 8 | | 31 | |
| | | | 4 | 28 | SAND (SP): medium dense, pale yellowish brown, damp, with fine gravel<br>- with 2"-thick moderate brown clayey sand lens, at 20' | | 3 | | 16 | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | Not Encountered |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-7a**

## LOG OF DRILL HOLE DH-WCRN (Continued)

LOCATION: Walnut Canyon Road, Lot 1293

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| 22 | | | | | | | | | | |
| 24 | | | 5 | (36) | Clayey SAND (SC): medium dense, moderate brown, damp, with scattered angular gravel fragments to 1/2"-length, and with very stiff sandy clay lens | 123 | 6 | | | |
| 26 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 30 | | | 6 | 27 | - pale yellowish brown, with silty sand lenses, at 29' | | 6 | | 32 | |
| 32 | | | | | - harder drilling, below about 33' | | | | | |
| 34 | | | 7 | (91) | **SAUGUS FORMATION (QTs)** Silty SAND (SM) interbedded with Sandy SILT (ML): very dense, pale yellowish brown, damp | 107 | 6 | | | |
| 36 | | | | | | | | | | |
| 38 | | | | | | | | | | |
| | | | 8 | 40 | Sandy SILT (ML): dense, pale yellowish brown, light greenish gray, damp | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | Not Encountered |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-7b**

## LOG OF DRILL HOLE DH-WCRN (Continued)

LOCATION: Walnut Canyon Road, Lot 1293

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| 42 | | | | | - with 1" dia. gravel returned to surface by auger flights, below about 42' | | | | | |
| 44 | | | 9 | 92:11 | Silty SAND (SM): very dense, pale yellowish brown, damp with scattered fine gravel, at 44-3/4' | | | | | |
| 46 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| 50 | | | 10 | 66 | - without gravel, at 49' | | 6 | | 13 | |
| 52 | | | | | NOTE: Two teeth worn off of auger bit after pulling augers from hole. | | | | | |
| 54 | | | | | | | | | | |
| 56 | | | | | | | | | | |
| 58 | | | | | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | Not Encountered |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-7c**

## LOG OF DRILL HOLE DH-WCRS

LOCATION: Walnut Canyon Road, Lot 1083
SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | -- | **ARTIFICIAL FILL (af)**<br>Silty Fine SAND (SM): moderate yellowish brown, dry to damp, with scattered gravel | | | | | |
| 4 | | | 2 | (5) | **ALLUVIUM (Qal)**<br>SAND (SP): moderate brown, very loose, damp | 107 | 8 | | | |
| | | | | | Clayey SAND (SC): very loose, dark brown, damp, with scattered coarse sand | | | | | |
| 10 | | | 3 | 12 | - loose, at 9'<br>- 2" dia. subrounded gravel stuck in sampler shoe after sampling<br>- blowcounts affected by gravel | | 6 | | 16 | |
| 14 | | | 4 | (12) | SAND (SP)/SAND with Clay (SP-SC): loose, moderate brown, moist | 101 | 7 | | | |
| | | | | | SAND with Silt (SP-SM): loose, moderate brown, moist, medium grained | | | | | |
| | | | 5 | 23 | - medium dense, with scattered fine rounded gravel, at 19' | | 7 | | 9 | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | Not Encountered |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 20, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-8a**

## LOG OF DRILL HOLE DH-WCRS (continued)

LOCATION: Walnut Canyon Road, Lot 1083

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| 22 | | | | | | | | | | |
| 24 | | | 6 | (25) | - interbedded with medium to coarse sand lenses, at 24' | 106 | 4 | | | |
| 26 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| | | | | | Clayey SAND (SC): loose, moderate brown, moist, with scattered fine gravel | | 11 | | 28 | |
| 30 | | | 7 | 10 | | | | | | |
| 32 | | | | | | | | | | |
| 34 | | | | | - with angular gravel fragments to 1/2" length, at 34-3/4' | | | | | |
| | | | 8 | (17) | | 112 | 7 | | | |
| 36 | | | | | | | | | | |
| 38 | | | | | | | | | | |
| | | | | | - increased clay content, at 39' | | | | | |
| | | | 9 | 11 | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | Not Encountered |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

## LOG OF DRILL HOLE DH-WCRS (continued)

LOCATION: Walnut Canyon Road, Lot 1083

SURFACE EL. (ft):

| ELEV. (ft) DEPTH (ft) | MATERIAL SYMBOL | SAMPLE | NUMBER | BLOW COUNT | MATERIAL DESCRIPTION | DRY DEN. (pcf) | MOISTURE CONTENT % | PLASTICITY (LL/PI) | % PASSING No. 200 | TV or PP (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|
| 42 | | | | | | | | | | |
| 44 | | | 10 | 38 | SAND with Clay (SP-SC): dense, moderate yellowish brown, moist, with scattered gravel 44 to 44-3/4'<br>- blowcounts possibly affected by gravel content | | 7 | | 9 | |
| 46 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| 50 | | | 11 | 14 | Clayey SAND (SC): medium dense, moderate brown, moist, with scattered fine gravel | | 11 | | | |
| 52 | | | | | | | | | | |
| 54 | | | | | | | | | | |
| 56 | | | | | | | | | | |
| 58 | | | | | | | | | | |

| | | | |
|---|---|---|---|
| CONTRACTOR: | S/G Drilling, Inc. | TOTAL DEPTH (ft): | 50.5' |
| METHOD: | 8-in. Hollowstem Auger | WATER DEPTH (ft): | Not Encountered |
| BACKFILL: | Cuttings with Portland | LOGGED BY: | L Prentice |
| DATE: | September 21, 2017 | CHECKED BY: | C Prentice |

NOTE: The log and data presented herein are a simplification of actual subsurface conditions encountered at the time of exploration at the specific location explored. Subsurface conditions may differ at other locations and at this location with the passage of time.

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE A-8c**

## SUMMARY OF SAMPLING DETAILS

| Symbol | Sample Number | Blowcount Push, or Grab | Sampler Type |
|---|---|---|---|
| | 1 | Bulk | Bulk Sample |
| | 2 | 23 | Standard Penetration Test (SPT) Sampler (1-3/8" ID/2" OD) driven |
| | 3 | (23) | Modified California Liner Sampler driven ( 2-3/8" ID/3" OD) |
| | 4 | Push | Thin-walled sampler pushed ( 2-7/8" ID/3" OD) |
| | 5 | (23) | Modified California Liner Sampler (disturbed) driven ( 2-3/8" ID/3" OD) |

**Blowcount Informtion**

| Blowcount | Description |
|---|---|
| 63 | 63 blows for 1' penetration after initial 6" seating |
| 89:11" | 89 blows for 11" penetration after initial 6" seating |
| 33:6" | 33 blows for 6" drive after initial 6" seating |
| Ref | >50 blows for initial 6" seating |
| (23) | Blowcounts for modified California sampler |
| WOH | weight of hammer |

## MATERIAL SYMBOLS AND CLASSIFICATIONS

- Lean CLAY (CL)
- Fat CLAY (CH)
- Sandy CLAY (CL)
- SILT (ML)
- Elastic SILT (MH)
- Clayey SILT (ML)
- Clayey GRAVEL (GP and GW)
- Sandy SILT (ML)
- Silty SAND (SM)
- SAND with Silt (SP-SM and SW-SM)
- SAND (SP and SW)
- Clayey SAND (SC)
- SAND with Clay (SP-SC and SW-SC)
- CLAYSTONE
- SILTSTONE
- SANDSTONE
- VOLCANIC
- DOLOMITIC
- SILICEOUS
- PAVING AND BASE MATERIALS
- CONCRETE
- GRAVEL (GP and GW)
- GRAVEL with Sand (GP and GW)
- SAND with Gravel (SP and SW)
- SAND with Silt and Gravel (SP-SM and SW-SM)
- Silty SAND with Gravel (SM)
- Clayey SAND with Gravel (SC)

**Other Symbols**

- Groundwater
- Strata break

## SUMMARY OF TERMS AND SYMBOLS USED ON LOGS

## Summary of Rock Logging Descriptions

### Weathering for Intact Rock (after USBR 2001)

| Descriptors | Diagnostic Features | | | | | General characteristics (strength, excavation, etc.) § |
|---|---|---|---|---|---|---|
| | Chemical weathering-Discoloration And/or oxidation | | Mechanical weathering-Grain boundary conditions (disaggregation) primarily for granitics and some coarse-grained sediments | Texture and solutioning | | |
| | Body of rock | Fracture Surfaces | | Texture | Leaching | |
| Fresh | No discoloration, not Oxidized | No discoloration or oxidation | No separation, intact (tight) | No change | No leaching | Hammer rings when crystalline rocks are struck. Almost always rock excavation except for naturally weak or weakly cemented rocks such as siltstones or shales. |
| Slightly weathered | Discoloration or oxidation is Limited to surface of, or short distance from, fractures; some feldspar crystals are dull | Minor to complete discoloration or oxidation of most surfaces | No visible separation, intact (tight) | Preserved | Minor leaching of some soluble minerals may be noted | Hammer rings when crystalline rocks are stuck. Body of rock not weakened. With few exceptions, such as siltstones or shales, classified as rock excavation. |
| Moderately Weathered | Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty" feldspar crystals are "cloudy" | All fracture surfaces are discolored or oxidized | Partial separation of boundaries visible | Generally preserved | Soluble minerals may be mostly leached | Hammer does not ring when rock is struck. Body of rock is slightly weakened. Depending on fracturing, usually is rock excavation except in naturally weak rocks such as siltstones or shales. |
| Intensely Weathered | Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in situ disaggregation, see grain boundary conditions | All fracture surfaces are discolored or oxidized, surfaces friable | Partial separation, rock is friable; in semiarid conditions granitics are disaggregated | Texture altered by chemical disintegra-tion (hy-dration, argillation) | Leaching of soluble minerals may be complete | Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened. Usually common excavation. |
| Decomposed | Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay | | Complete separation of grain boundaries (disaggregated) | Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete | | Can be granulated by hand. Always common excavation. Resistant minerals such as quartz may be present as "stringers" or "dikes." |

### Rock Hardness (after USBR 2001)

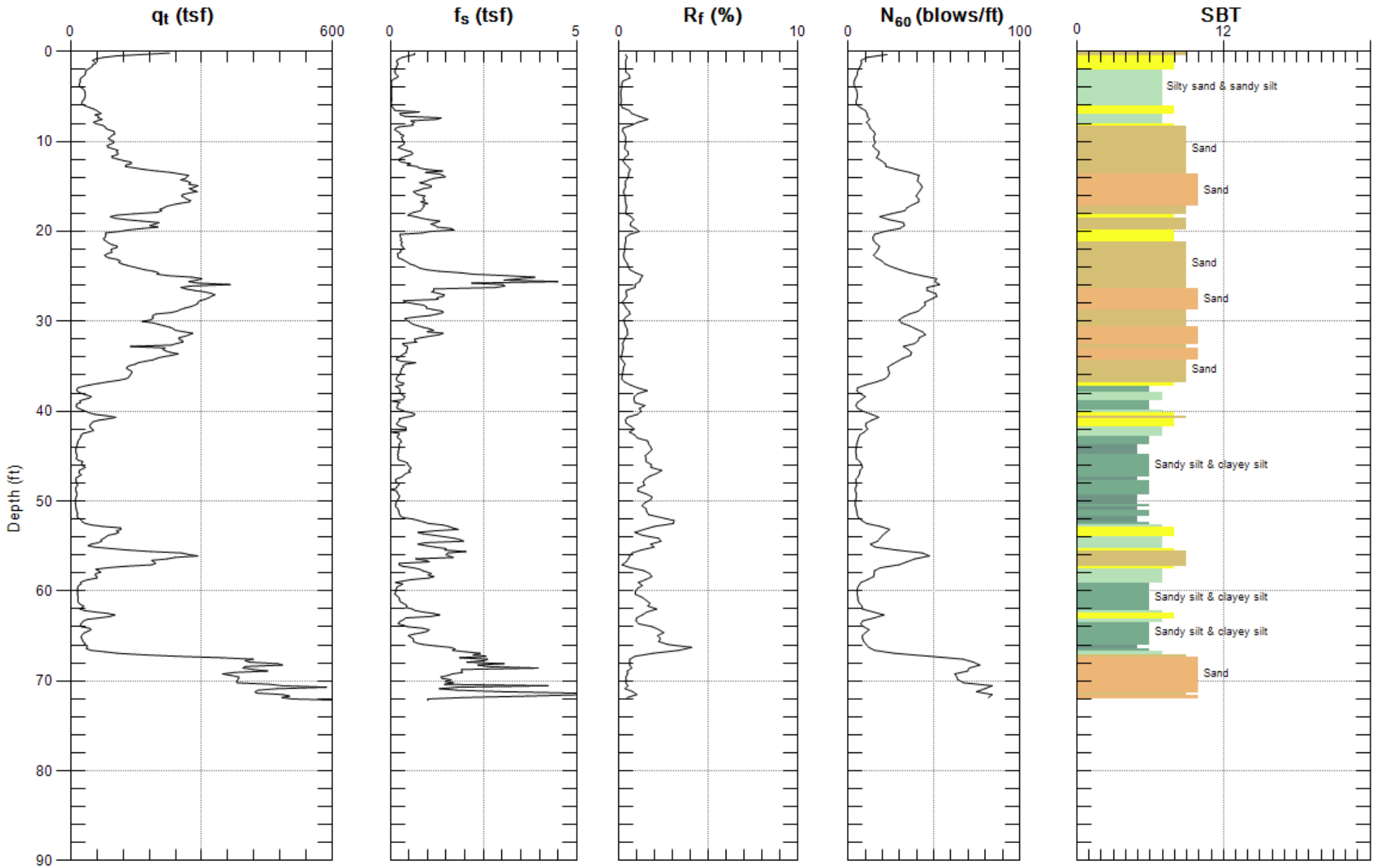
| Descriptor | Criteria |
|---|---|
| Extremely hard | Cannot be scratched with a pocketknife or sharp knife. Can only be chipped with repeated hammer blows. |
| Very hard | Cannot be scratched with a pocketknife. Breaks with repeated hammer blows. |
| Hard | Can be scratched with a pocketknife with difficulty (heavy pressure). Breaks with heavy hammer blows. |
| Moderately hard | Can be scratched with a pocketknife with light or moderate pressure. Breaks with light hammer blow or heavy manual pressure. |
| Moderately soft | Can be grooved 2 mm (1/6 inch) deep with a pocketknife with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure. |
| Soft | Can be grooved or gouged easily with a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure. |
| Very soft | Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure. |

## SUMMARY OF ROCK TERMS USED ON LOGS

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-AF

Engineer: CRAIG P.
Date: 9/28/2017 07:27

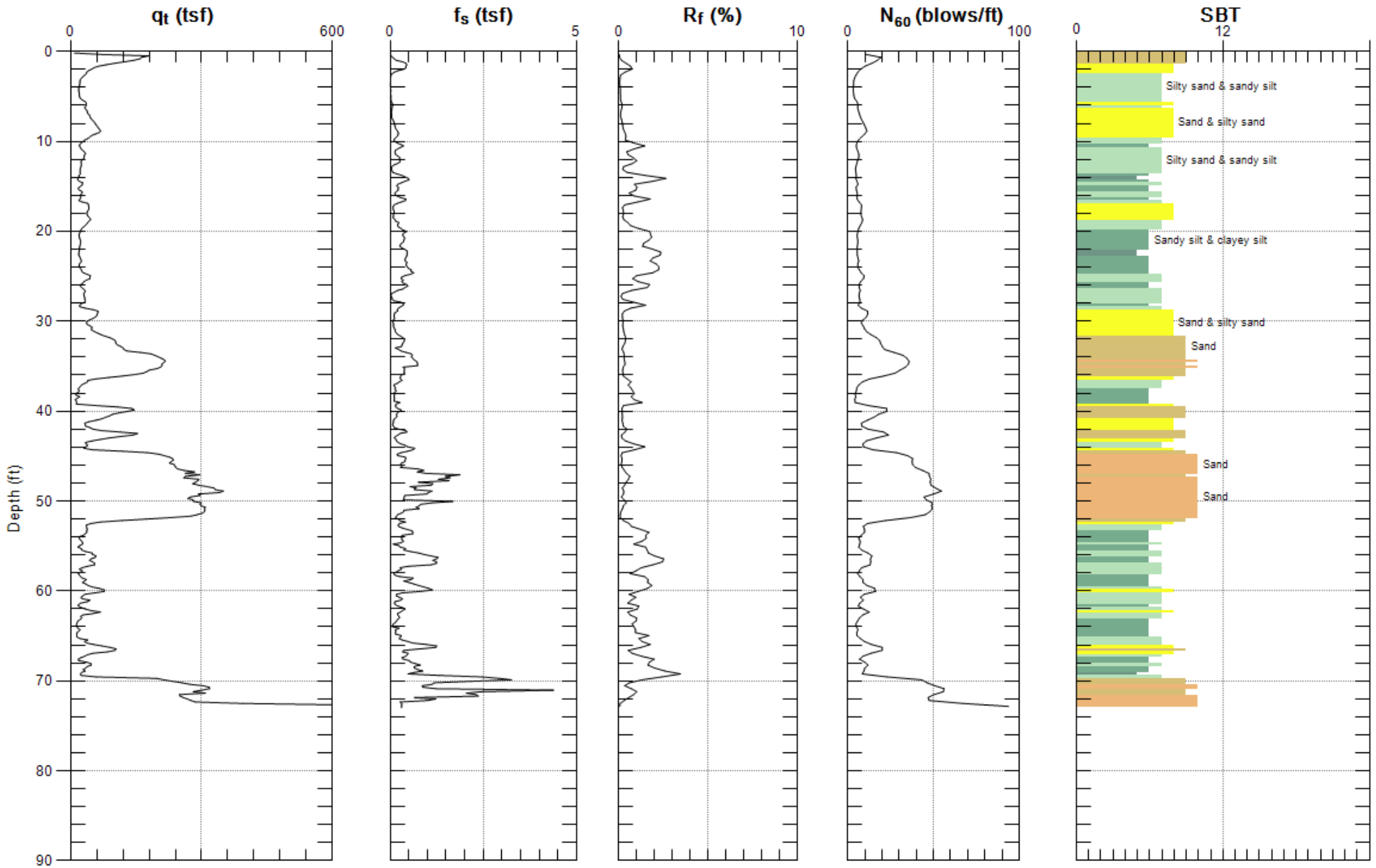



Max. Depth: 72.178 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-RHS1
Engineer: CRAIG P.
Date: 9/28/2017 08:13

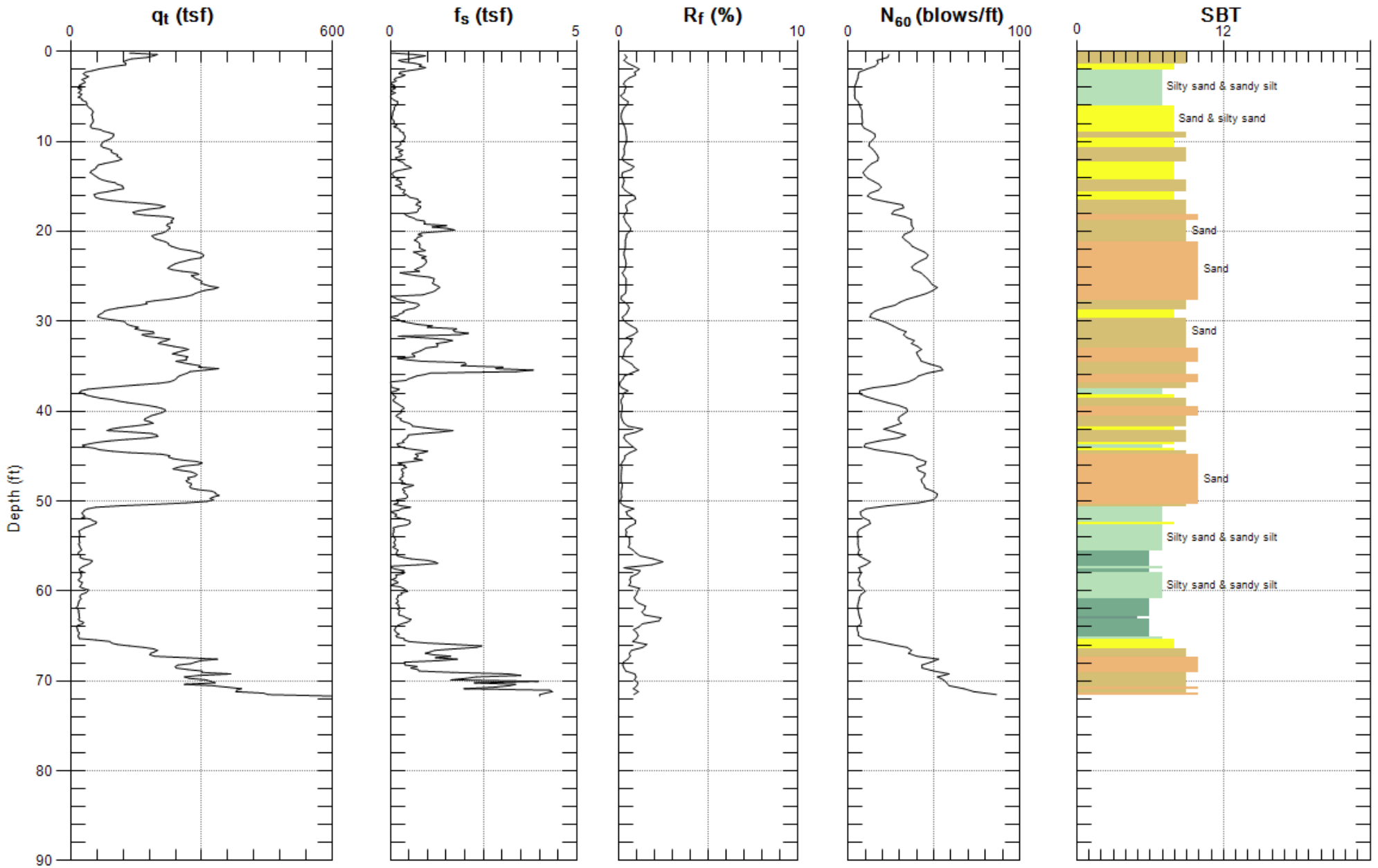



Max. Depth: 72.999 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-RHS2
Engineer: CRAIG P.
Date: 9/28/2017 09:31

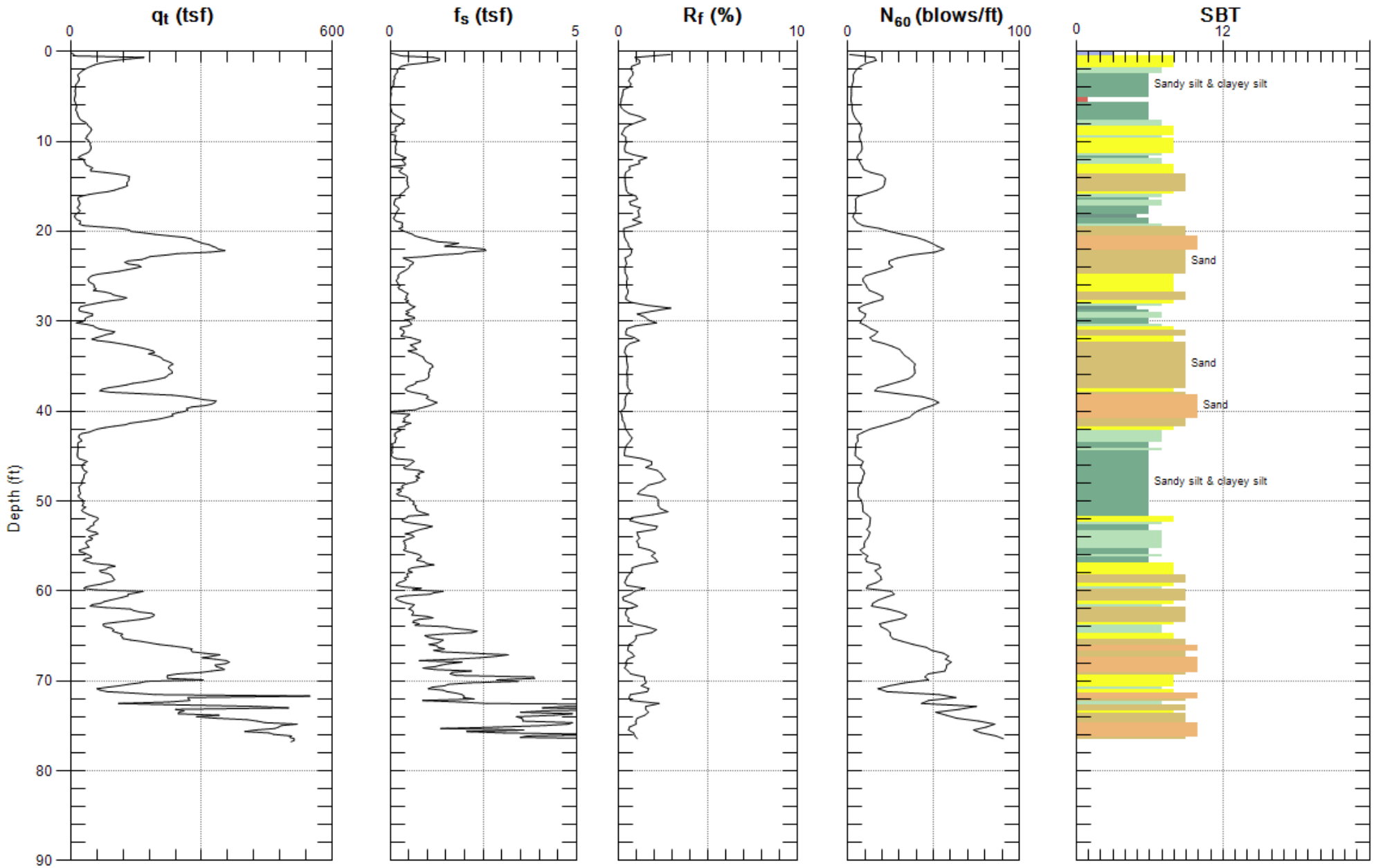



Max. Depth: 71.686 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-450HS
Engineer: CRAIG P.
Date: 9/28/2017 10:24

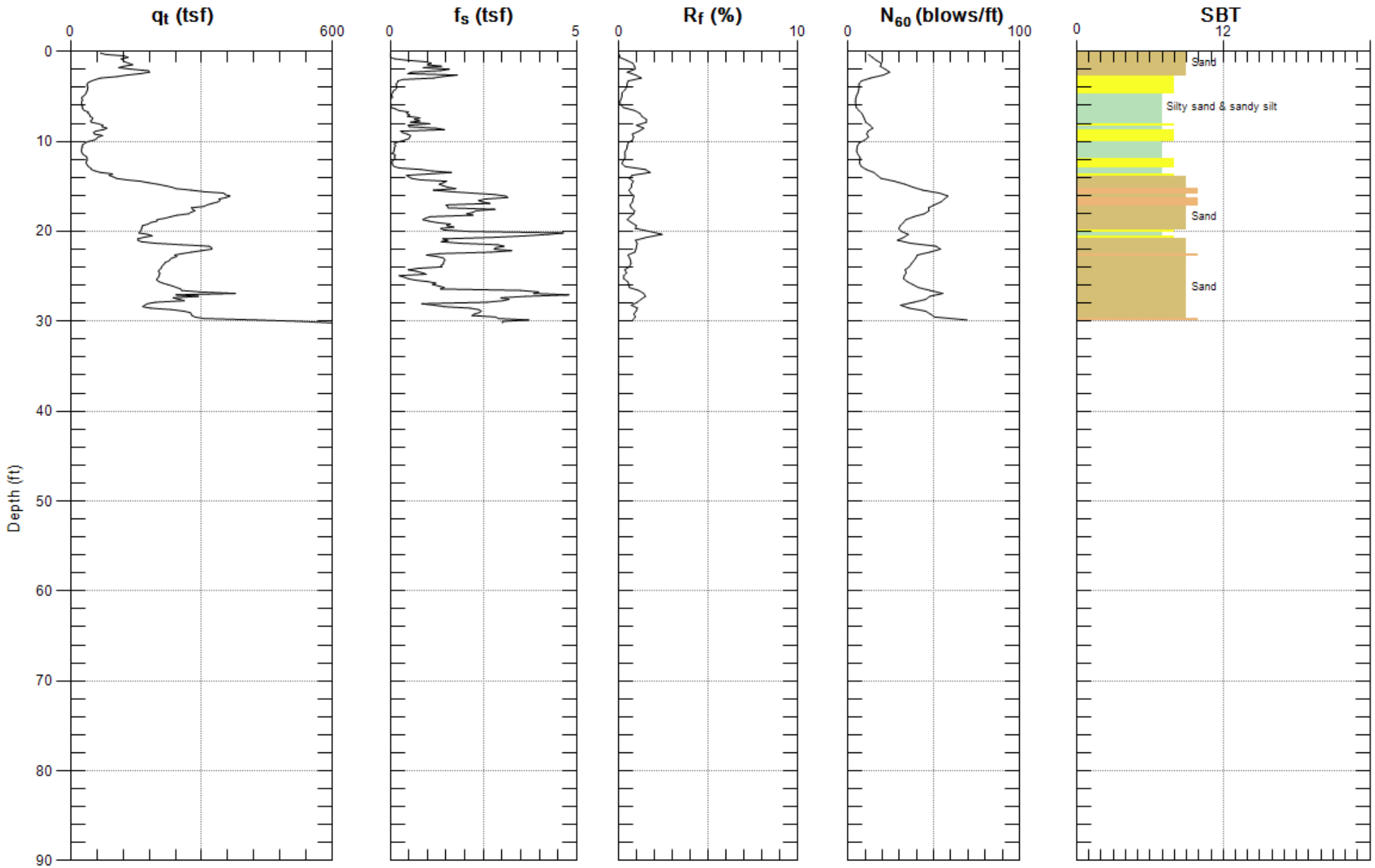



Max. Depth: 76.772 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-467HS
Engineer: CRAIG P.
Date: 9/28/2017 11:09

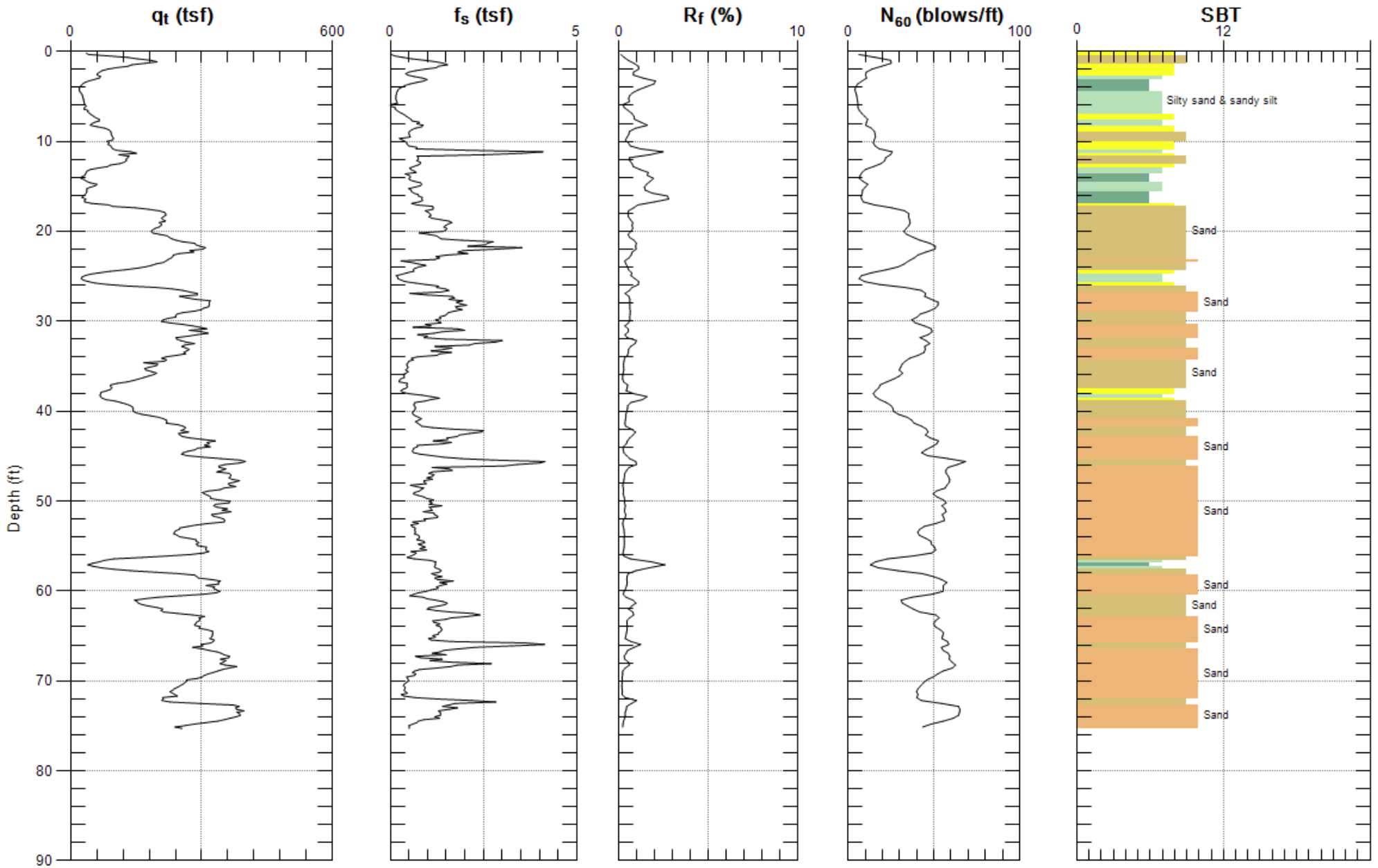



Max. Depth: 30.184 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-347MA
Engineer: CRAIG P.
Date: 9/28/2017 11:47

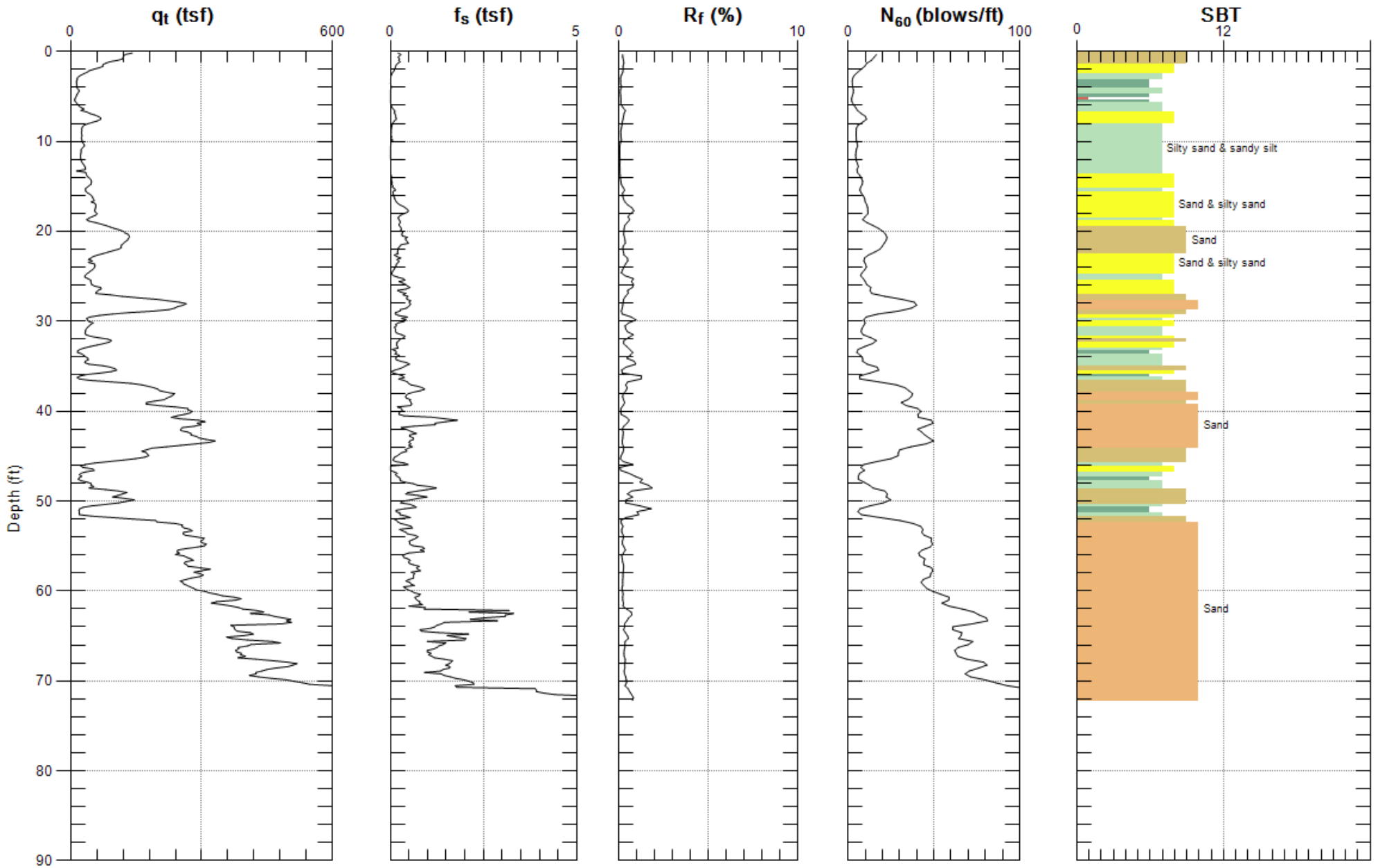



Max. Depth: 75.295 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-500LAA1
Engineer: CRAIG P.
Date: 9/27/2017 02:19

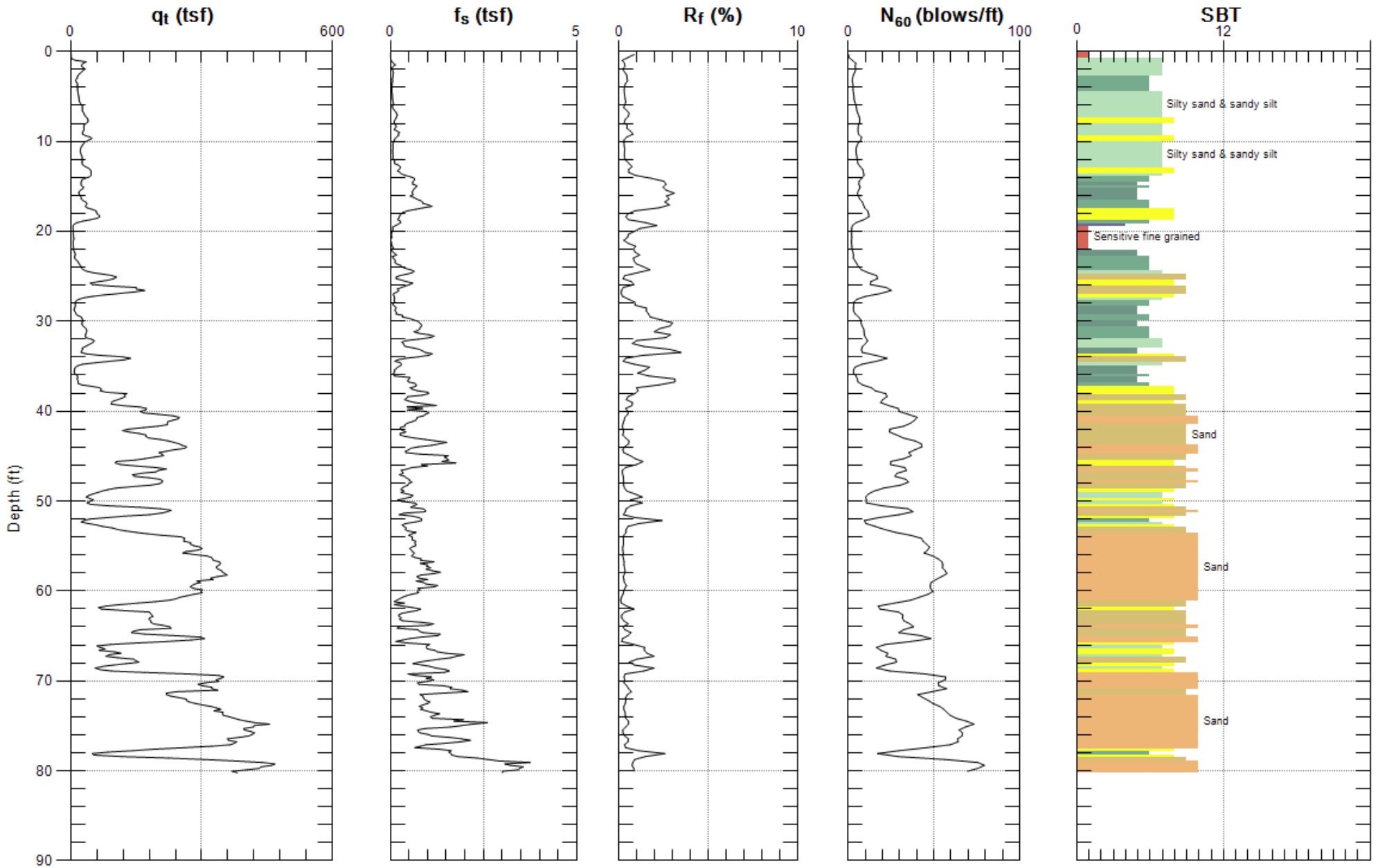



Max. Depth: 72.507 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-500LAA2
Engineer: CRAIG P.
Date: 9/27/2017 01:20




Max. Depth: 80.217 (ft)
Avg. Interval: 0.328 (ft)

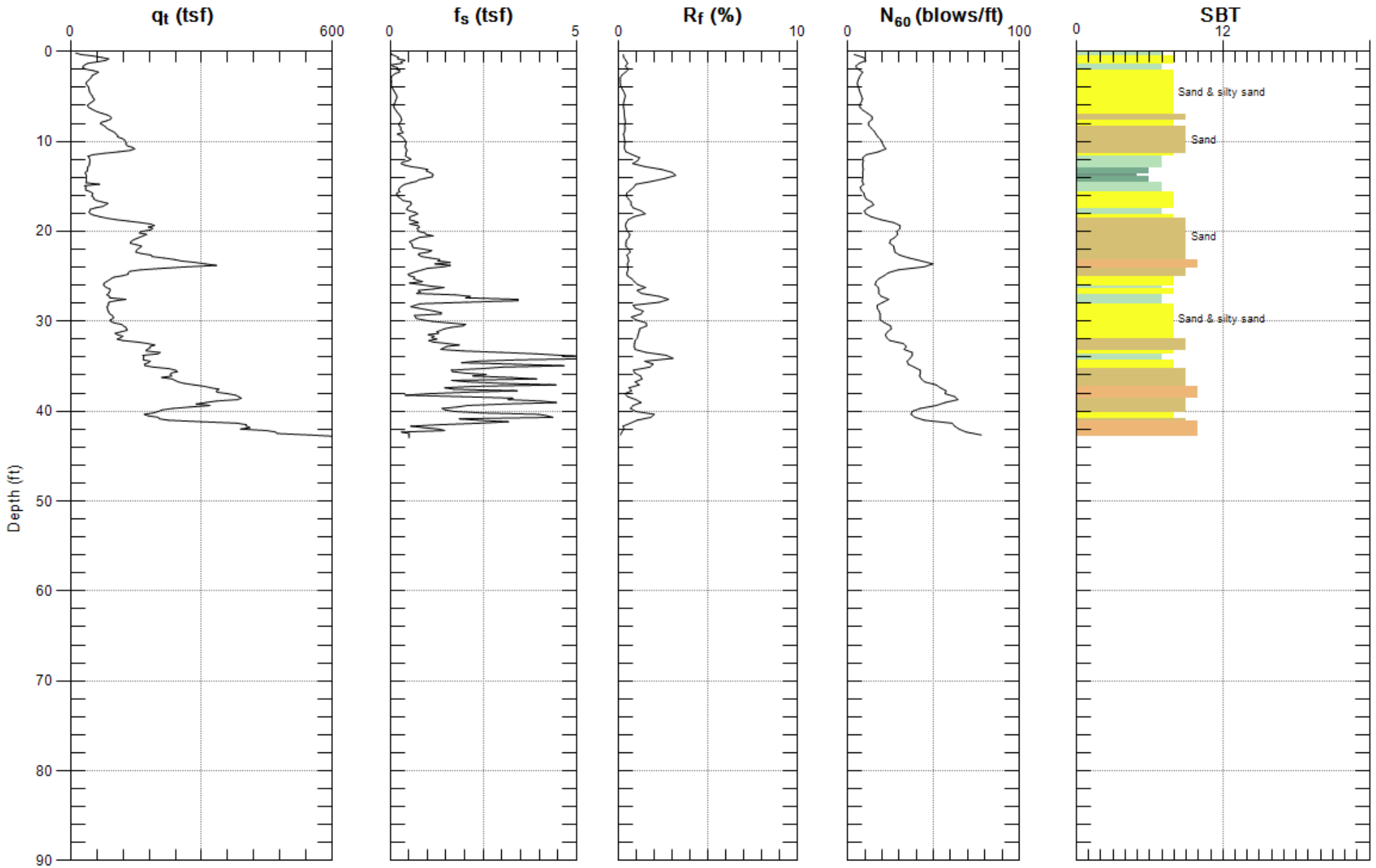
SBT: Soil Behavior Type (Robertson 1990)

GREGG

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-WCRN1

Engineer: CRAIG P.
Date: 9/27/2017 09:07

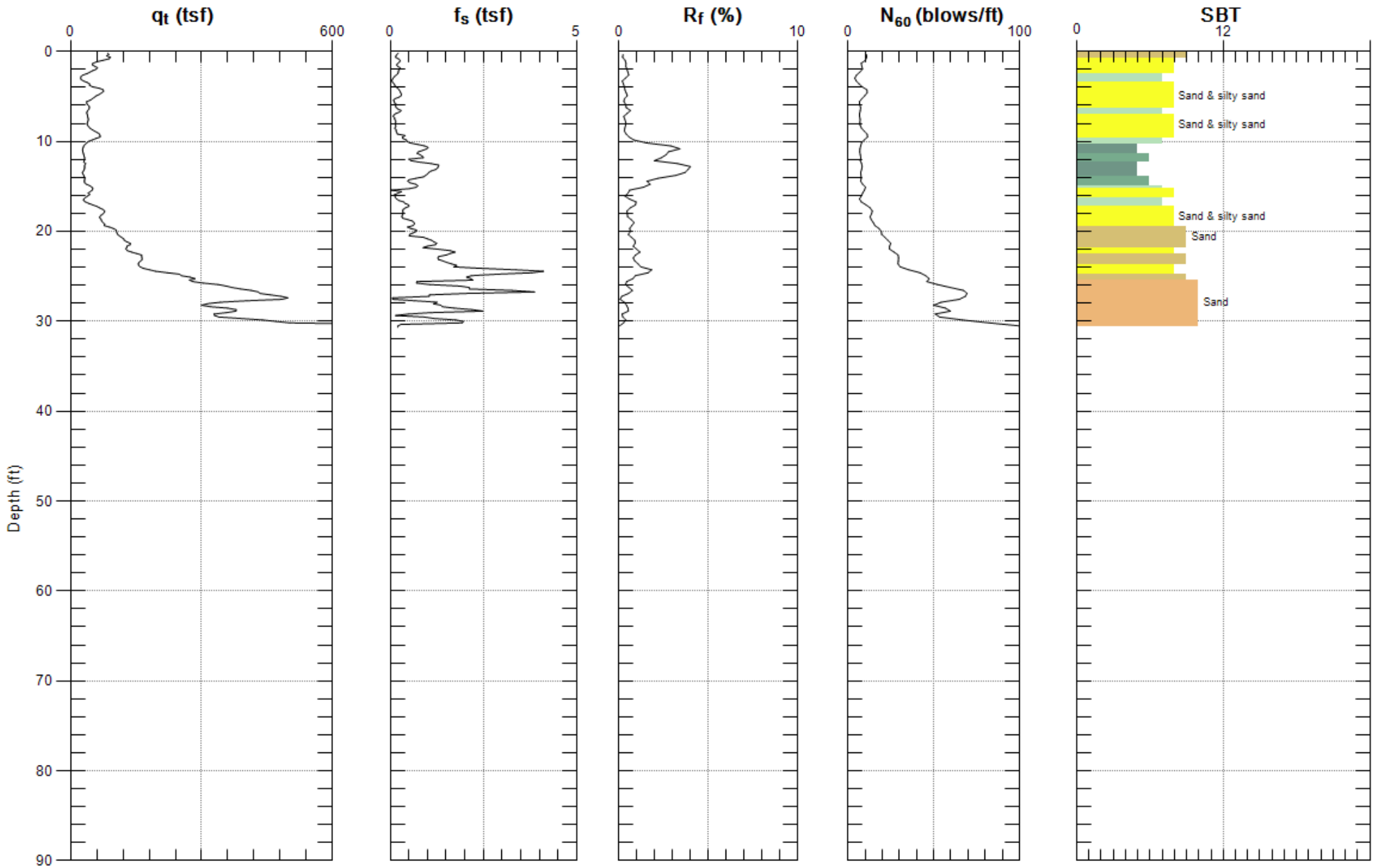



Max. Depth: 42.979 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-WCRN2
Engineer: CRAIG P.
Date: 9/27/2017 08:39




Max. Depth: 30.676 (ft)
Avg. Interval: 0.328 (ft)

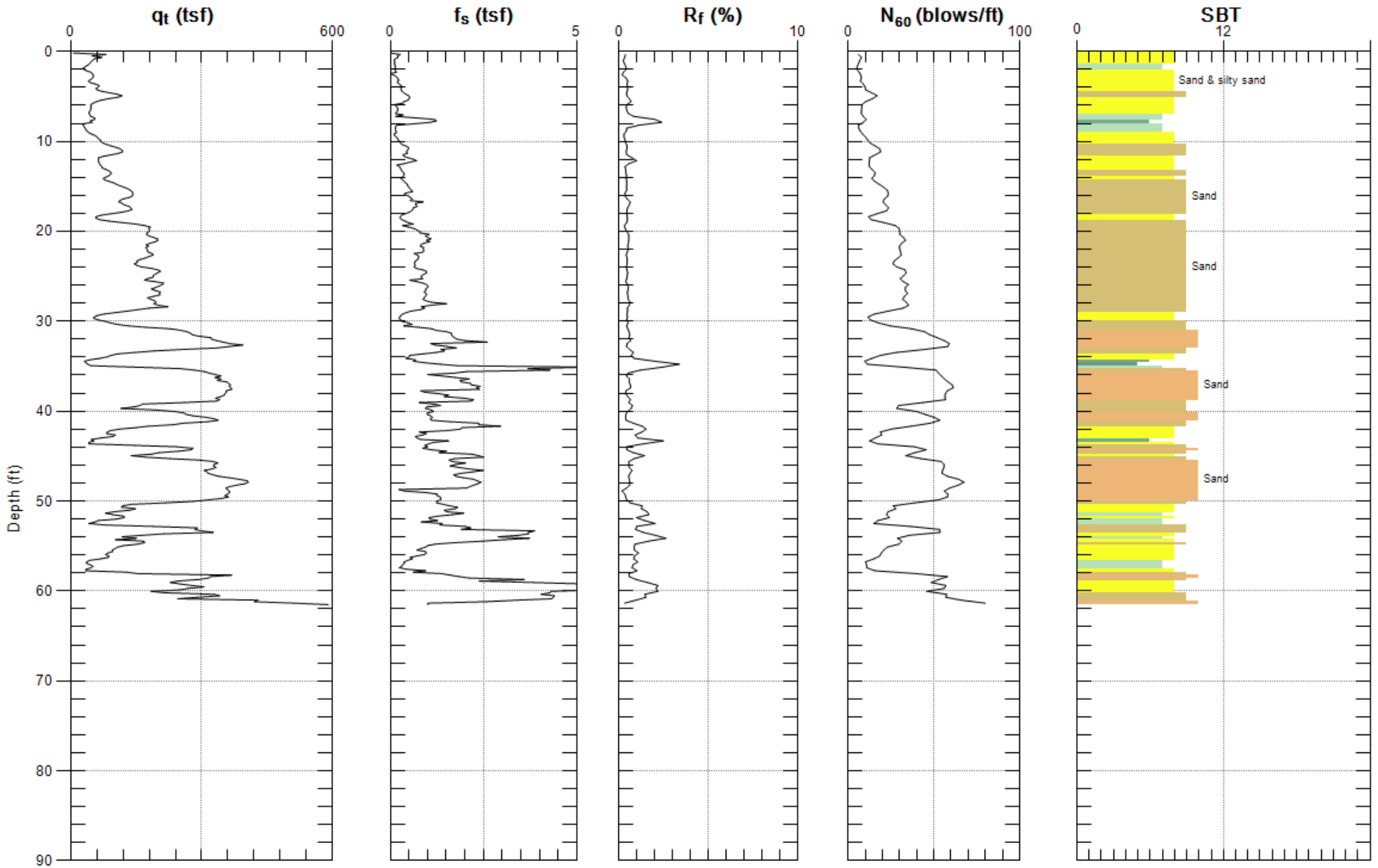
SBT: Soil Behavior Type (Robertson 1990)

GREGG

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-WCRS1

Engineer: CRAIG P.
Date: 9/27/2017 09:52




Max. Depth: 61.516 (ft)
Avg. Interval: 0.328 (ft)

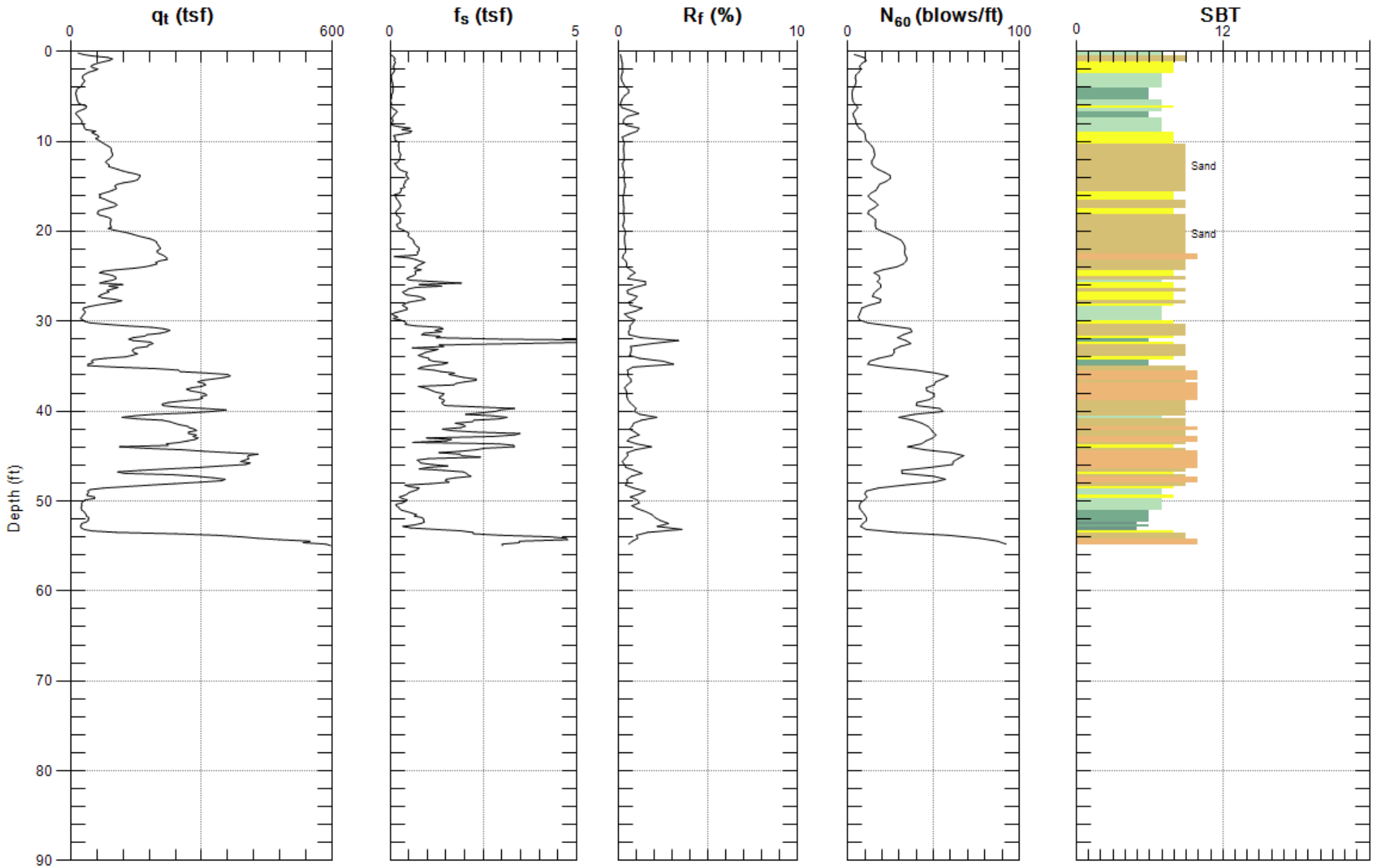
SBT: Soil Behavior Type (Robertson 1990)

GREGG

# OAKRIDGE GEO.

Site: MOOREPARK
Sounding: CPT-WCRS2

Engineer: CRAIG P.
Date: 9/27/2017 10:41

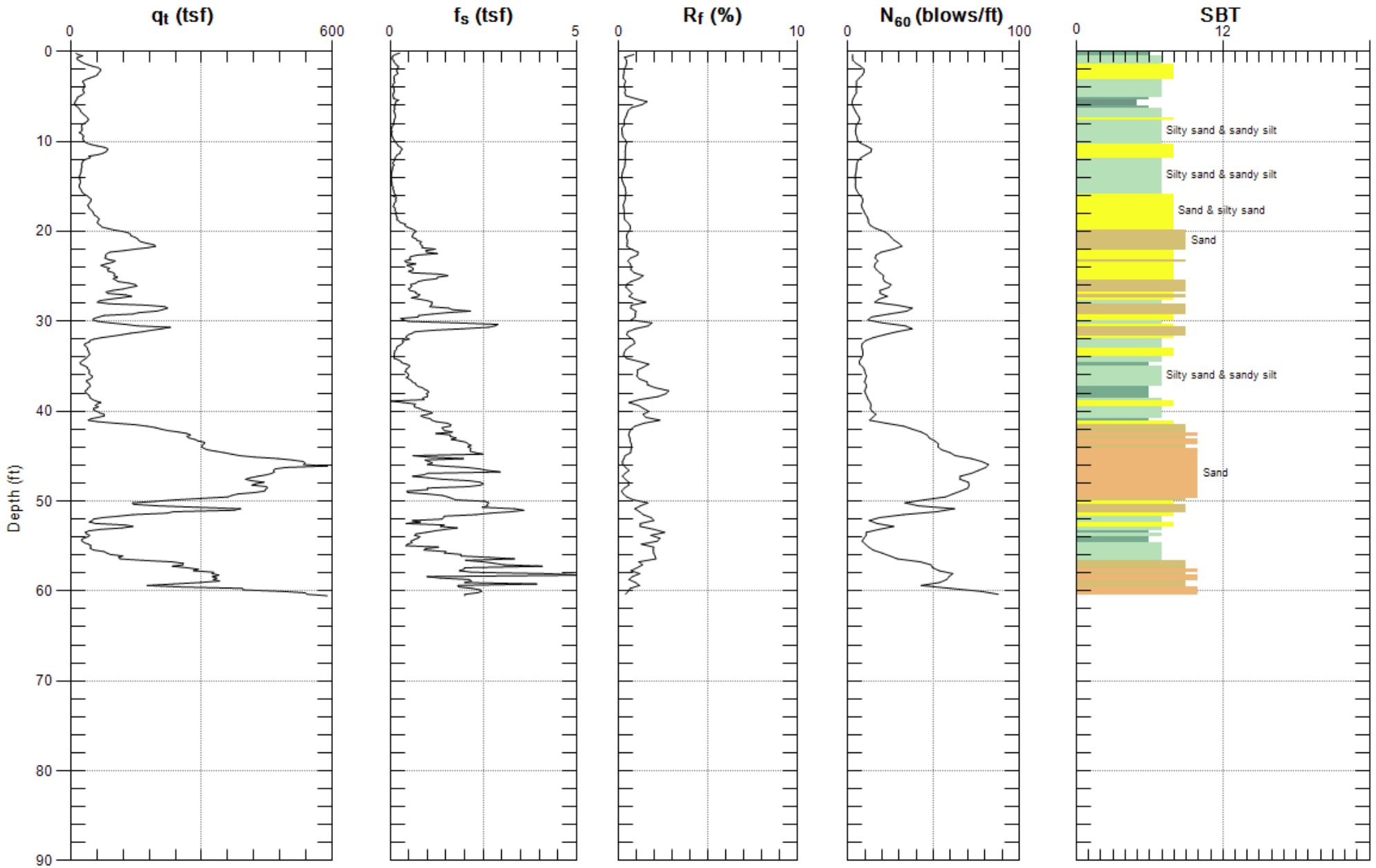



Max. Depth: 54.954 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

# OAKRIDGE GEO.

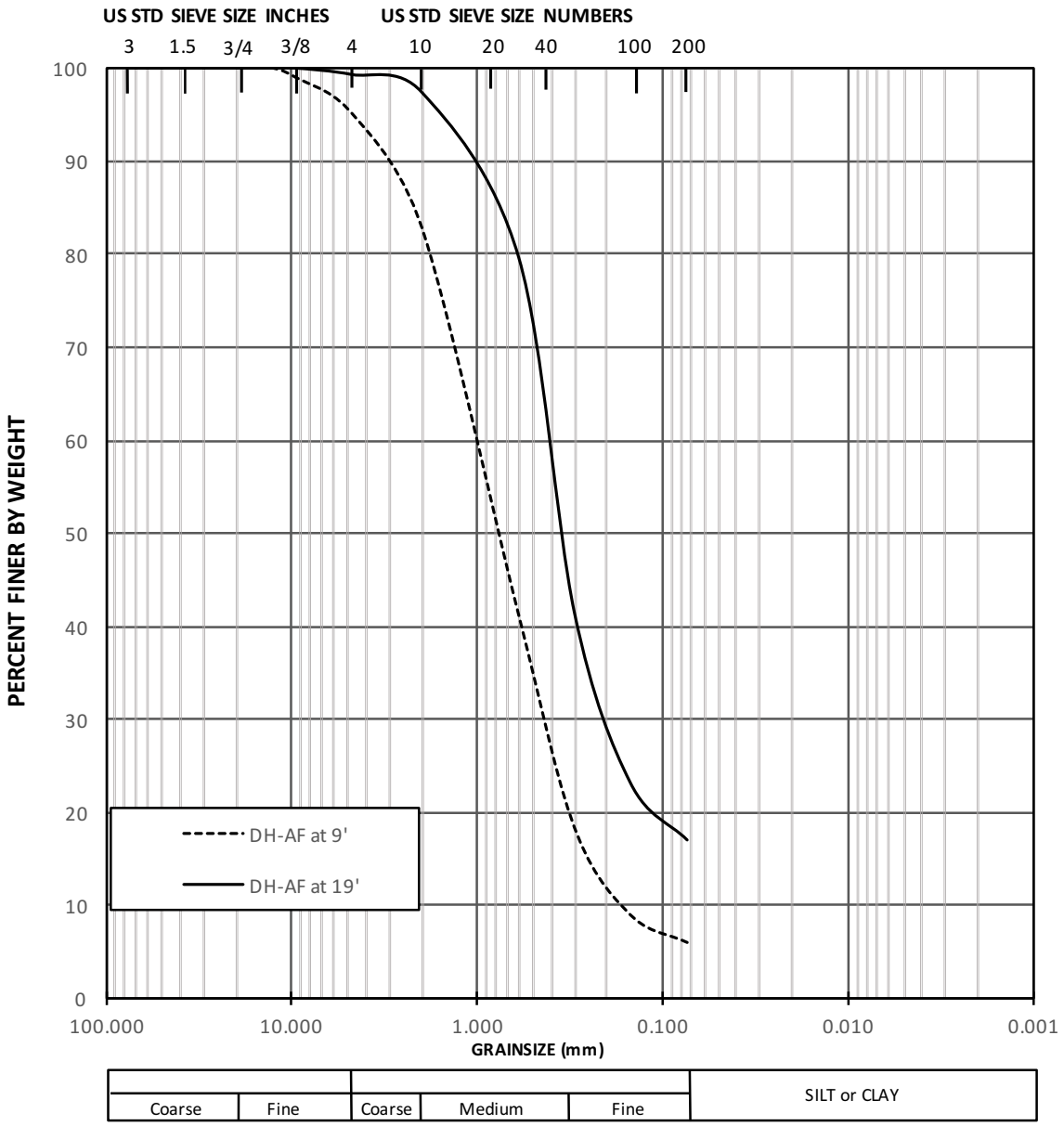
Site: MOOREPARK
Sounding: CPT-WCRS3
Engineer: CRAIG P.
Date: 9/27/2017 11:35




Max. Depth: 60.531 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

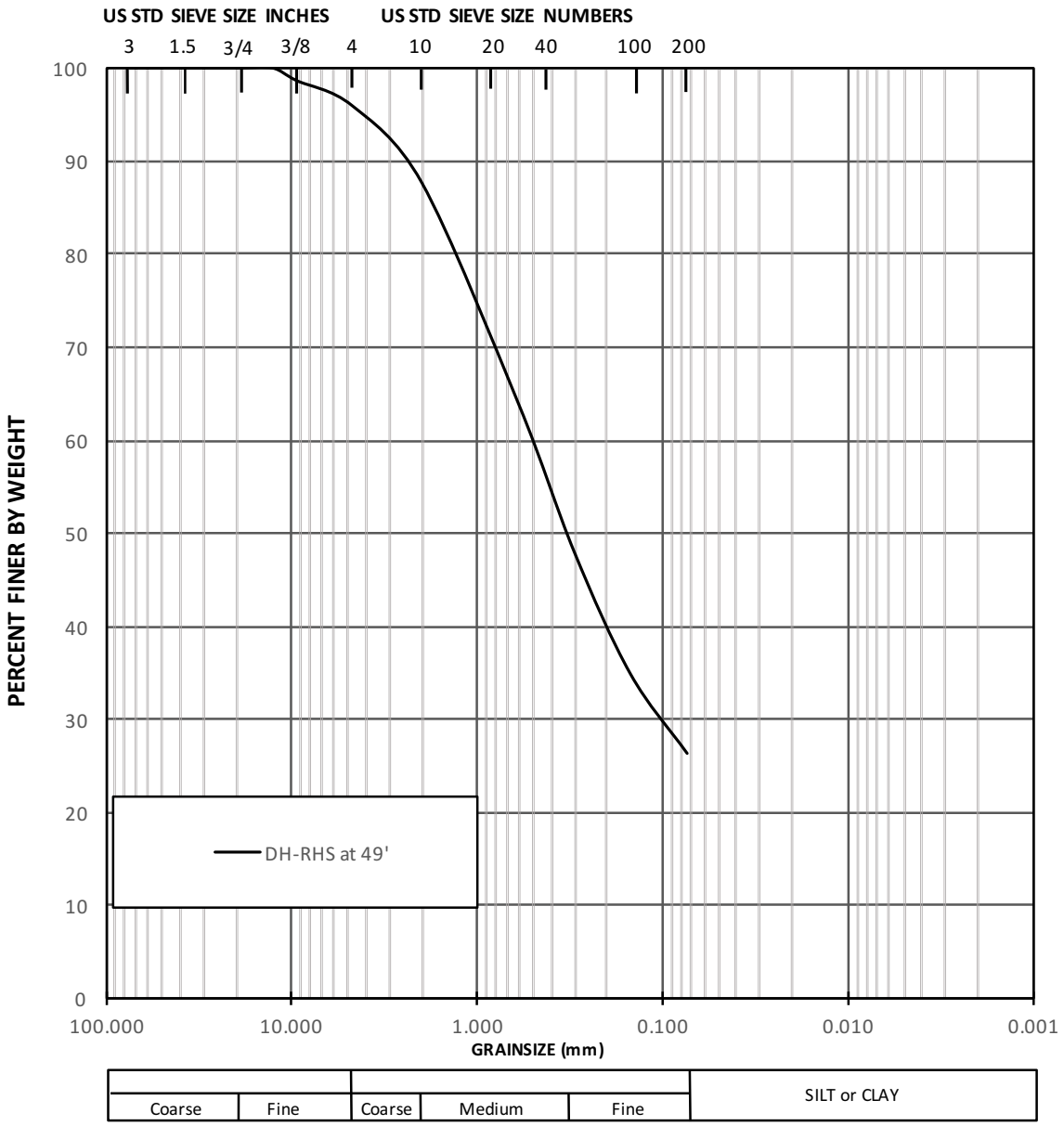
# APPENDIX B




| LOCATION | DEPTH | CLASSIFICATION | PASSING NO. 200 (%) |
|---|---|---|---|
| DH-AF | 9' | SAND with Silt (SP-SM) | 6 |
| DH-AF | 19' | Silty SAND (SM) | 17 |

**GRAINSIZE DISTRIBUTION**
**Moorpark Geohazards Study**
**Moorpark, California**

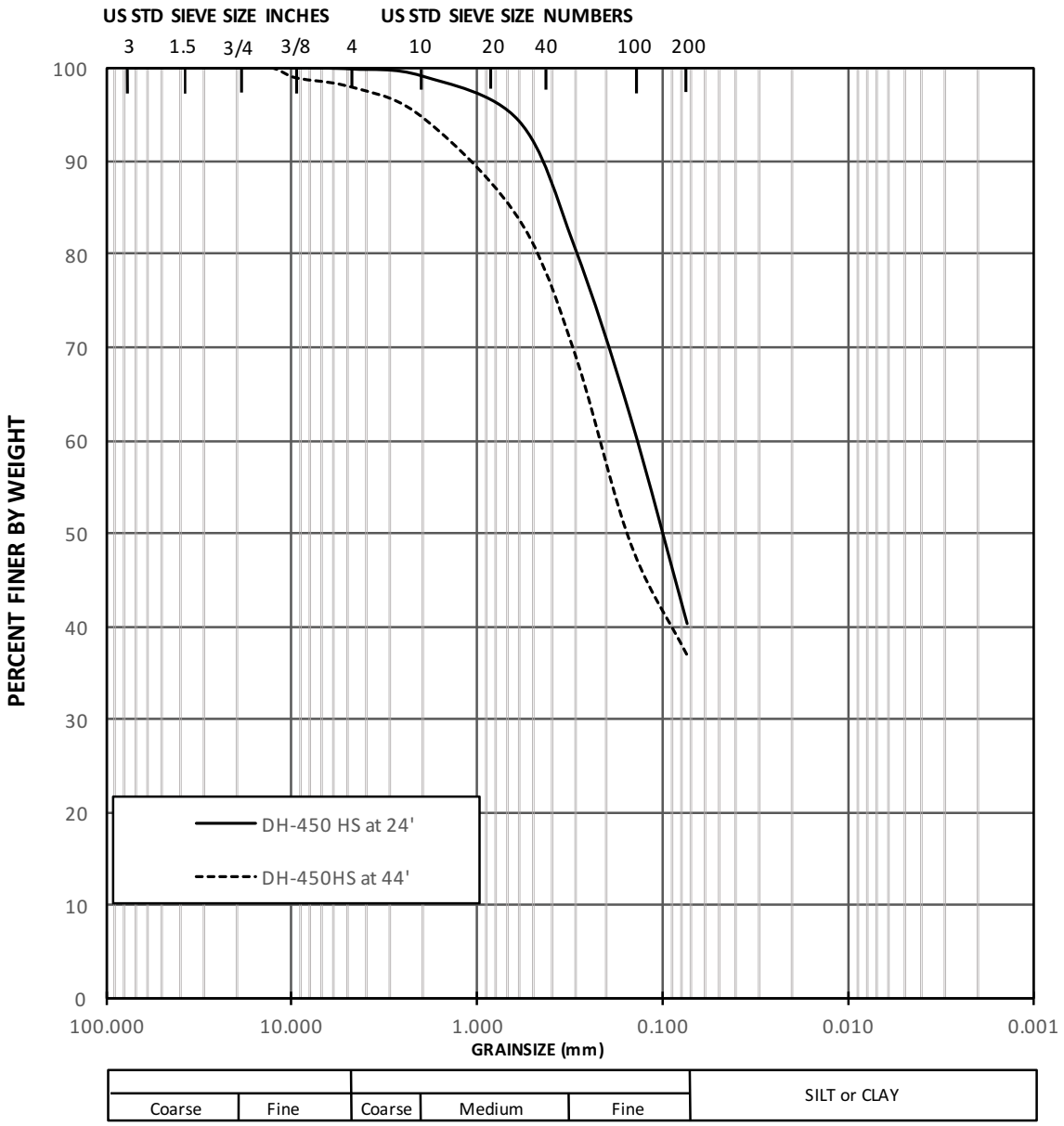
**PLATE B-1a**




| LOCATION | DEPTH | CLASSIFICATION | PASSING NO. 200 (%) |
|---|---|---|---|
| DH-RHS | 49' | Clayey SAND (SC) | 26 |

**GRAINSIZE DISTRIBUTION**
**Moorpark Geohazards Study**
**Moorpark, California**

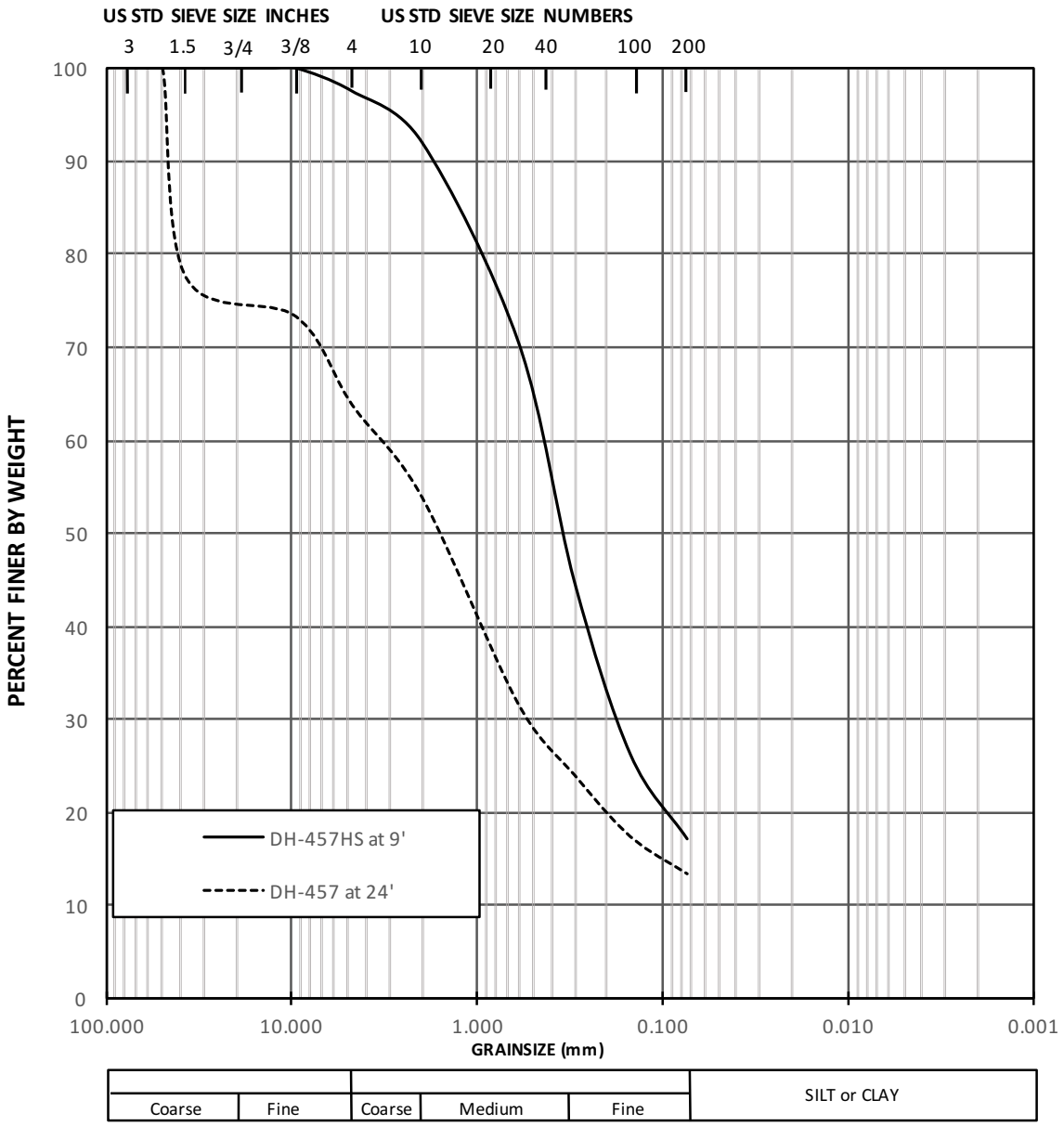
**PLATE B-1b**




| LOCATION | DEPTH | CLASSIFICATION | PASSING NO. 200 (%) |
|---|---|---|---|
| DH-450 HS | 24' | Silty to Clayey SAND (SM to SC) | 40 |
| DH-450 HS | 44' | Clayey SAND (SC) | 37 |

**GRAINSIZE DISTRIBUTION**
**Moorpark Geohazards Study**
**Moorpark, California**

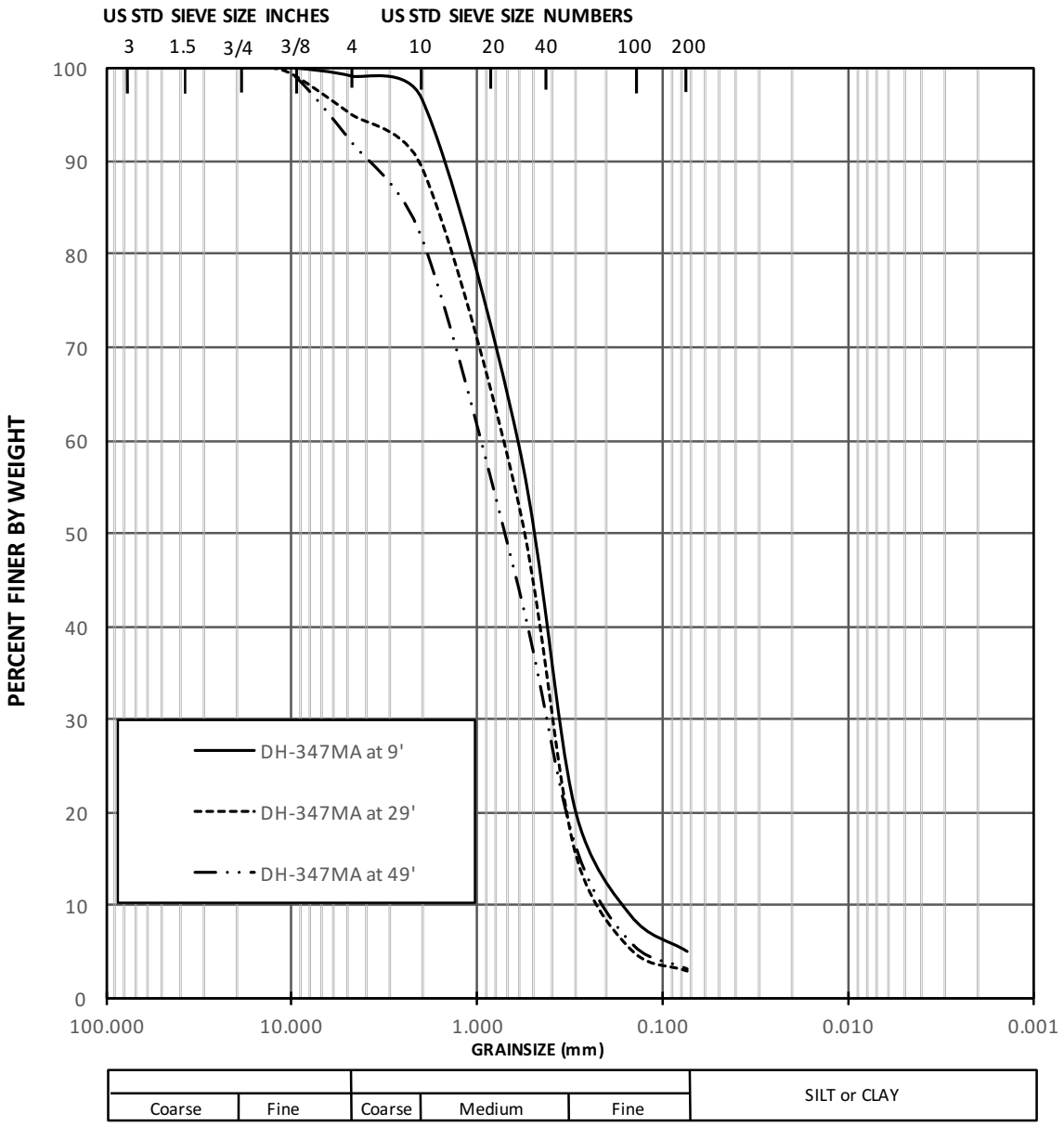
**PLATE B-1c**




| LOCATION | DEPTH | CLASSIFICATION | PASSING NO. 200 (%) |
|---|---|---|---|
| DH-457 HS | 9' | Clayey SAND (SC) | 17 |
| DH-457 HS | 24' | Clayey SAND (SC) | 13 |

**GRAINSIZE DISTRIBUTION**
**Moorpark Geohazards Study**
**Moorpark, California**

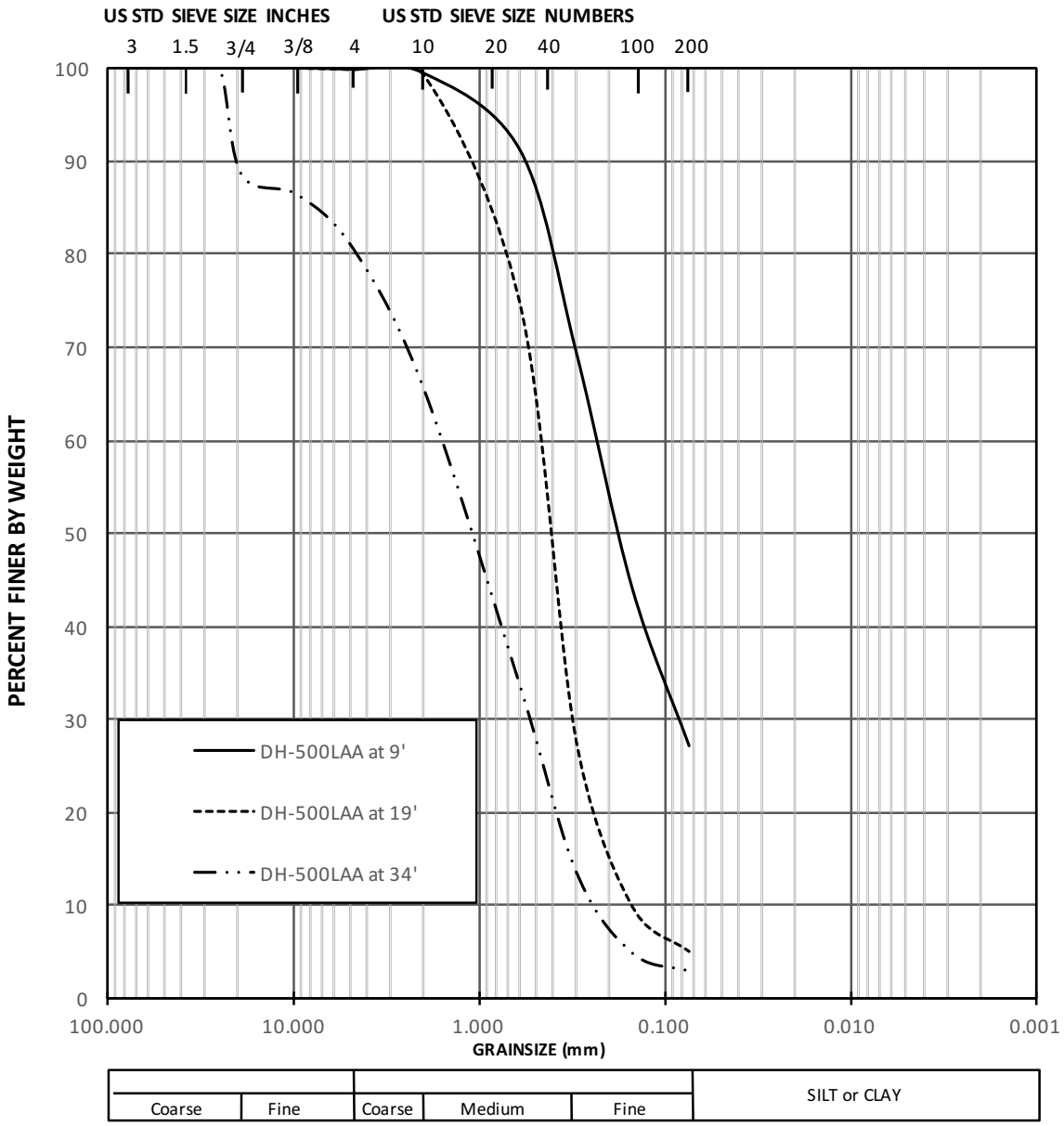
**PLATE B-1d**




| LOCATION | DEPTH | CLASSIFICATION | PASSING NO. 200 (%) |
|---|---|---|---|
| DH-347MA | 9' | SAND with Silt (SP-SM) | 5 |
| DH-347MA | 29' | SAND (SP) | 3 |
| DH-347MA | 49' | SAND (SP) | 3 |

**GRAINSIZE DISTRIBUTION**
**Moorpark Geohazards Study**
**Moorpark, California**

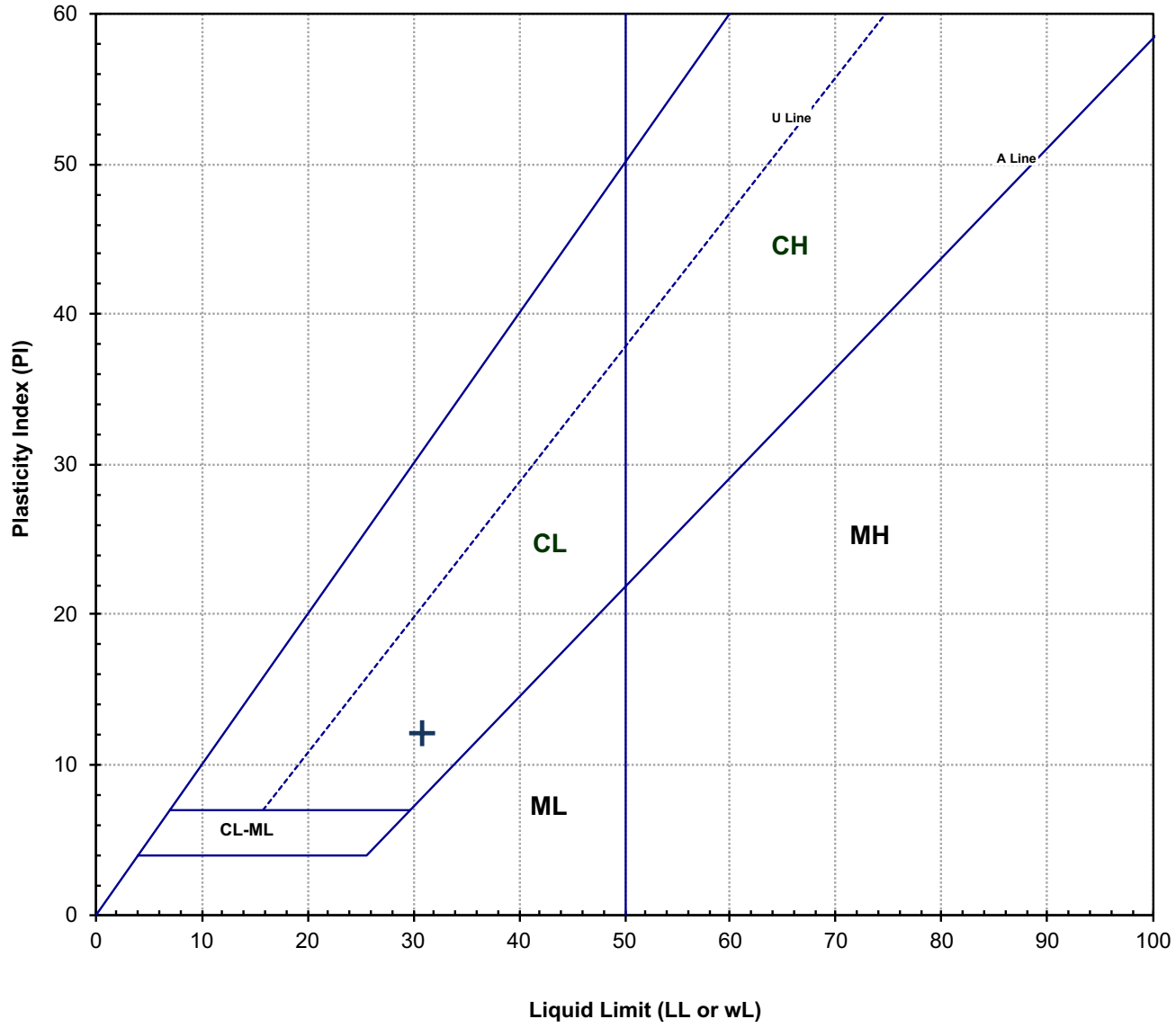
**PLATE B-1e**




| LOCATION | DEPTH | CLASSIFICATION | PASSING NO. 200 (%) |
|---|---|---|---|
| DH-500LAA | 9' | Clayey SAND (SC) | 27 |
| DH-500LAA | 19' | SAND with Silt (SP-SM) | 5 |
| DH-500LAA | 34' | SAND (SP) | 3 |

**GRAINSIZE DISTRIBUTION**
**Moorpark Geohazards Study**
**Moorpark, California**

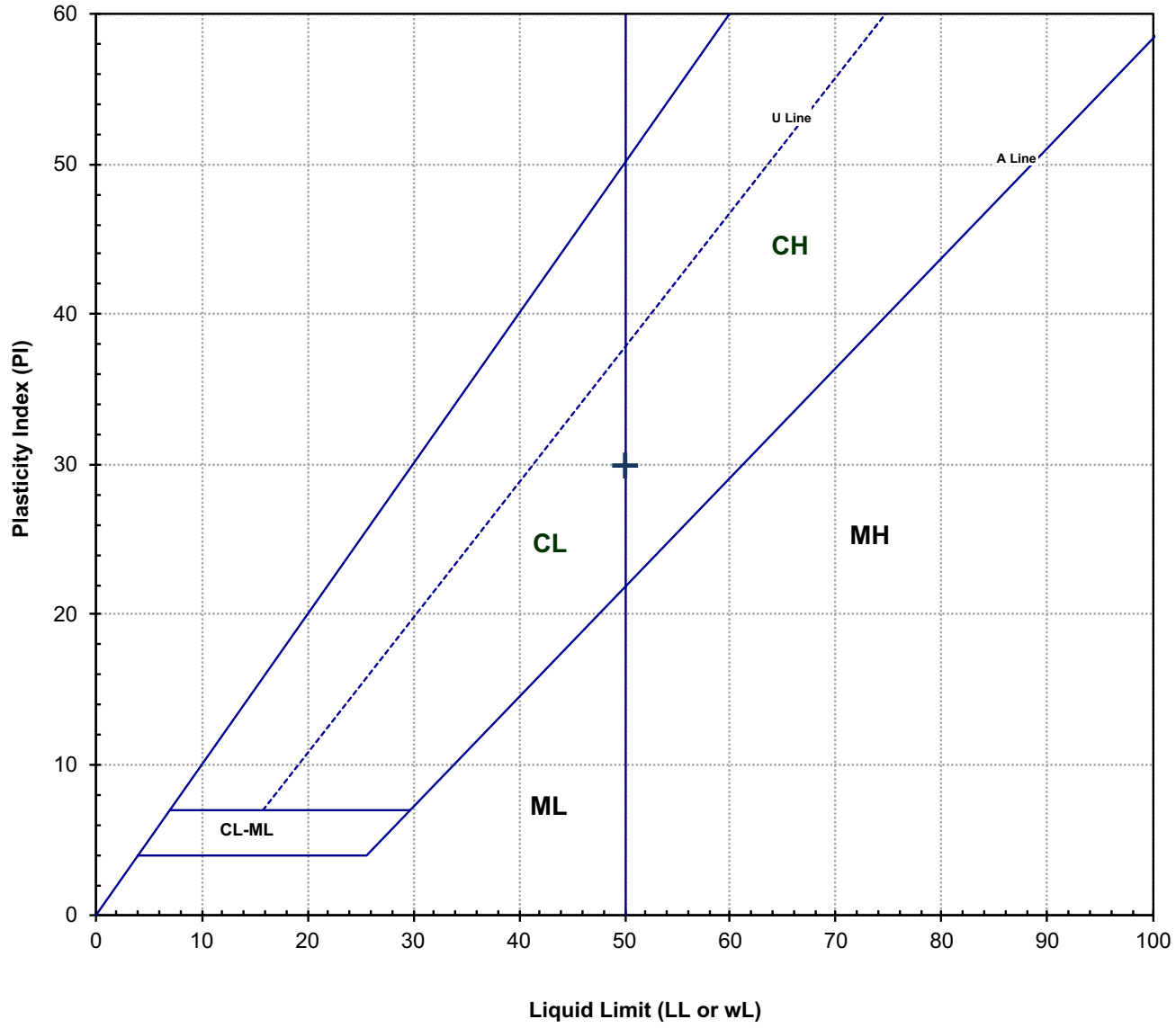
**PLATE B-1f**




| | | CLASSIFICATION | LIQUID LIMIT (LL) | PLASTIC LIMIT (PL) | PLASTICITY INDEX (PI) |
|---|---|---|---|---|---|
| **LOCATION** | DH-AF | | | | |
| **DEPTH** | 44' | CLAY (CL) | 31 | 19 | 12 |

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

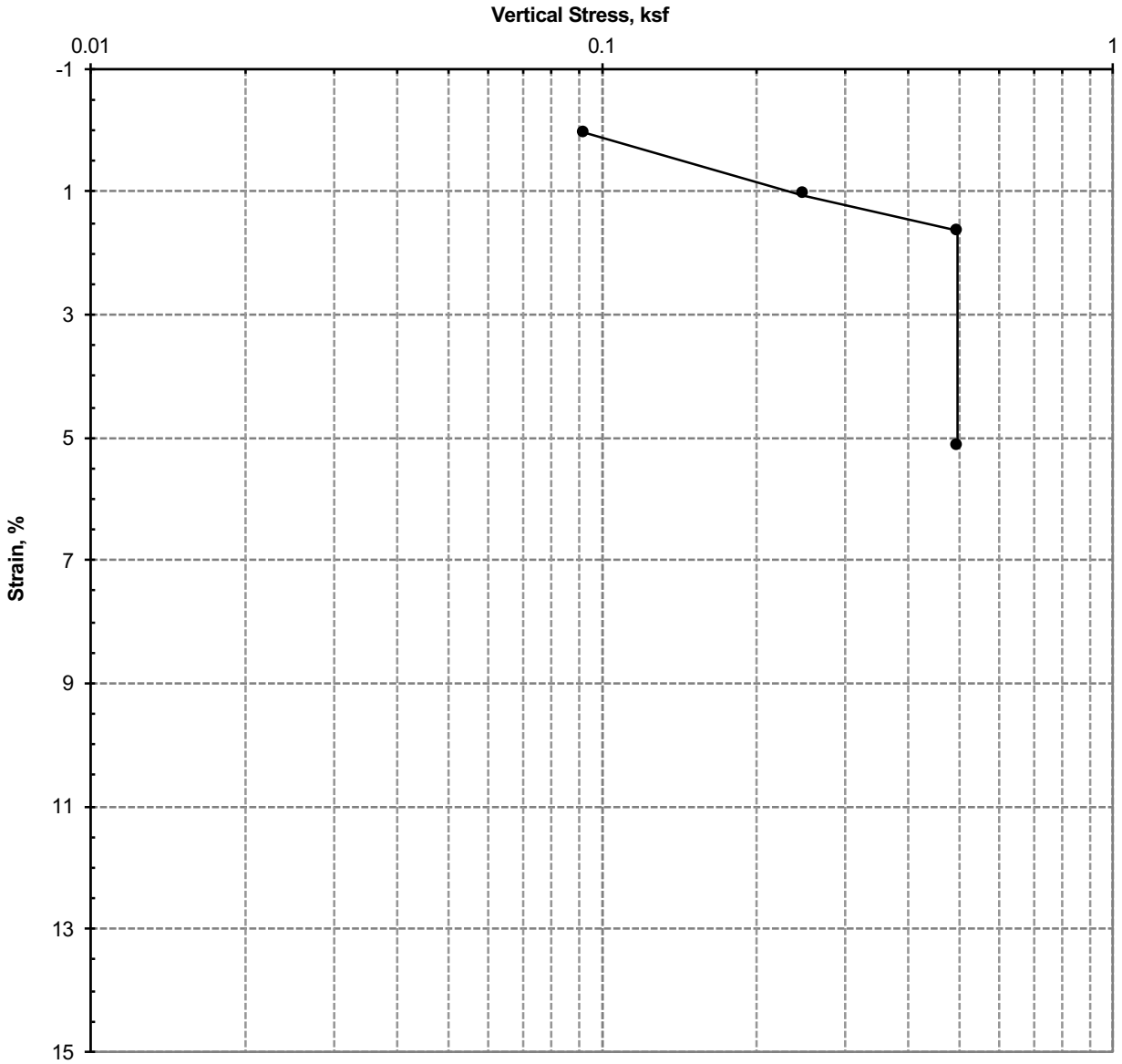
**PLATE B-2a**




| | | CLASSIFICATION | LIQUID LIMIT (LL) | PLASTIC LIMIT (PL) | PLASTICITY INDEX (PI) |
|---|---|---|---|---|---|
| **LOCATION** | DH-500LAA | | | | |
| **DEPTH** | 44' | Sandy CLAY (CL/CH) | 50 | 20 | 30 |

**MOORPARK GEOHAZARDS STUDY**
**Moorpark, California**

**PLATE B-2b**




| SAMPLE ID | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | DH-AF , #1 , 4.0 ft | |
| | USCS Classification: | Poorly-graded SAND with silt (SP-SM): brown, moist | |

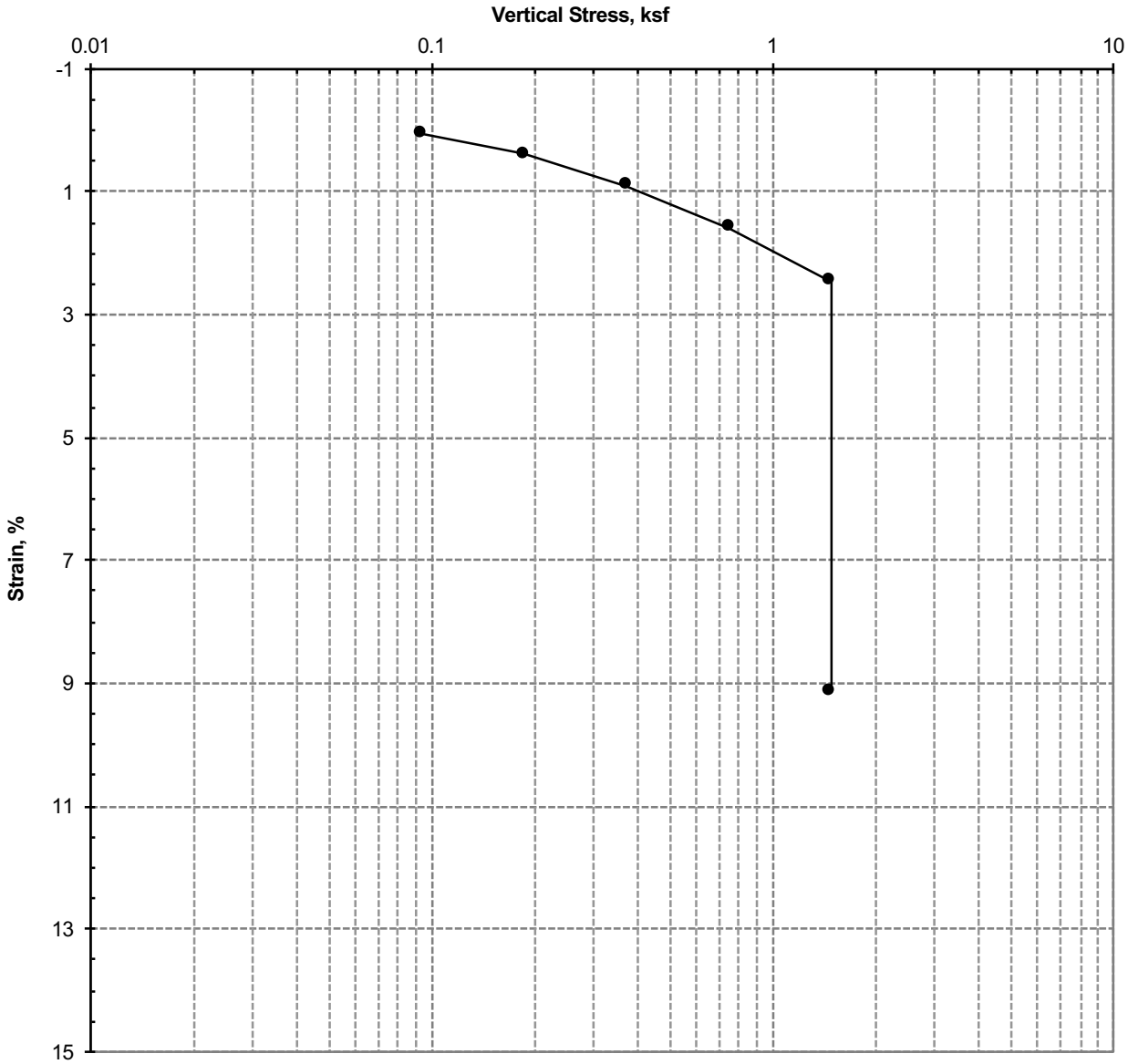
| PROPERTIES | Initial | Final |
|---|---|---|
| Water Content, % | 2.7% | 18.7% |
| Dry Unit Weight, pcf | 95.0 | 100.2 |
| Saturation, % | 10% | 76% |
| Void Ratio | 0.74 | 0.65 |
| Diameter, in | 2.42 | 2.42 |
| Height, in | 1.00 | 0.95 |

| SUMMARY | | |
|---|---|---|
| | Preconsolidation Pressure, ksf | --- |
| | Inundation Increment, ksf | 0.50 |
| | Liquid Limit | --- |
| | Plastic Limit | --- |
| | Plasticity Index | --- |
| | Passing #200 | --- |
| | Estimated Gs | 2.65 |

| REMARKS | |
|---|---|
| | Test Method: ASTM D4546 |
| | Project: Moorpark Downtown |

**COLLAPSE TEST**

**PLATE B-3a**




| SAMPLE I | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | DH-AF , #3 , 14.0 ft | |
| | USCS Classification: | Silty SAND (SM): light brown, moist | |

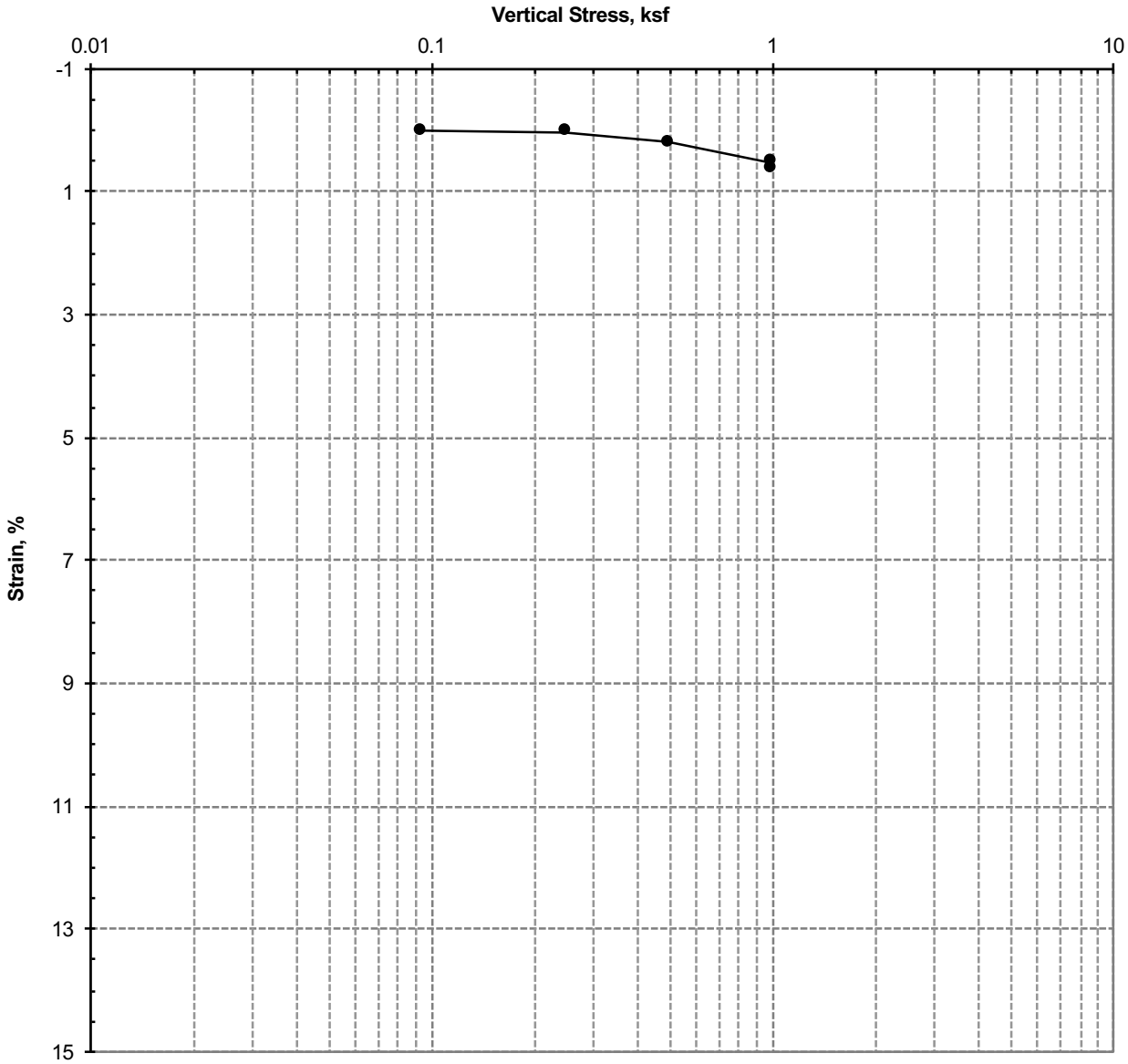
| PROPERTIES | Initial | Final |
|---|---|---|
| Water Content, % | 4.1% | 17.6% |
| Dry Unit Weight, pcf | 98.6 | 108.5 |
| Saturation, % | 16% | 89% |
| Void Ratio | 0.68 | 0.52 |
| Diameter, in | 2.42 | 2.42 |
| Height, in | 1.00 | 0.91 |

| SUMMARY | | |
|---|---|---|
| | Preconsolidation Pressure, ksf | --- |
| | Inundation Increment, ksf | 1.49 |
| | Liquid Limit | --- |
| | Plastic Limit | --- |
| | Plasticity Index | --- |
| | Passing #200 | --- |
| | Estimated Gs | 2.65 |

| REMARKS | |
|---|---|
| | Test Method: ASTM D4546 |
| | Project: Moorpark Downtown |

**COLLAPSE TEST**

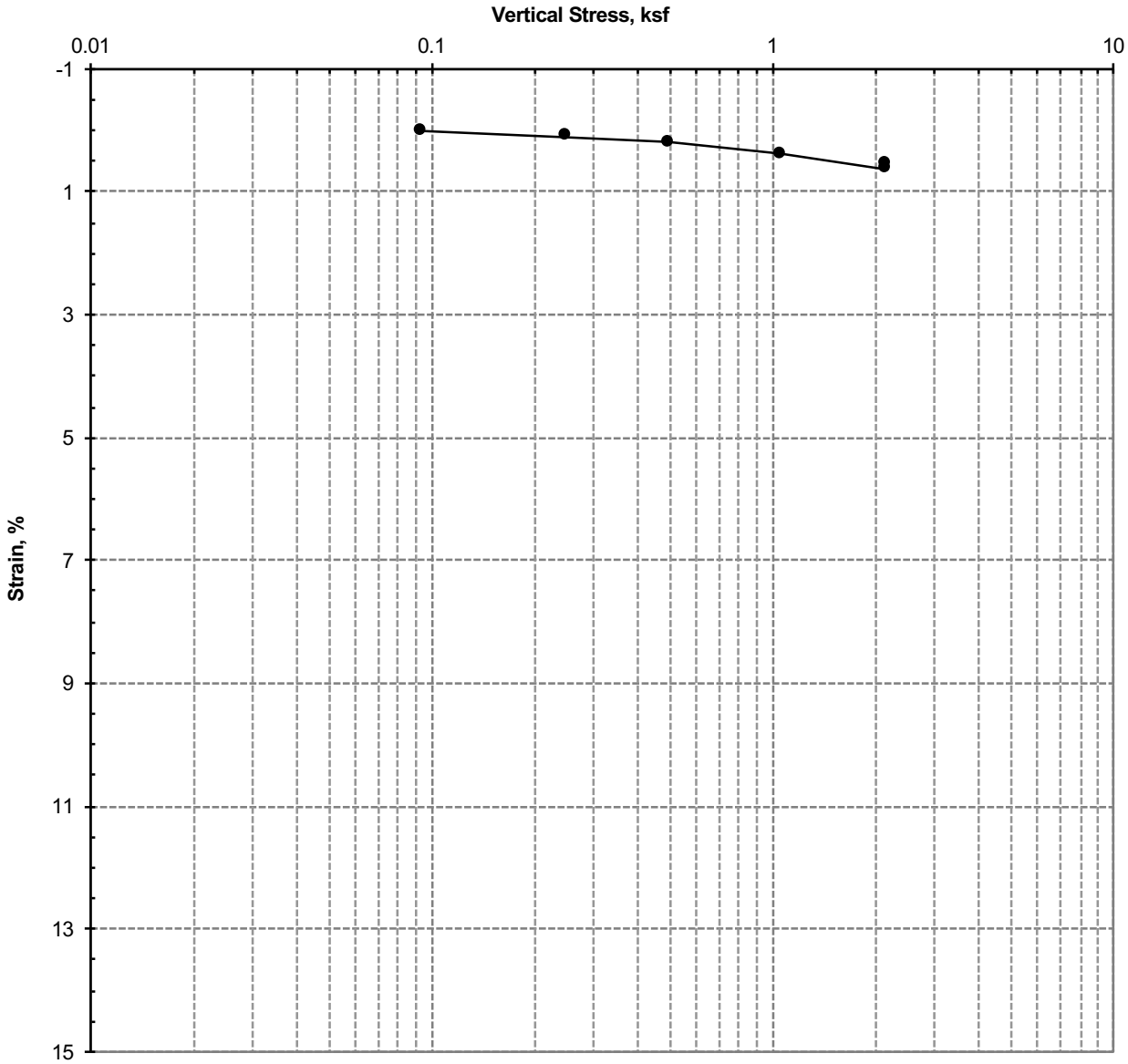
**PLATE B-3b**




| SAMPLE I | | | | SUMMARY | | |
|---|---|---|---|---|---|---|
| | Boring, Sample #, Depth | DH-RHS , #3 , 9.0 ft | | | Preconsolidation Pressure, ksf | --- |
| | USCS Classification: | SILT (ML): light brown, moist | | | Inundation Increment, ksf | 0.99 |
| | | | | | Liquid Limit | --- |
| PROPERTIES | | Initial | Final | | Plastic Limit | --- |
| | Water Content, % | 27.7% | 32.1% | | Plasticity Index | --- |
| | Dry Unit Weight, pcf | 88.2 | 88.8 | | Passing #200 | --- |
| | Saturation, % | 84% | 98% | | Estimated Gs | 2.65 |
| | Void Ratio | 0.88 | 0.86 | REMARKS | Test Method: ASTM D4546 | |
| | Diameter, in | 2.42 | 2.42 | | Project: Moorpark Downtown | |
| | Height, in | 1.00 | 0.99 | | | |

**COLLAPSE TEST**

**PLATE B-3c**




| SAMPLE ID | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | DH-RHS , #5 , 19.0 ft | |
| | USCS Classification: | Lean CLAY (CL): yellow brown, moist | |

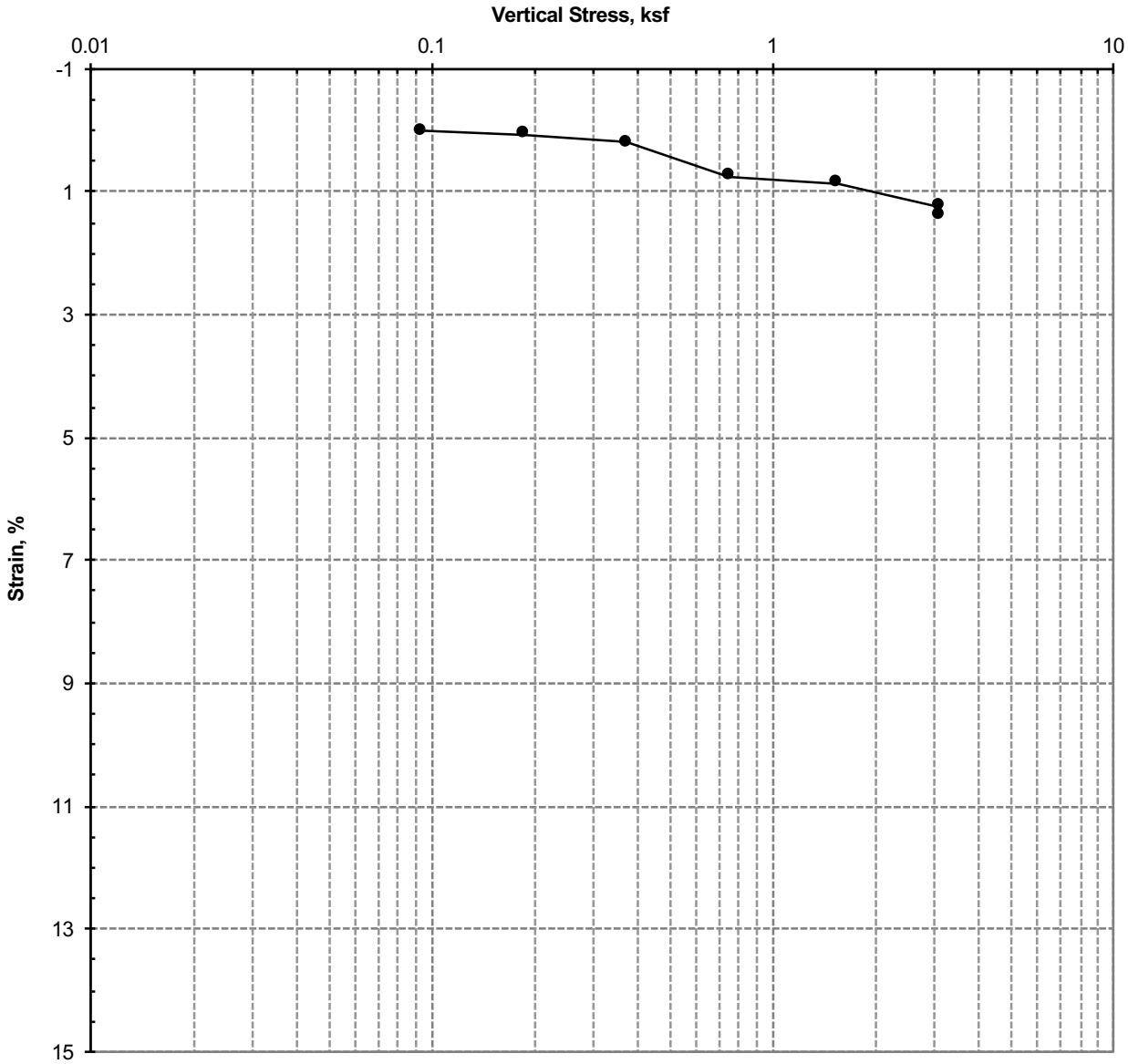
| PROPERTIES | Initial | Final |
|---|---|---|
| Water Content, % | 16.1% | 20.6% |
| Dry Unit Weight, pcf | 103.3 | 103.9 |
| Saturation, % | 71% | 92% |
| Void Ratio | 0.60 | 0.59 |
| Diameter, in | 2.42 | 2.42 |
| Height, in | 1.00 | 0.99 |

| SUMMARY | |
|---|---|
| Preconsolidation Pressure, ksf | --- |
| Inundation Increment, ksf | 3.11 |
| Liquid Limit | --- |
| Plastic Limit | --- |
| Plasticity Index | --- |
| Passing #200 | --- |
| Estimated Gs | 2.65 |

| REMARKS | |
|---|---|
| Test Method: ASTM D4546 | |
| Project: Moorpark Downtown | |

**COLLAPSE TEST**

**PLATE B-3d**

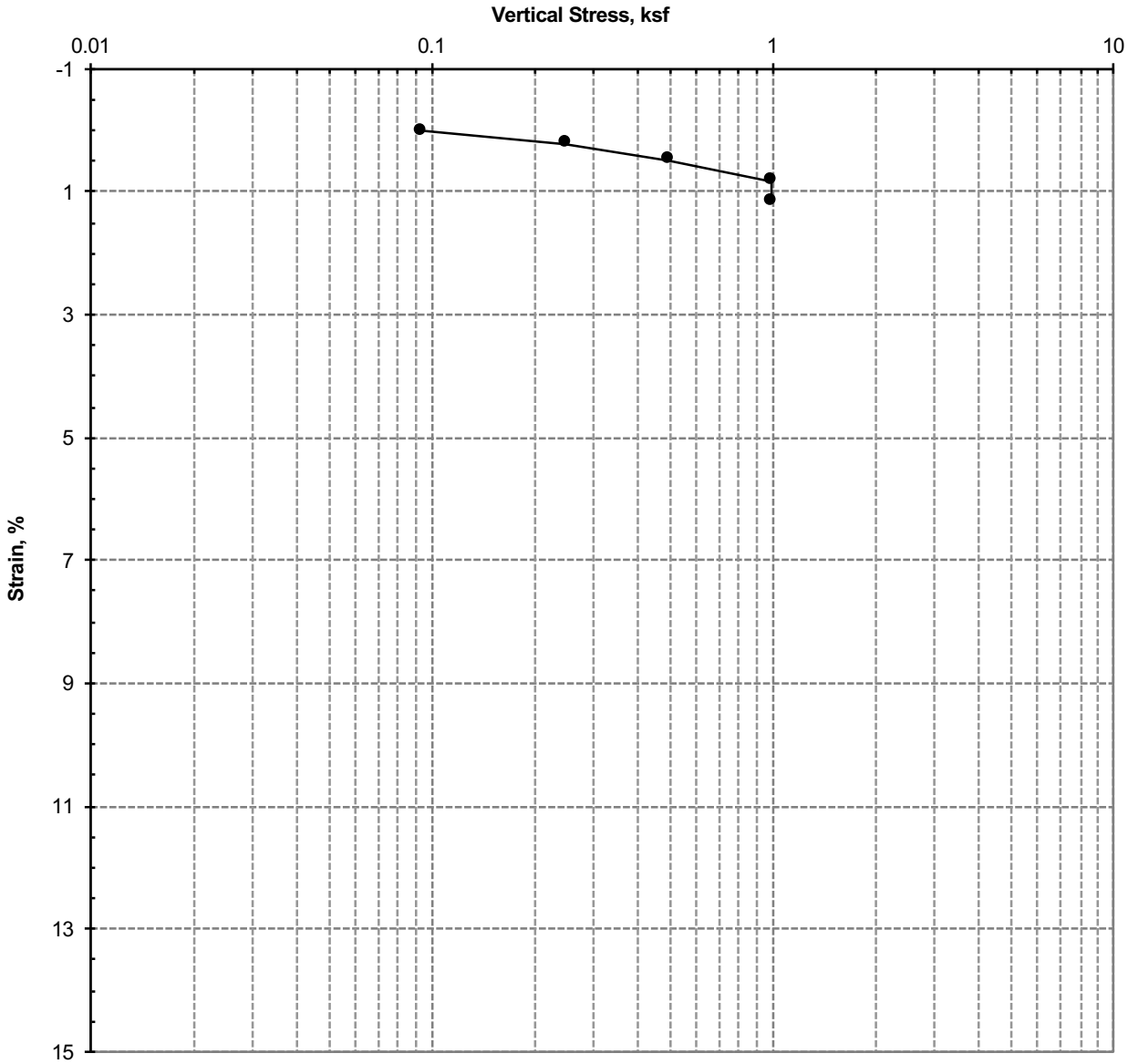



| SAMPLE ID | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | DH-RHS , #7 , 29.0 ft | |
| | USCS Classification: | Poorly-graded SAND (SP): red yellow, moist, slightly cemented | |
| PROPERTIES | | Initial | Final |
| | Water Content, % | 10.8% | 14.6% |
| | Dry Unit Weight, pcf | 111.9 | 113.5 |
| | Saturation, % | 60% | 84% |
| | Void Ratio | 0.48 | 0.46 |
| | Diameter, in | 2.42 | 2.42 |
| | Height, in | 1.00 | 0.99 |

| SUMMARY | | |
|---|---|---|
| | Preconsolidation Pressure, ksf | --- |
| | Inundation Increment, ksf | 3.11 |
| | Liquid Limit | --- |
| | Plastic Limit | --- |
| | Plasticity Index | --- |
| | Passing #200 | --- |
| | Estimated Gs | 2.65 |
| REMARKS | Test Method: ASTM D4546 | |
| | Project: Moorpark Downtown | |

**COLLAPSE TEST**

**PLATE B-3e**




| SAMPLE I | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | 450HS , #2 , 9.0 ft | |
| | USCS Classification: | Silty SAND (SM): light brown, moist | |

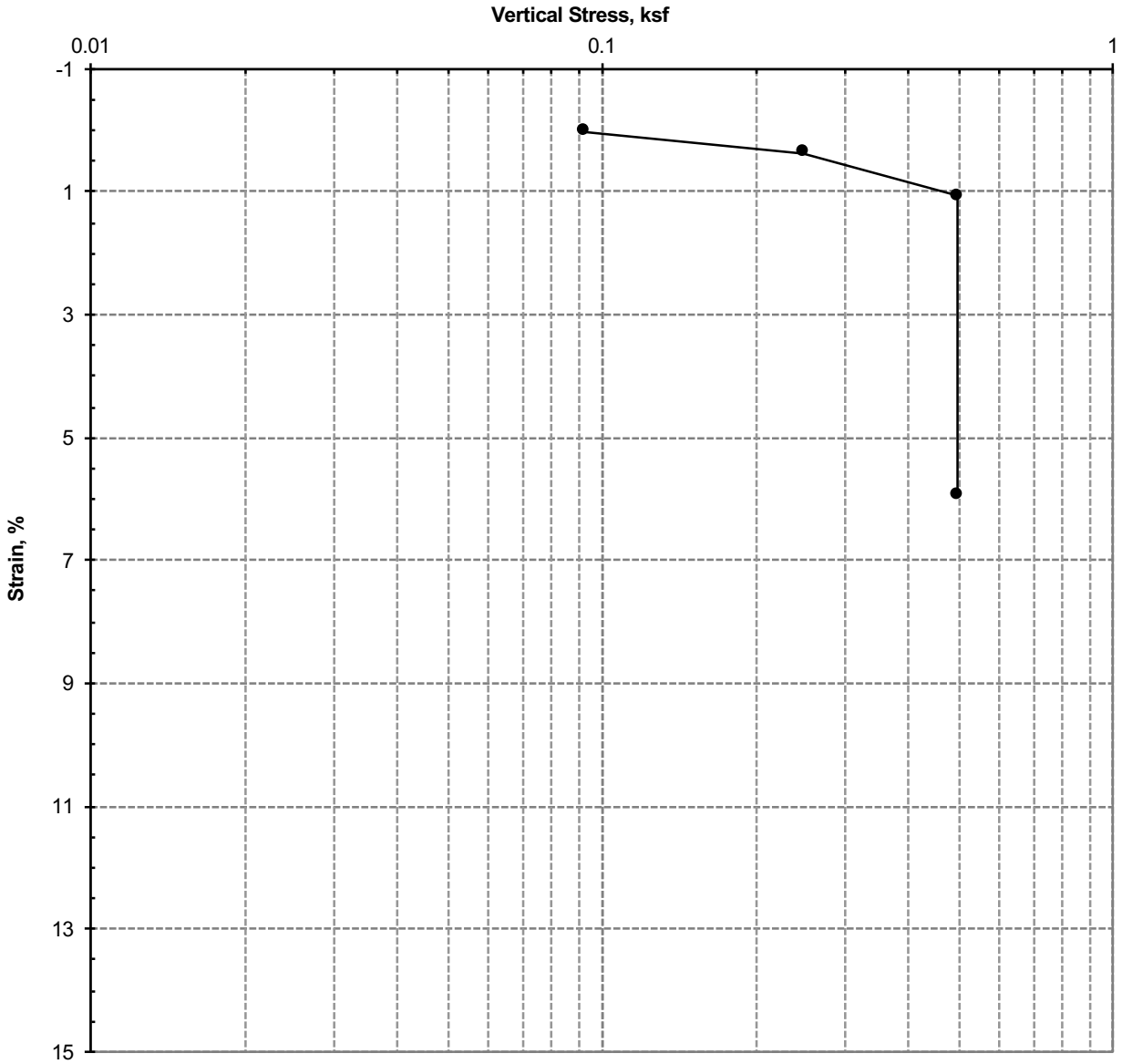
| PROPERTIES | Initial | Final |
|---|---|---|
| Water Content, % | 8.3% | 20.2% |
| Dry Unit Weight, pcf | 99.6 | 100.7 |
| Saturation, % | 33% | 83% |
| Void Ratio | 0.66 | 0.64 |
| Diameter, in | 2.42 | 2.42 |
| Height, in | 1.00 | 0.99 |

| SUMMARY | |
|---|---|
| Preconsolidation Pressure, ksf | --- |
| Inundation Increment, ksf | 0.99 |
| Liquid Limit | --- |
| Plastic Limit | --- |
| Plasticity Index | --- |
| Passing #200 | --- |
| Estimated Gs | 2.65 |

| REMARKS | |
|---|---|
| Test Method: ASTM D4546 | |
| Project: Moorpark Downtown | |

**COLLAPSE TEST**

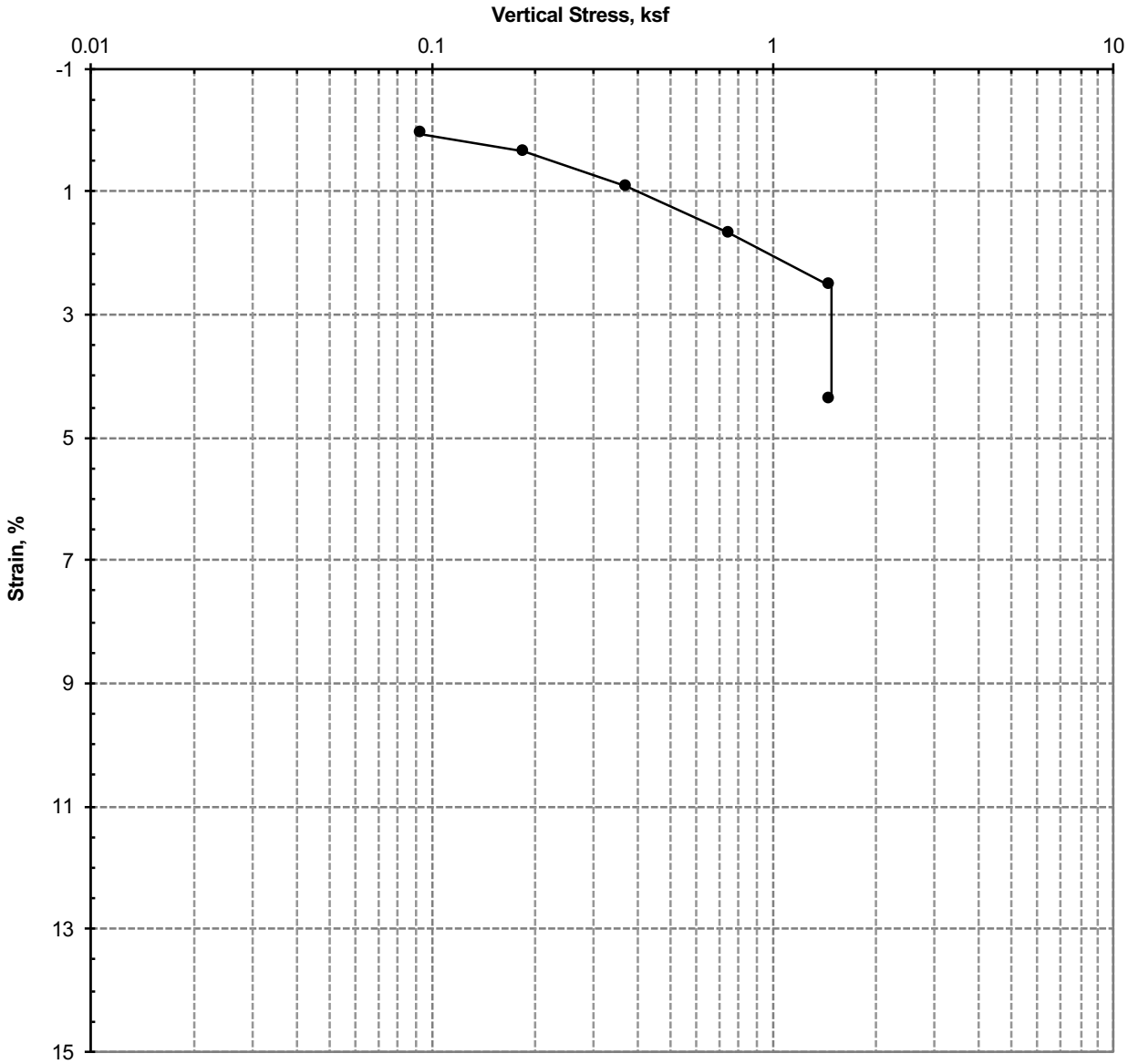
**PLATE B-3f**




| SAMPLE ID | | | | SUMMARY | | |
|---|---|---|---|---|---|---|
| | Boring, Sample #, Depth | 457HS , #1 , 4.0 ft | | | Preconsolidation Pressure, ksf | --- |
| | USCS Classification: | Poorly-graded SAND with silt (SP-SM): dark brown, moist | | | Inundation Increment, ksf | 0.50 |
| | | | | | Liquid Limit | --- |
| | | | | | Plastic Limit | --- |
| PROPERTIES | | Initial | Final | | Plasticity Index | --- |
| | Water Content, % | 5.4% | 21.2% | | Passing #200 | --- |
| | Dry Unit Weight, pcf | 93.3 | 99.2 | | Estimated Gs | 2.65 |
| | Saturation, % | 18% | 84% | REMARKS | Test Method: ASTM D4546 | |
| | Void Ratio | 0.77 | 0.67 | | Project: Moorpark Downtown | |
| | Diameter, in | 2.42 | 2.42 | | | |
| | Height, in | 1.00 | 0.94 | | | |

**COLLAPSE TEST**

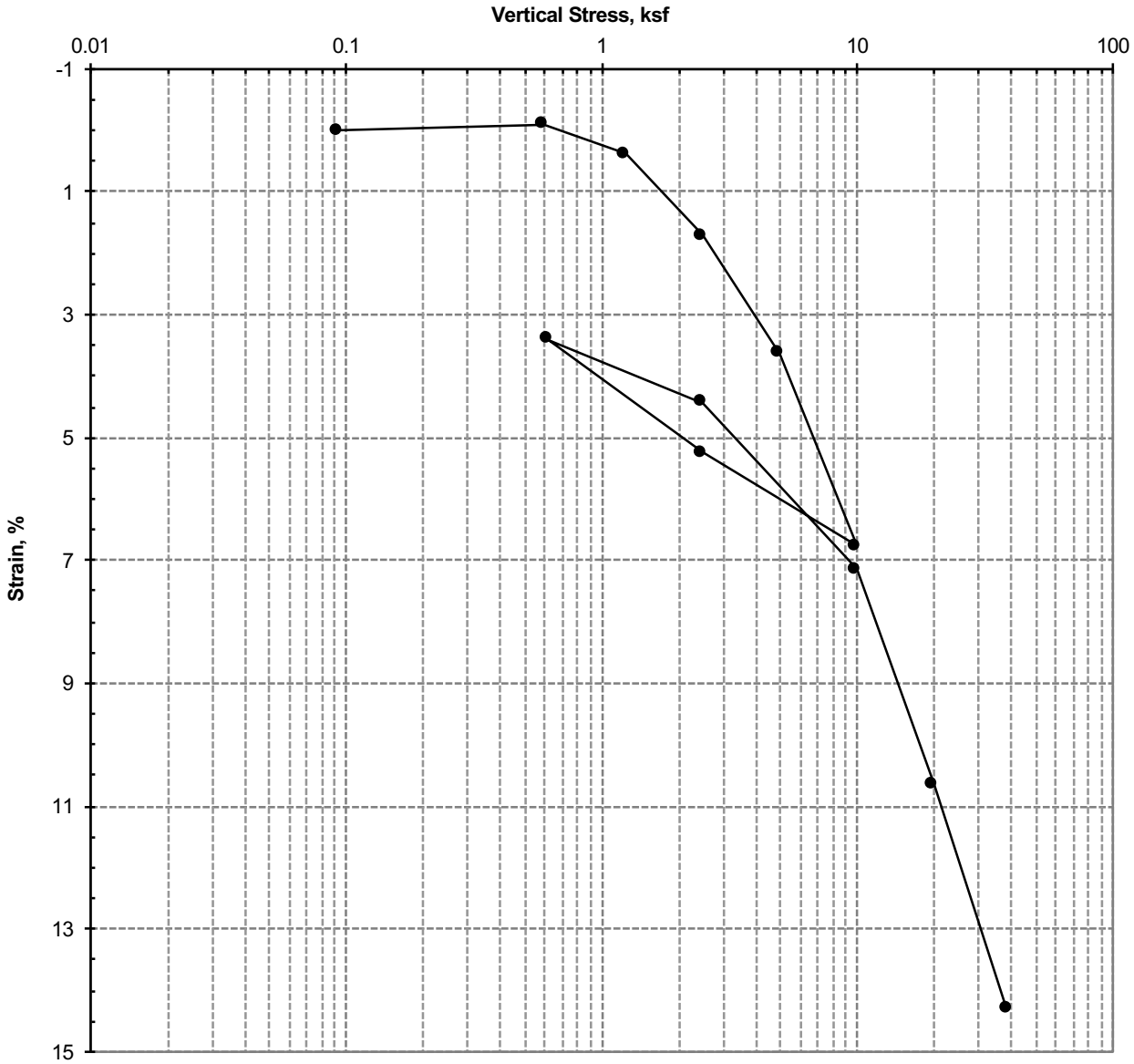
**PLATE B-3g**




| SAMPLE ID | | | | SUMMARY | | |
|---|---|---|---|---|---|---|
| | Boring, Sample #, Depth | 457HS , #3 , 14.0 ft | | | Preconsolidation Pressure, ksf | --- |
| | USCS Classification: | Poorly-graded SAND (SP): light brown, moist | | | Inundation Increment, ksf | 1.49 |
| | | | | | Liquid Limit | --- |
| PROPERTIES | | Initial | Final | | Plastic Limit | --- |
| | Water Content, % | 2.3% | 19.1% | | Plasticity Index | --- |
| | Dry Unit Weight, pcf | 94.5 | 98.9 | | Passing #200 | --- |
| | Saturation, % | 8% | 75% | | Estimated Gs | 2.65 |
| | Void Ratio | 0.75 | 0.67 | REMARKS | Test Method: ASTM D4546 | |
| | Diameter, in | 2.42 | 2.42 | | Project: Moorpark Downtown | |
| | Height, in | 1.00 | 0.96 | | | |

**COLLAPSE TEST**

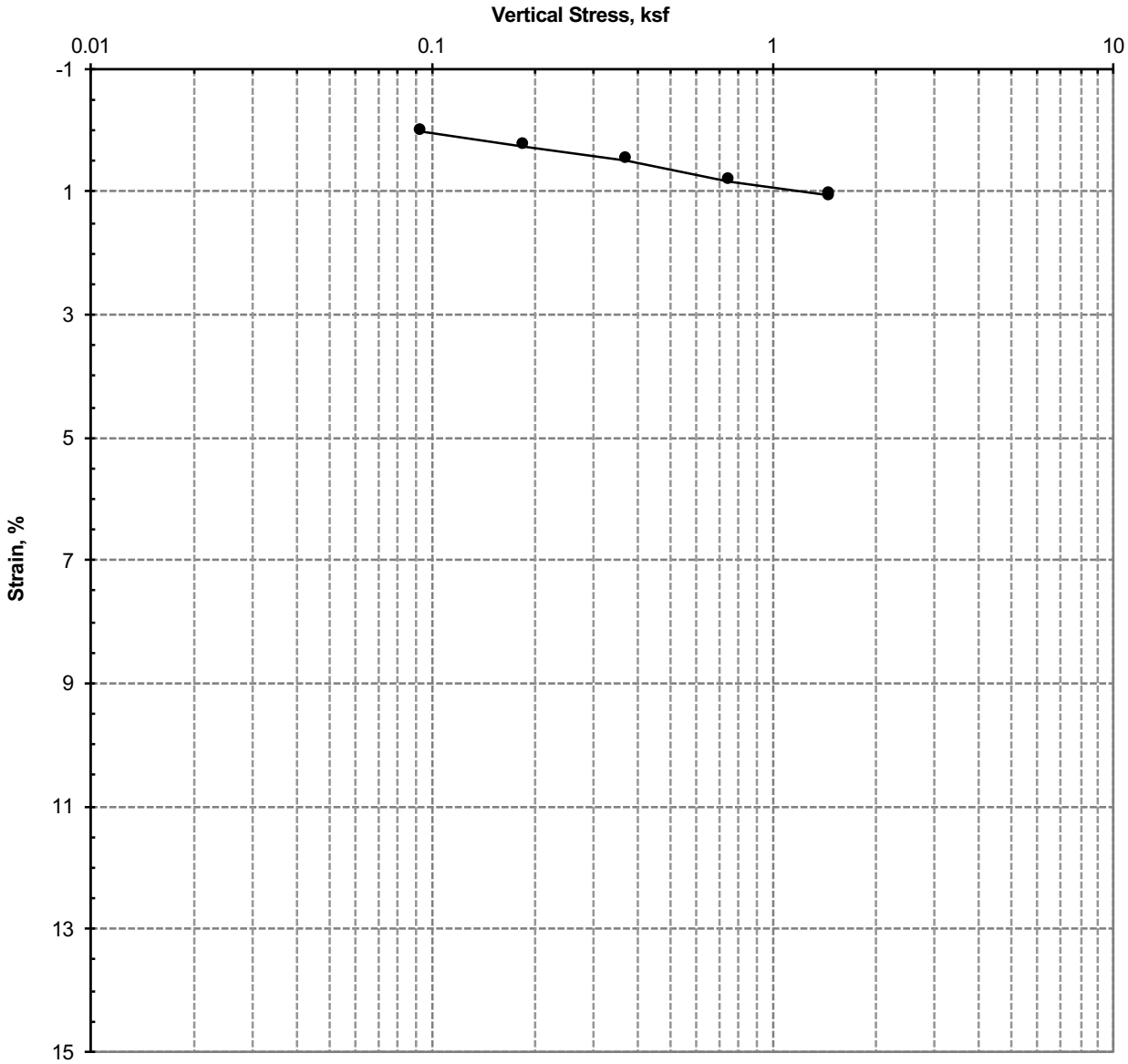
**PLATE B-3h**




| | | | | | |
|---|---|---|---|---|---|
| SAMPLE ID | Boring, Sample #, Depth | 347MA , #2 , 4.0 ft | | SUMMARY | Preconsolidation Pressure, ksf | --- |
| | USCS Classification: | Silty SAND (SM): brown, moist | | | Inundation Increment, ksf | 0.10 |
| | | | | | Liquid Limit | --- |
| PROPERTIES | | Initial | Final | | Plastic Limit | --- |
| | Water Content, % | %MC | %MC | | Plasticity Index | --- |
| | Dry Unit Weight, pcf | DUW | #VALUE! | | Passing #200 | --- |
| | Saturation, % | Saturation | #VALUE! | | Estimated Gs | 2.65 |
| | Void Ratio | Void Ratio | #VALUE! | REMARKS | Test Method: ASTM D4546 | |
| | Diameter, in | 2.42 | 2.42 | | Project: Moorpark Downtown | |
| | Height, in | 1.00 | 0.86 | | | |

**COLLAPSE TEST**

**PLATE B-3i**




| SAMPLE I | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | 347MS , #4 , 14.0 ft | |
| | USCS Classification: | Sandy SILT (ML): light brown, moist | |

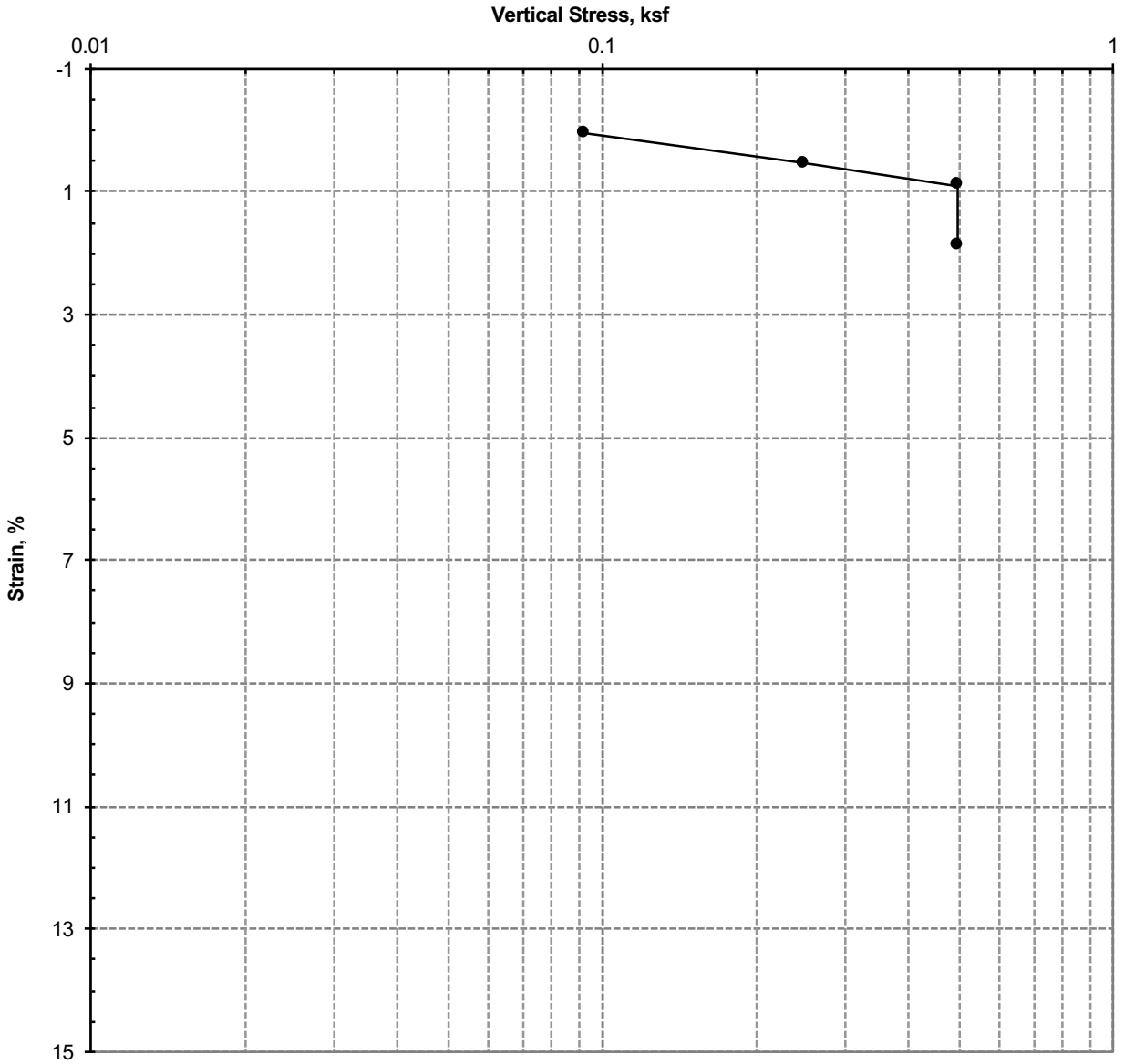
| PROPERTIES | Initial | Final |
|---|---|---|
| Water Content, % | 21.6% | 29.4% |
| Dry Unit Weight, pcf | 80.9 | 81.8 |
| Saturation, % | 55% | 76% |
| Void Ratio | 1.05 | 1.02 |
| Diameter, in | 2.42 | 2.42 |
| Height, in | 1.00 | 0.99 |

| SUMMARY | | |
|---|---|---|
| | Preconsolidation Pressure, ksf | --- |
| | Inundation Increment, ksf | 1.49 |
| | Liquid Limit | --- |
| | Plastic Limit | --- |
| | Plasticity Index | --- |
| | Passing #200 | --- |
| | Estimated Gs | 2.65 |

| REMARKS | |
|---|---|
| | Test Method: ASTM D4546 |
| | Project: Moorpark Downtown |

**COLLAPSE TEST**

**PLATE B-3j**

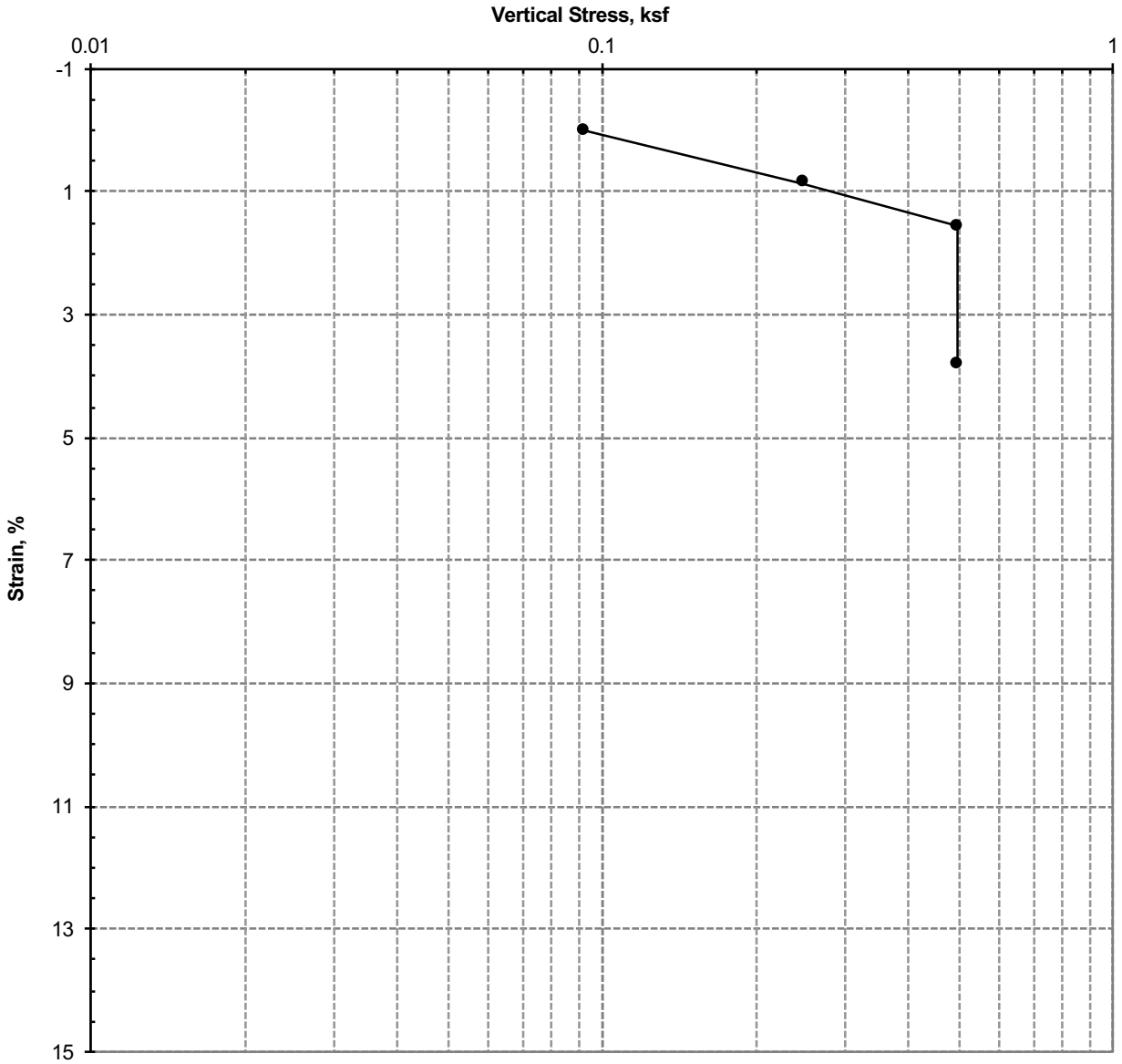



| SAMPLE ID | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | 500LAA , #1 , 5.0 ft | |
| | USCS Classification: | Poorly-graded SAND with silt (SP-SM): light brown, moist | |
| **PROPERTIES** | | Initial | Final |
| | Water Content, % | 8.8% | 22.3% |
| | Dry Unit Weight, pcf | 96.6 | 98.4 |
| | Saturation, % | 33% | 87% |
| | Void Ratio | 0.71 | 0.68 |
| | Diameter, in | 2.42 | 2.42 |
| | Height, in | 1.00 | 0.98 |

| SUMMARY | | |
|---|---|---|
| | Preconsolidation Pressure, ksf | --- |
| | Inundation Increment, ksf | 0.50 |
| | Liquid Limit | --- |
| | Plastic Limit | --- |
| | Plasticity Index | --- |
| | Passing #200 | --- |
| | Estimated Gs | 2.65 |
| **REMARKS** | Test Method: ASTM D4546 | |
| | Project: Moorpark Downtown | |

**COLLAPSE TEST**

**PLATE B-3k**




| SAMPLE ID | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | WCRN , #1 , 4.0 ft | |
| | USCS Classification: | Poorly-graded SAND with silt (SP-SM): brown, moist | |

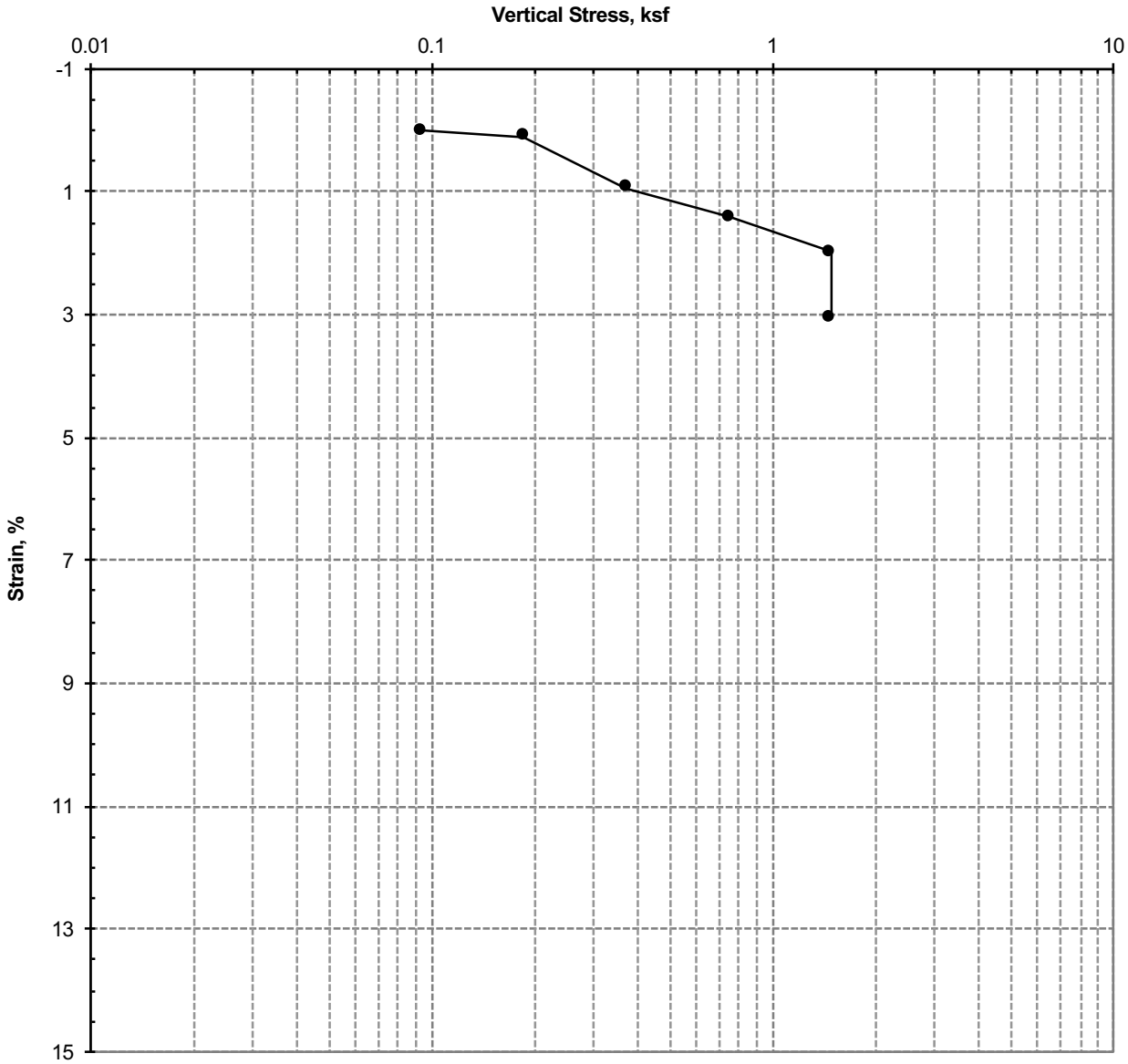
| PROPERTIES | Initial | Final |
|---|---|---|
| Water Content, % | 9.1% | 17.1% |
| Dry Unit Weight, pcf | 95.3 | 99.0 |
| Saturation, % | 33% | 68% |
| Void Ratio | 0.74 | 0.67 |
| Diameter, in | 2.42 | 2.42 |
| Height, in | 1.00 | 0.96 |

| SUMMARY | | |
|---|---|---|
| | Preconsolidation Pressure, ksf | --- |
| | Inundation Increment, ksf | 0.50 |
| | Liquid Limit | --- |
| | Plastic Limit | --- |
| | Plasticity Index | --- |
| | Passing #200 | --- |
| | Estimated Gs | 2.65 |

| REMARKS | |
|---|---|
| | Test Method: ASTM D4546 |
| | Project: Moorpark Downtown |

**COLLAPSE TEST**

**PLATE B-3I**




| SAMPLE ID | | | |
|---|---|---|---|
| | Boring, Sample #, Depth | WCRS , #4 , 14.0 ft | |
| | USCS Classification: | Poorly-graded SAND with silt (SP-SM): brown, moist | |

| PROPERTIES | Initial | Final |
|---|---|---|
| Water Content, % | 7.1% | 19.6% |
| Dry Unit Weight, pcf | 101.1 | 104.3 |
| Saturation, % | 29% | 88% |
| Void Ratio | 0.64 | 0.59 |
| Diameter, in | 2.42 | 2.42 |
| Height, in | 1.00 | 0.97 |

| SUMMARY | | |
|---|---|---|
| | Preconsolidation Pressure, ksf | --- |
| | Inundation Increment, ksf | 1.49 |
| | Liquid Limit | --- |
| | Plastic Limit | --- |
| | Plasticity Index | --- |
| | Passing #200 | --- |
| | Estimated Gs | 2.65 |

| REMARKS | |
|---|---|
| | Test Method: ASTM D4546 |
| | Project: Moorpark Downtown |

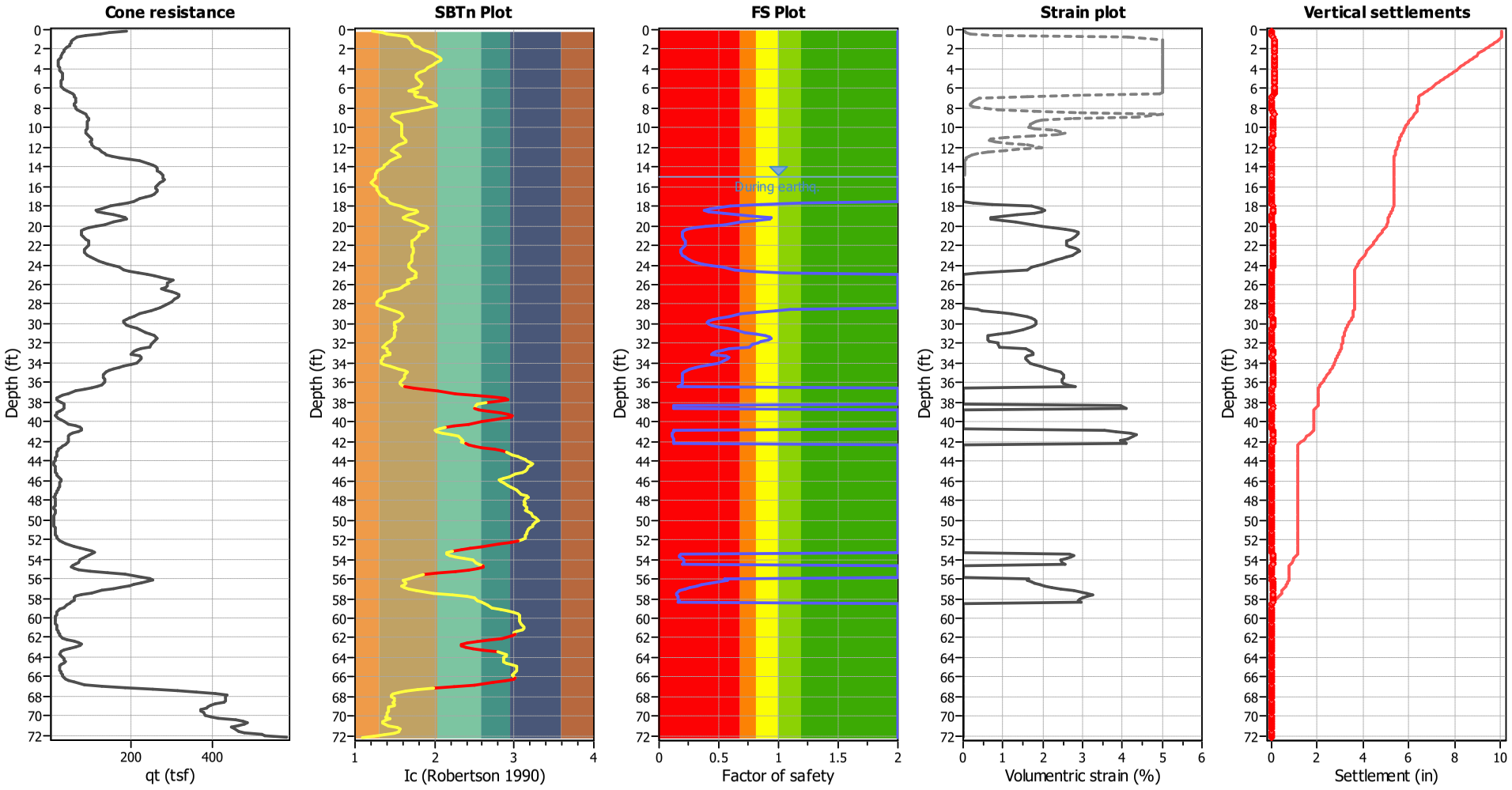
**COLLAPSE TEST**

**PLATE B-3m**

# APPENDIX C

# Post Earthquake Settlement Plots

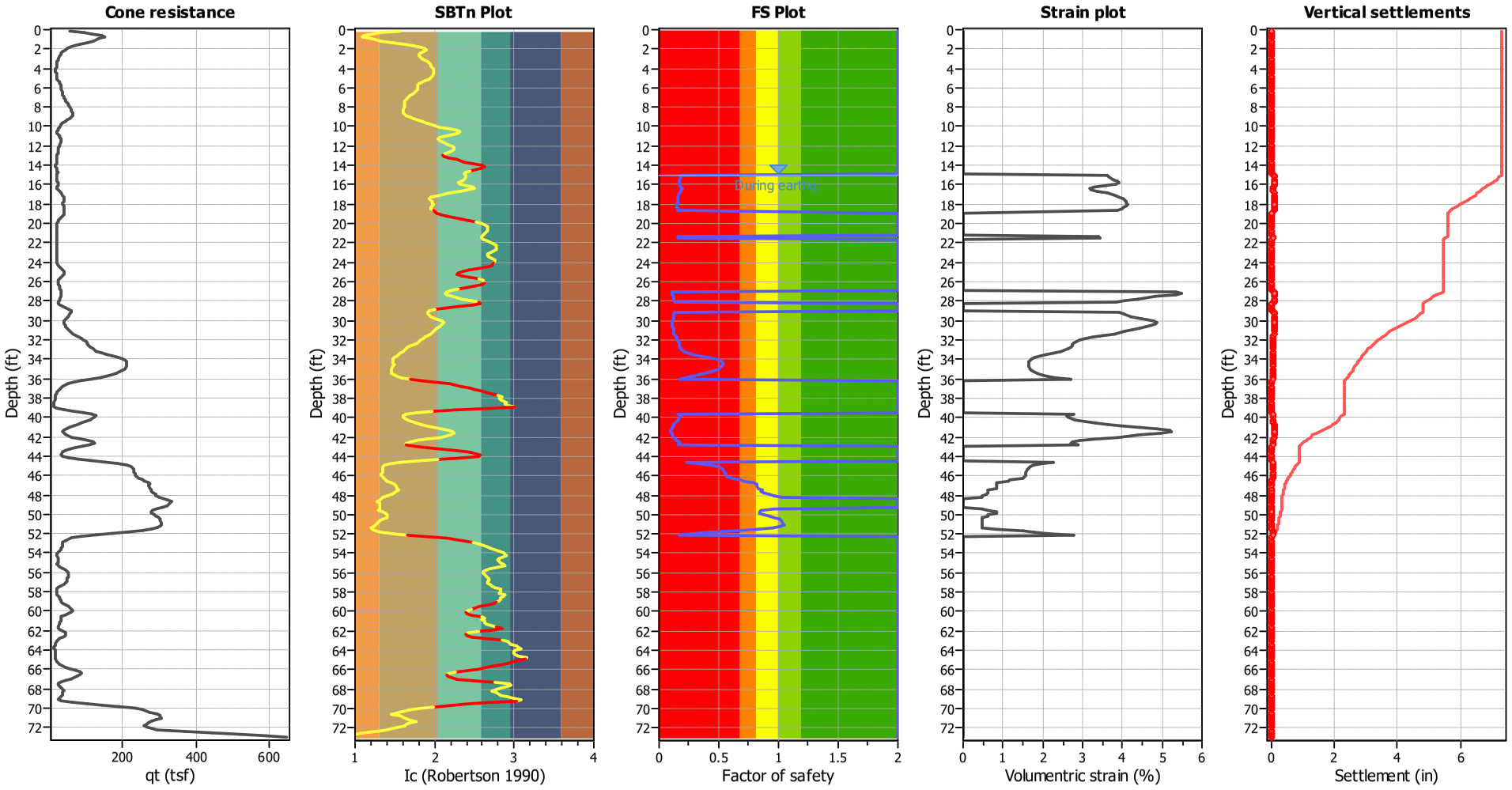
## Estimation of post-earthquake settlements




**Abbreviations**

| | |
|---|---|
| $q_t$: | Total cone resistance (cone resistance $q_c$ corrected for pore water effects) |
| $I_c$: | Soil Behaviour Type Index |
| FS: | Calculated Factor of Safety against liquefaction |
| Volumentric strain: | Post-liquefaction volumentric strain |

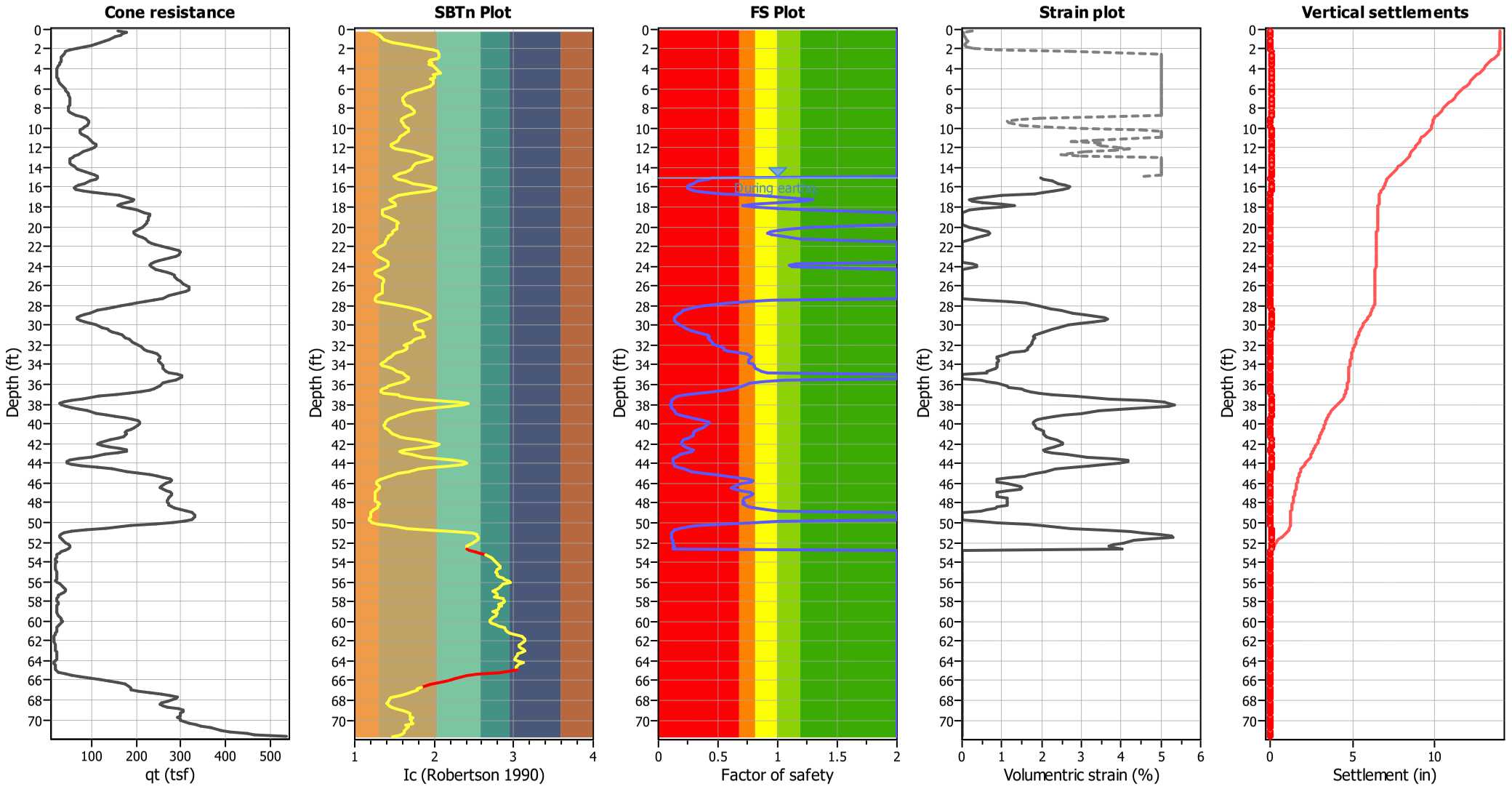
## Estimation of post-earthquake settlements




**Abbreviations**

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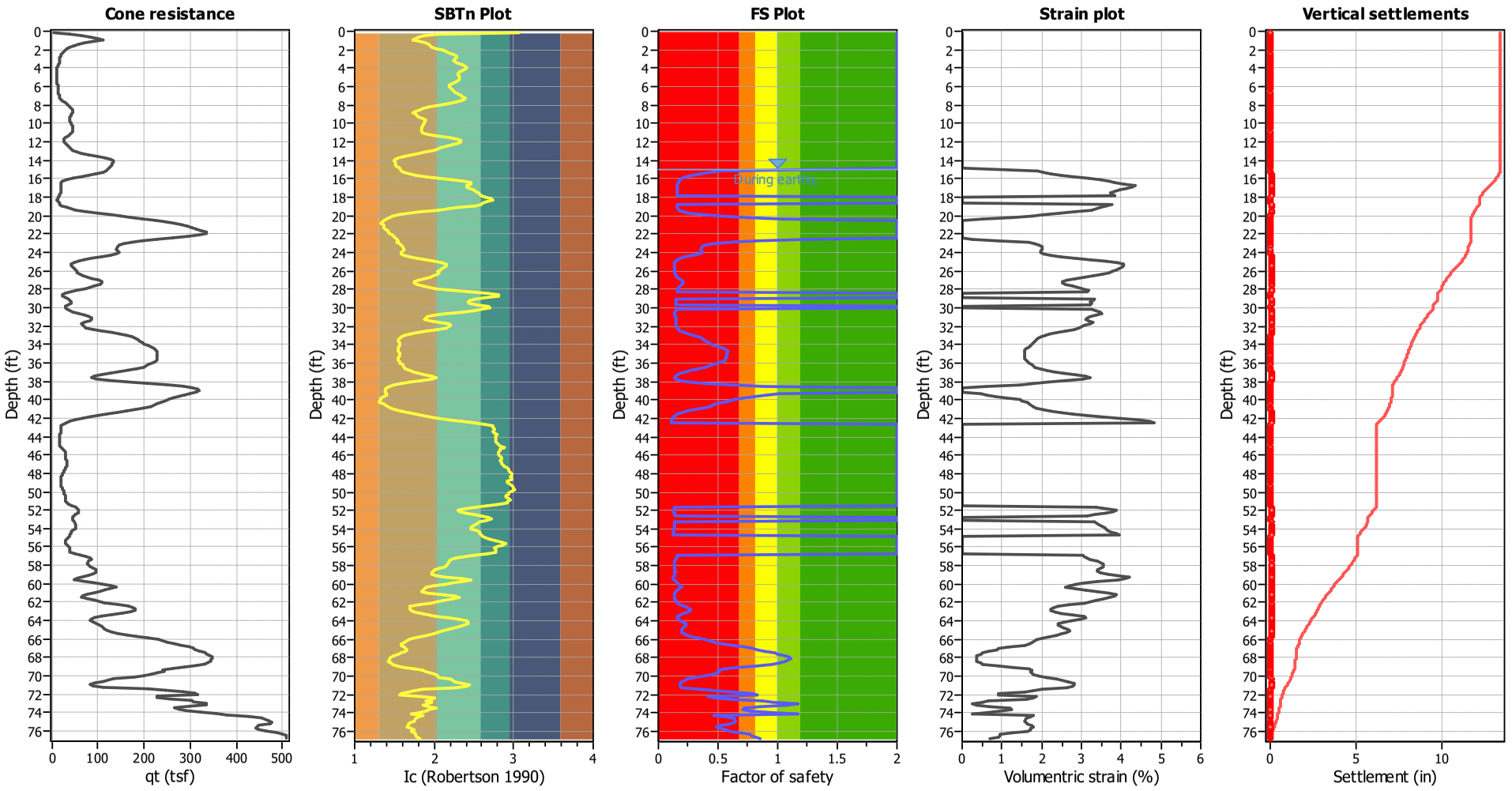
## Estimation of post-earthquake settlements




**Abbreviations**

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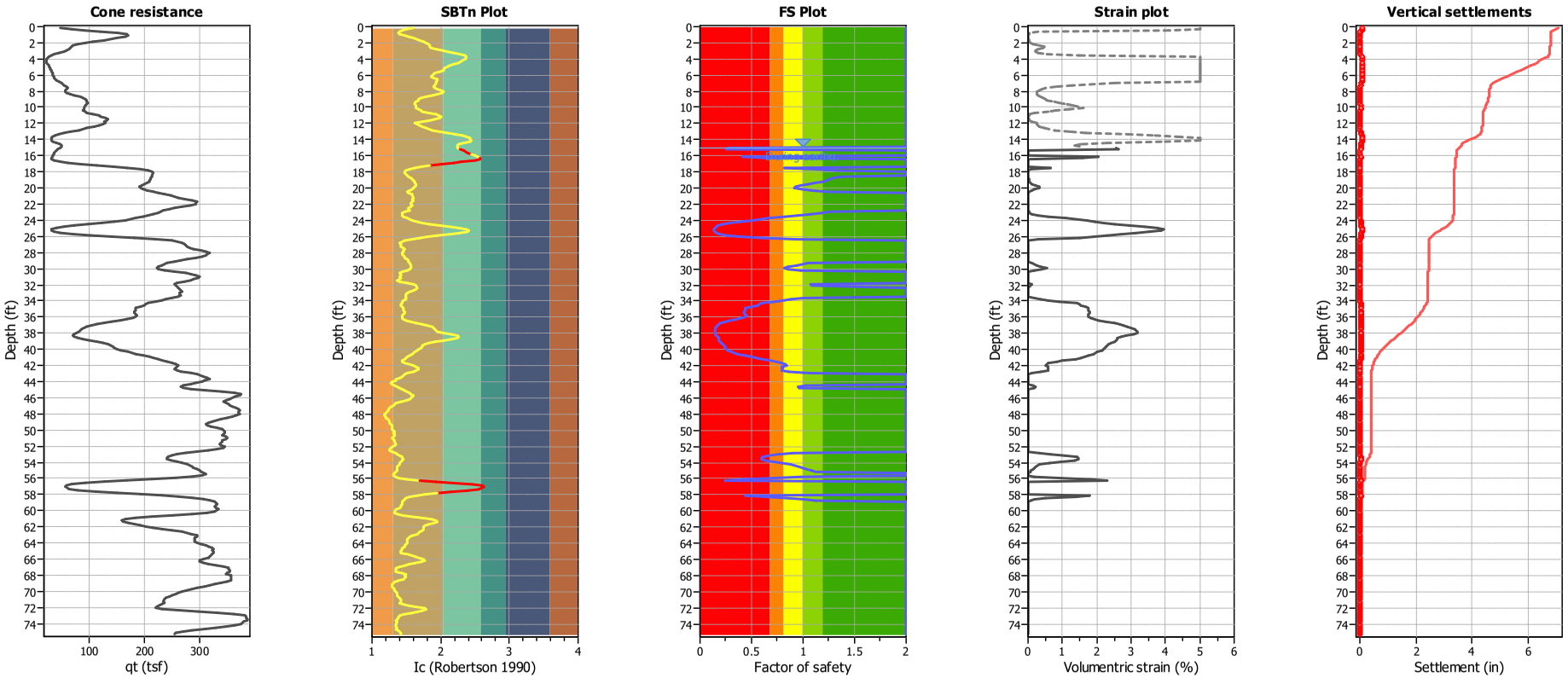
## Estimation of post-earthquake settlements




**Abbreviations**

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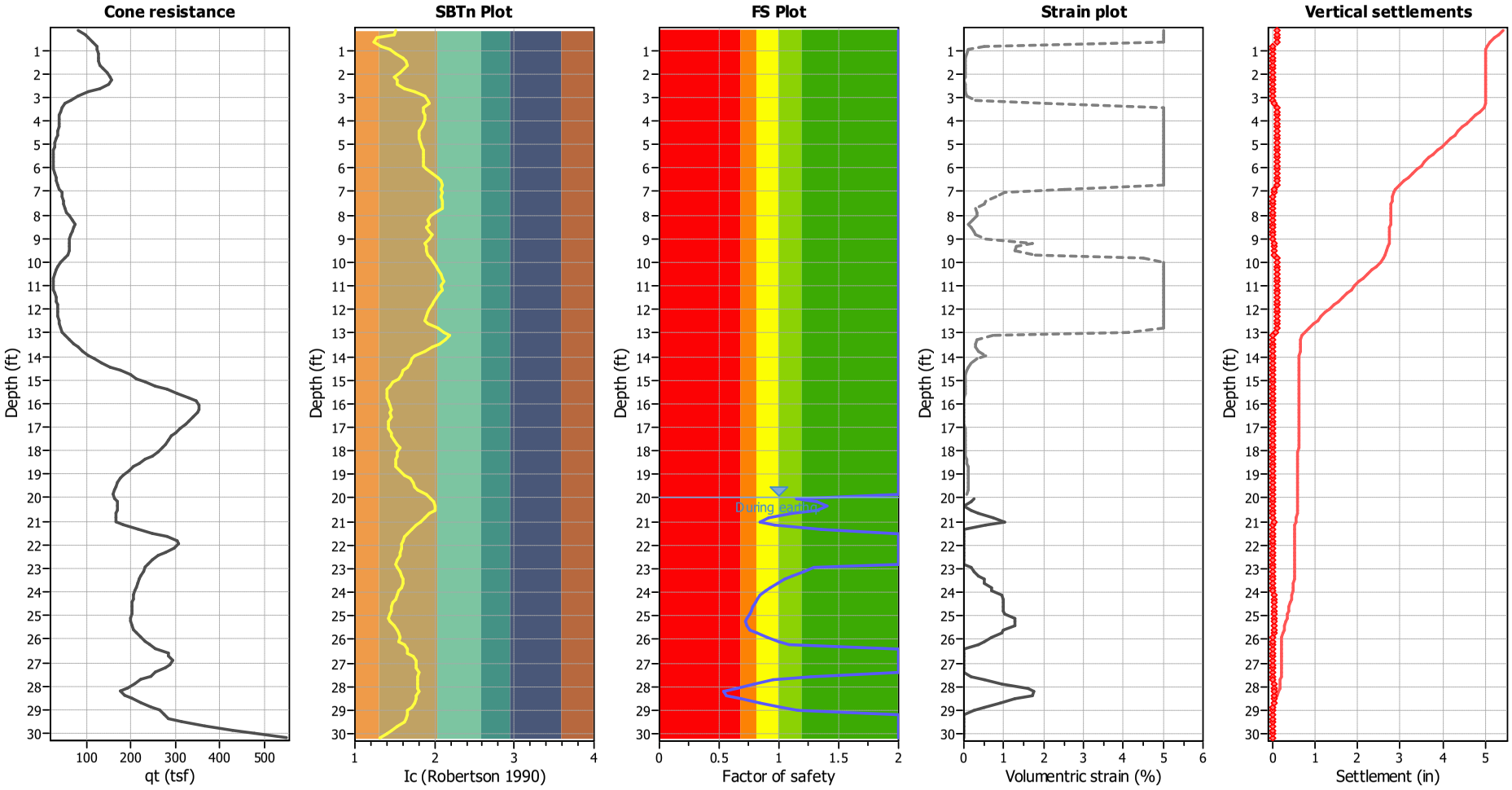
## Estimation of post-earthquake settlements




**Abbreviations**

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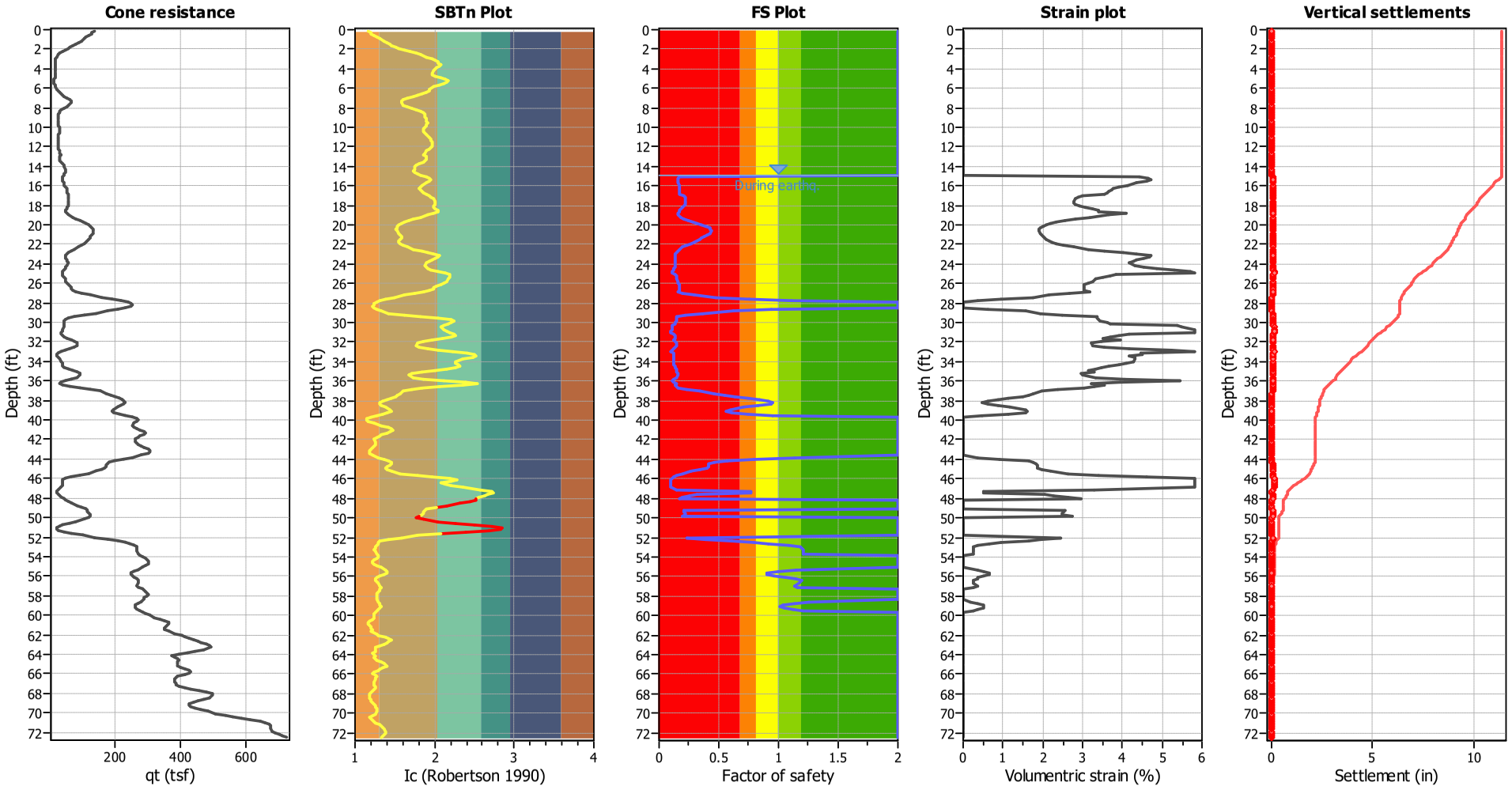
## Estimation of post-earthquake settlements




**Abbreviations**

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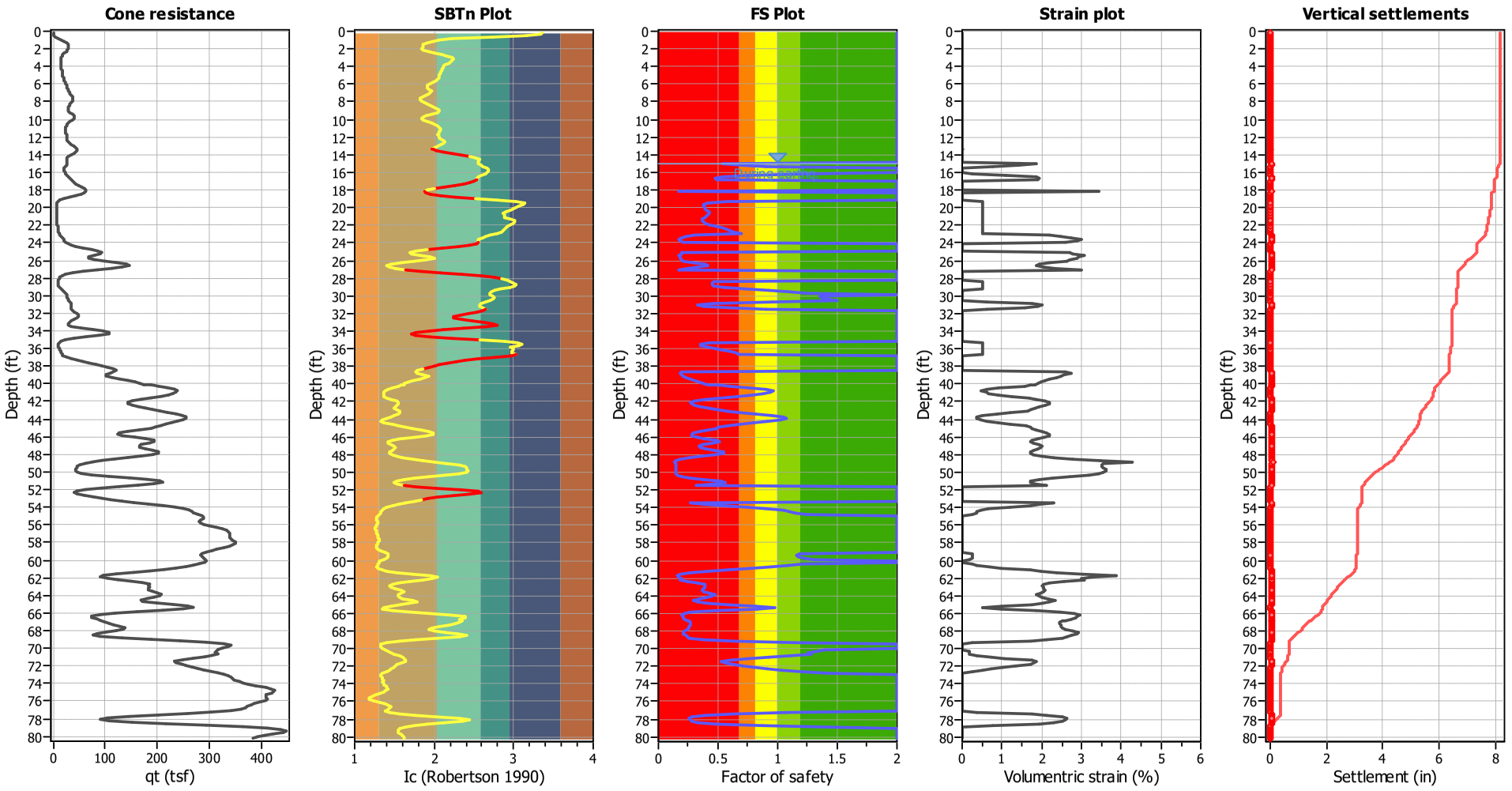
## Estimation of post-earthquake settlements




**Abbreviations**

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|---|---|
| $q_t$: | Total cone resistance (cone resistance $q_c$ corrected for pore water effects) |
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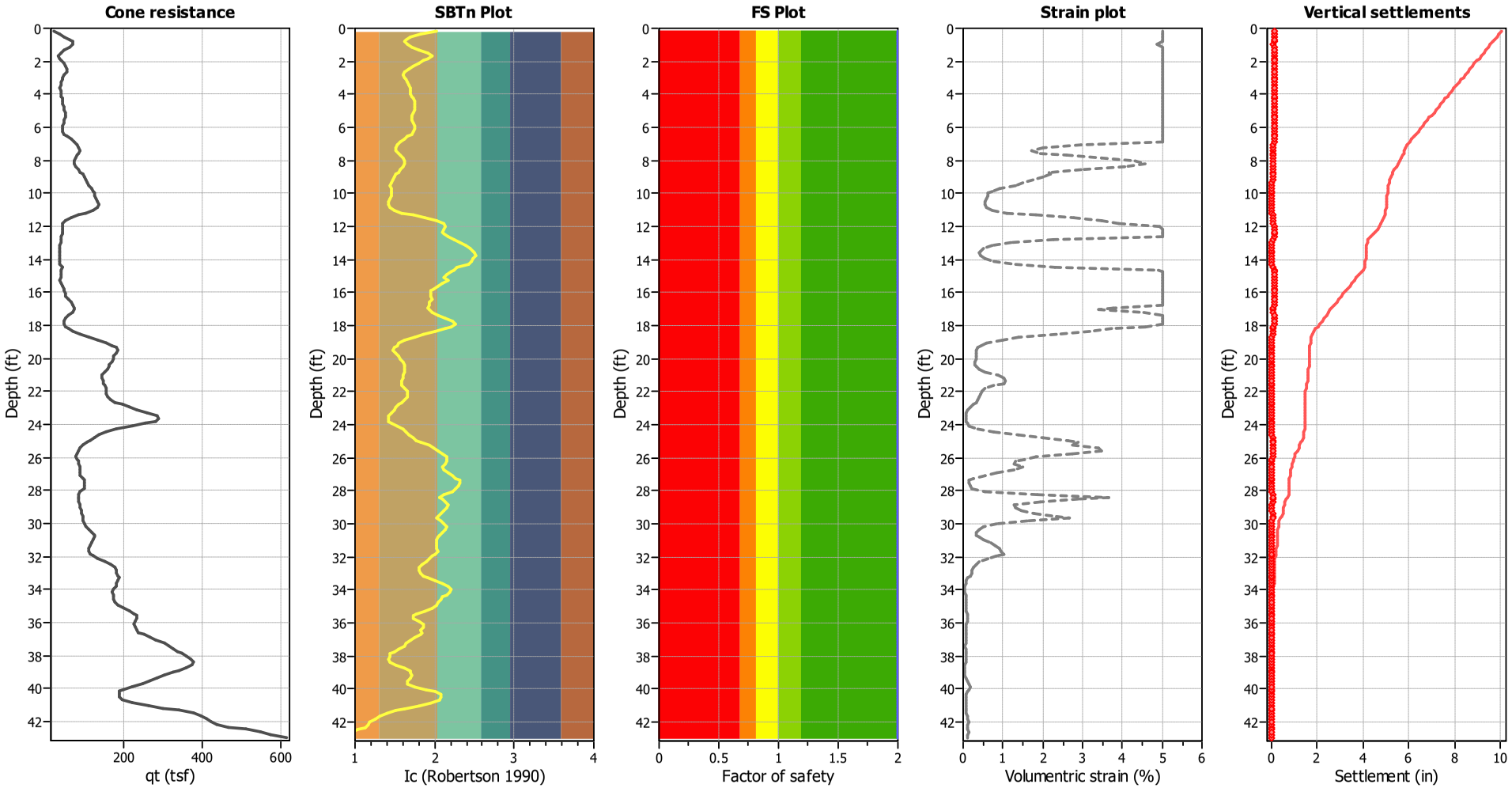
## Estimation of post-earthquake settlements




**Abbreviations**

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## Estimation of post-earthquake settlements

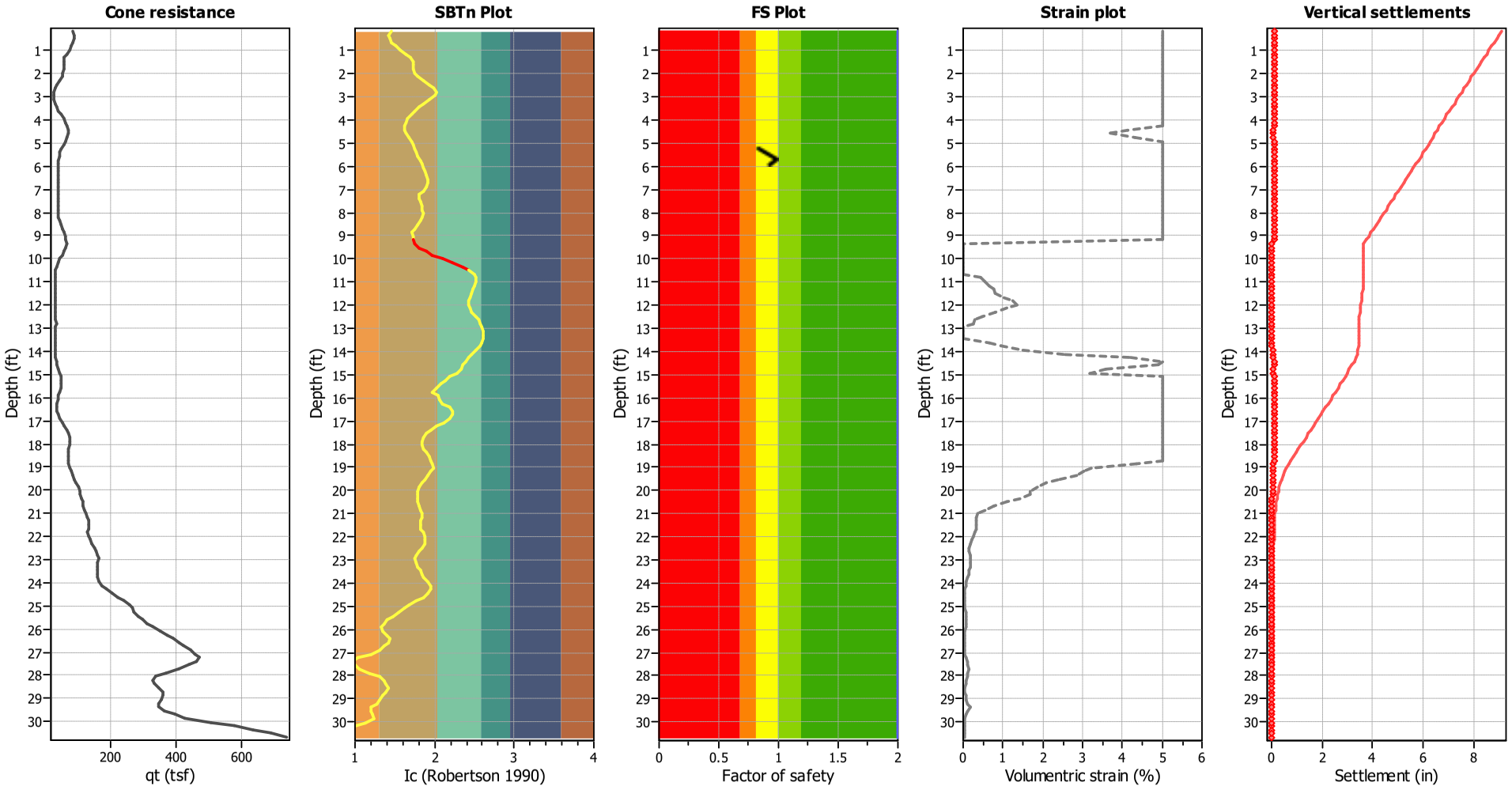



**Abbreviations**

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During earthq.

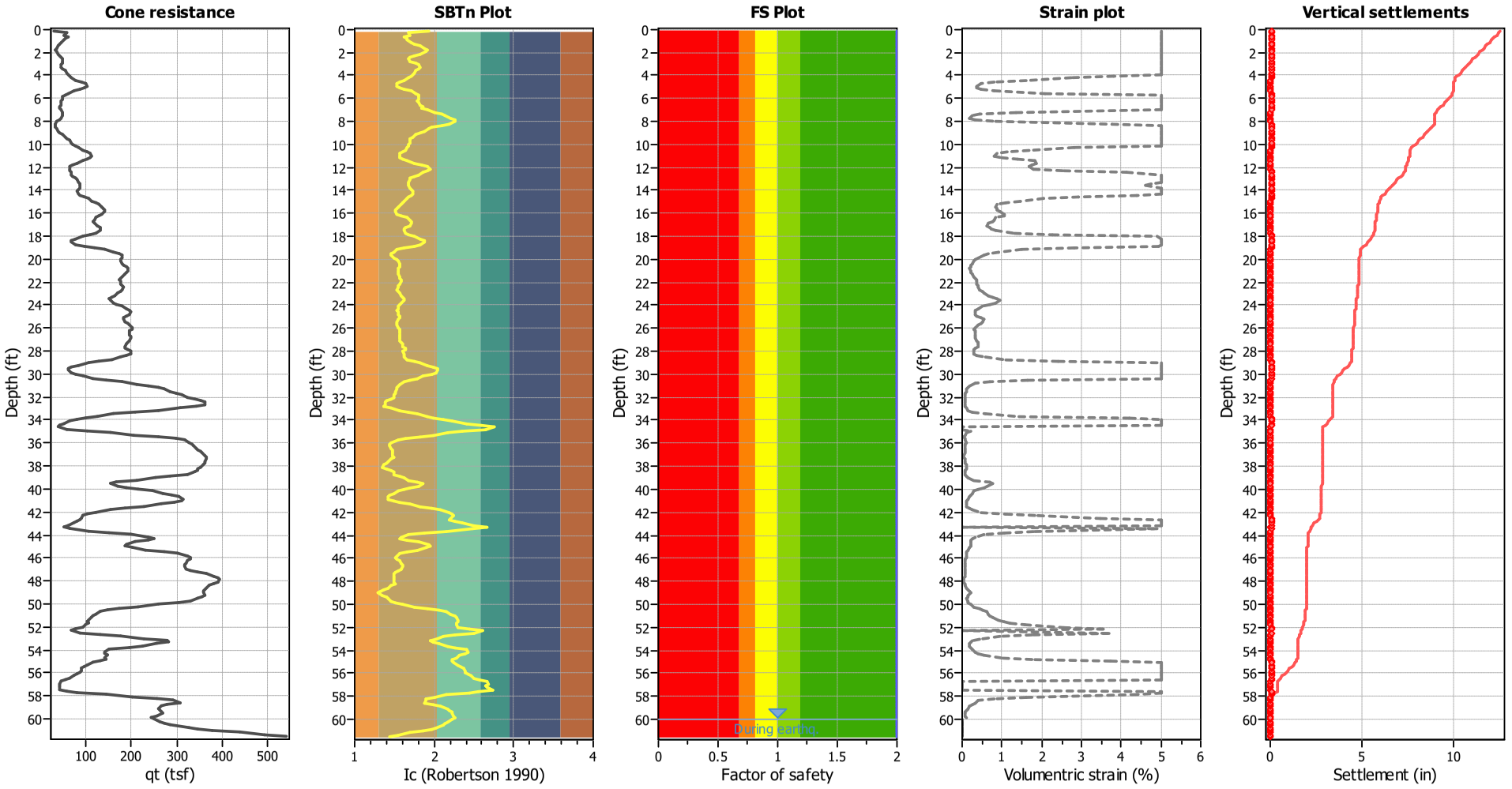
## Estimation of post-earthquake settlements




**Abbreviations**

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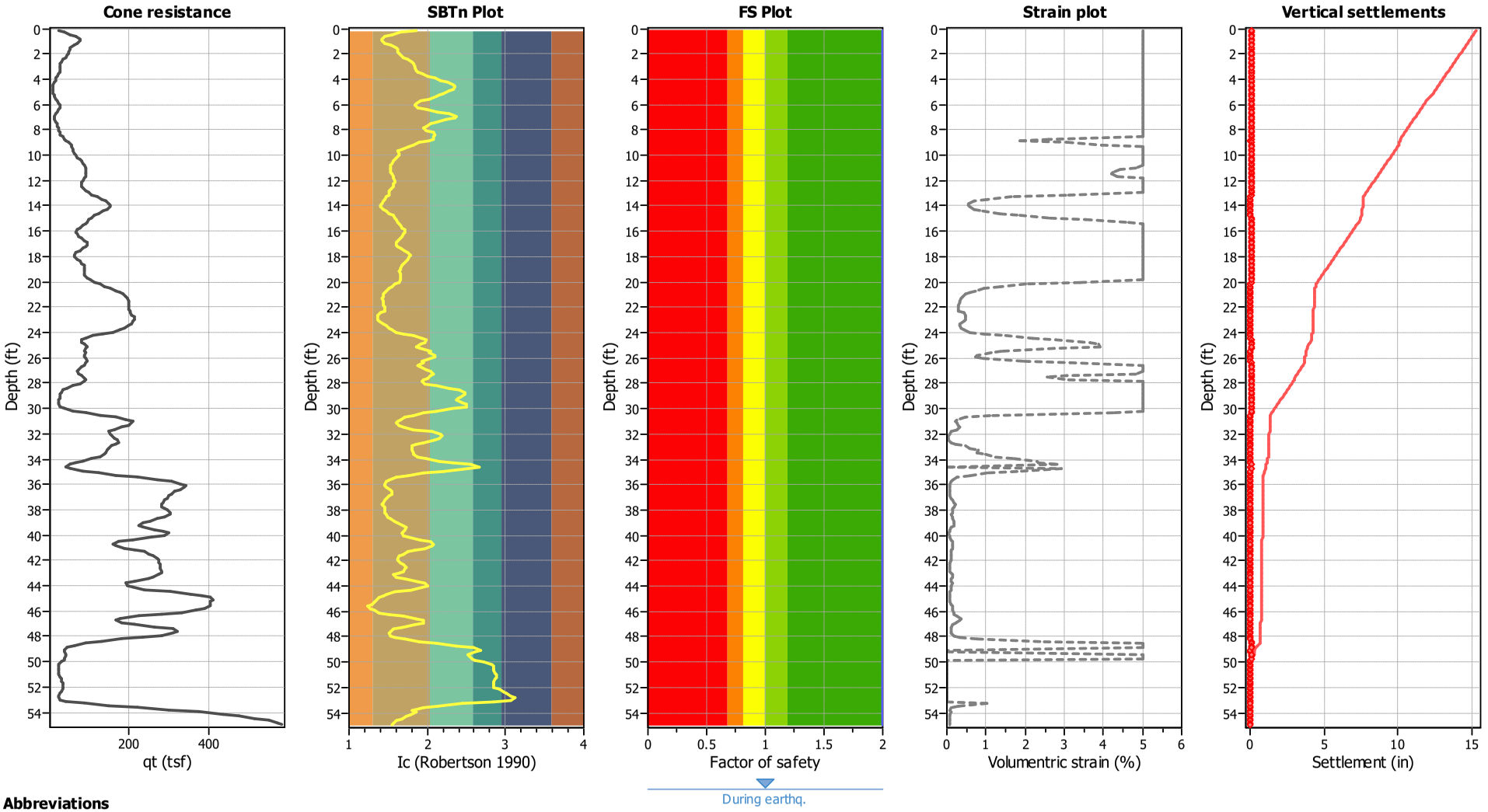
## Estimation of post-earthquake settlements




**Abbreviations**

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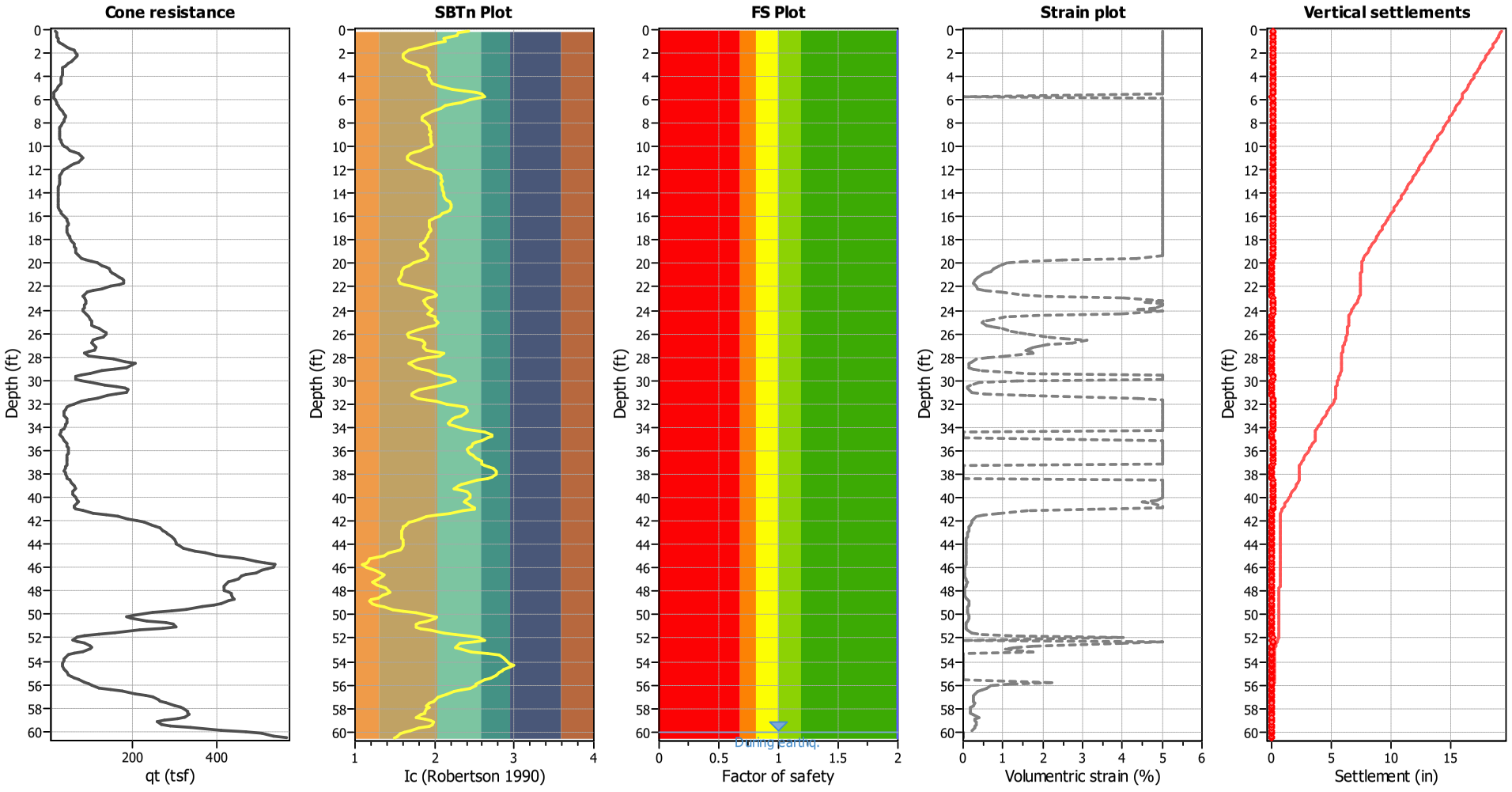
## Estimation of post-earthquake settlements




**Abbreviations**

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## Estimation of post-earthquake settlements




**Abbreviations**

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| FS: | Calculated Factor of Safety against liquefaction |
| Volumentric strain: | Post-liquefaction volumentric strain |

# Velocity Survey Data

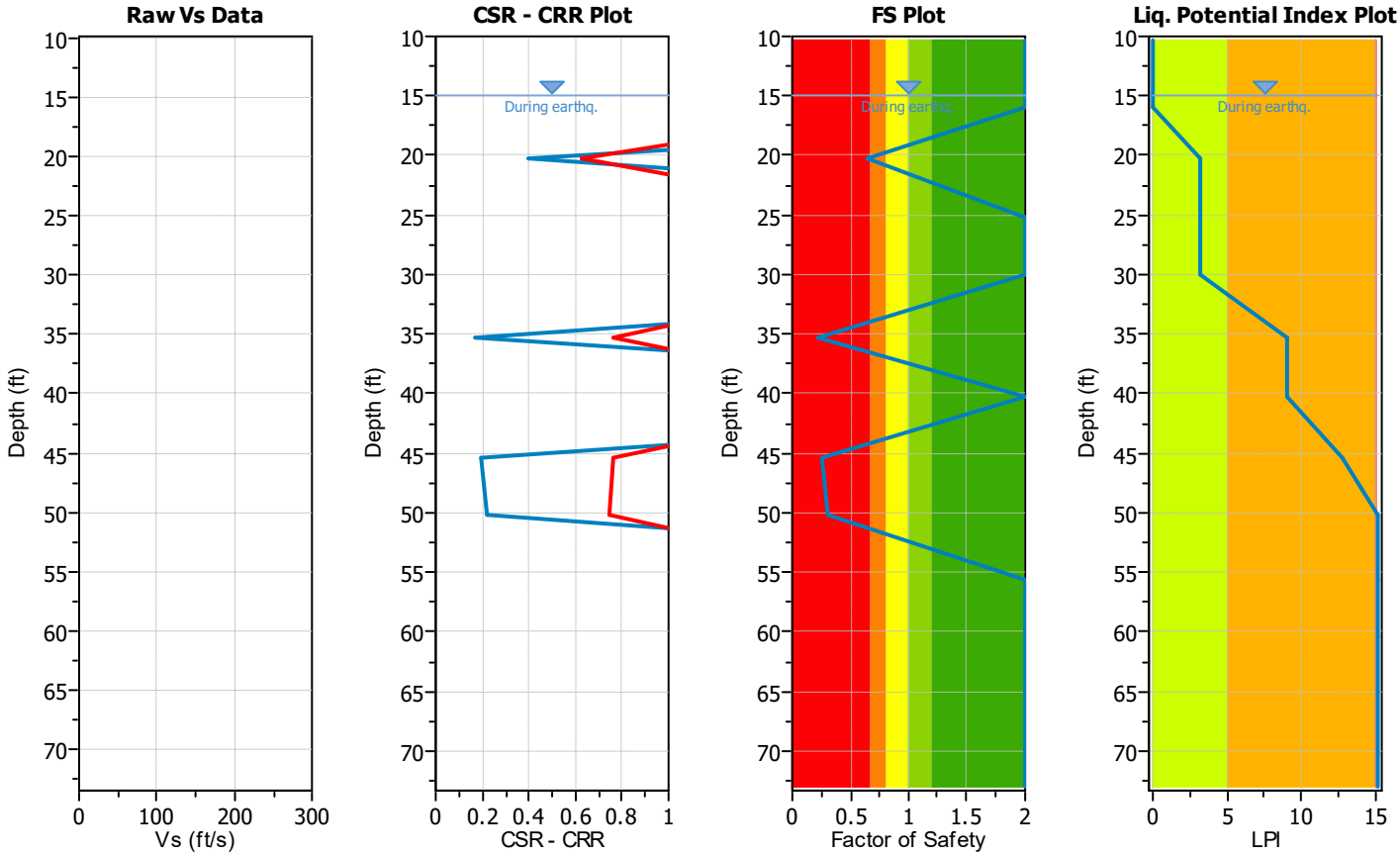
# $V_s$ BASED LIQUEFACTION ANALYSIS REPORT

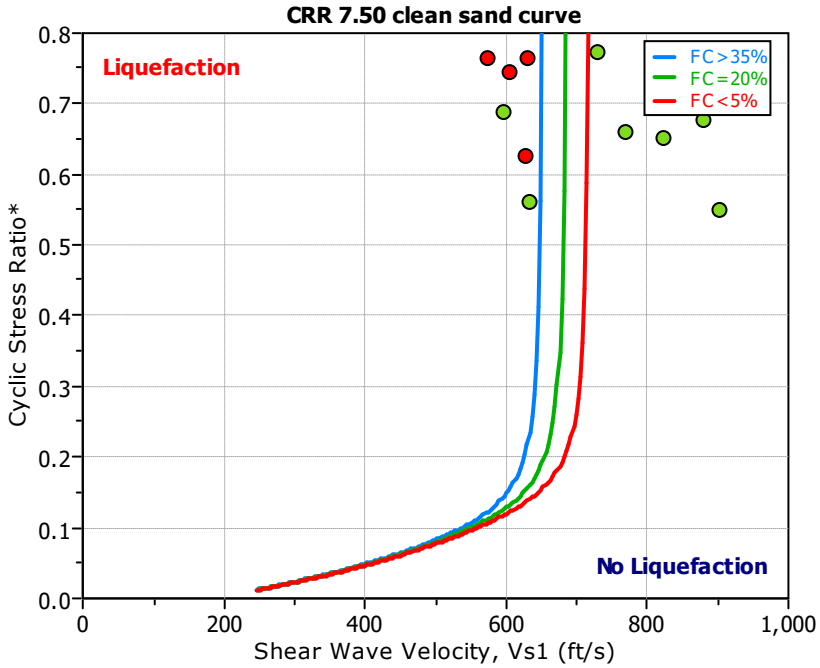
**Project title : Downtown Moorpark** **$V_s$ Name: RHS-1**

**Location : Remainder High Street**

**:: Input parameters and analysis properties ::**

| | |
|---|---|
| Analysis method: | NCEER 1998 (Youd et al. 2001) |
| G.W.T. (in-situ): | 33.00 ft |
| G.W.T. (earthq.): | 15.00 ft |
| Earthquake magnitude $M_w$: | 7.00 |
| Peak ground acceleration: | 1.03 g |
| Eq. external load: | 0.00 tsf |



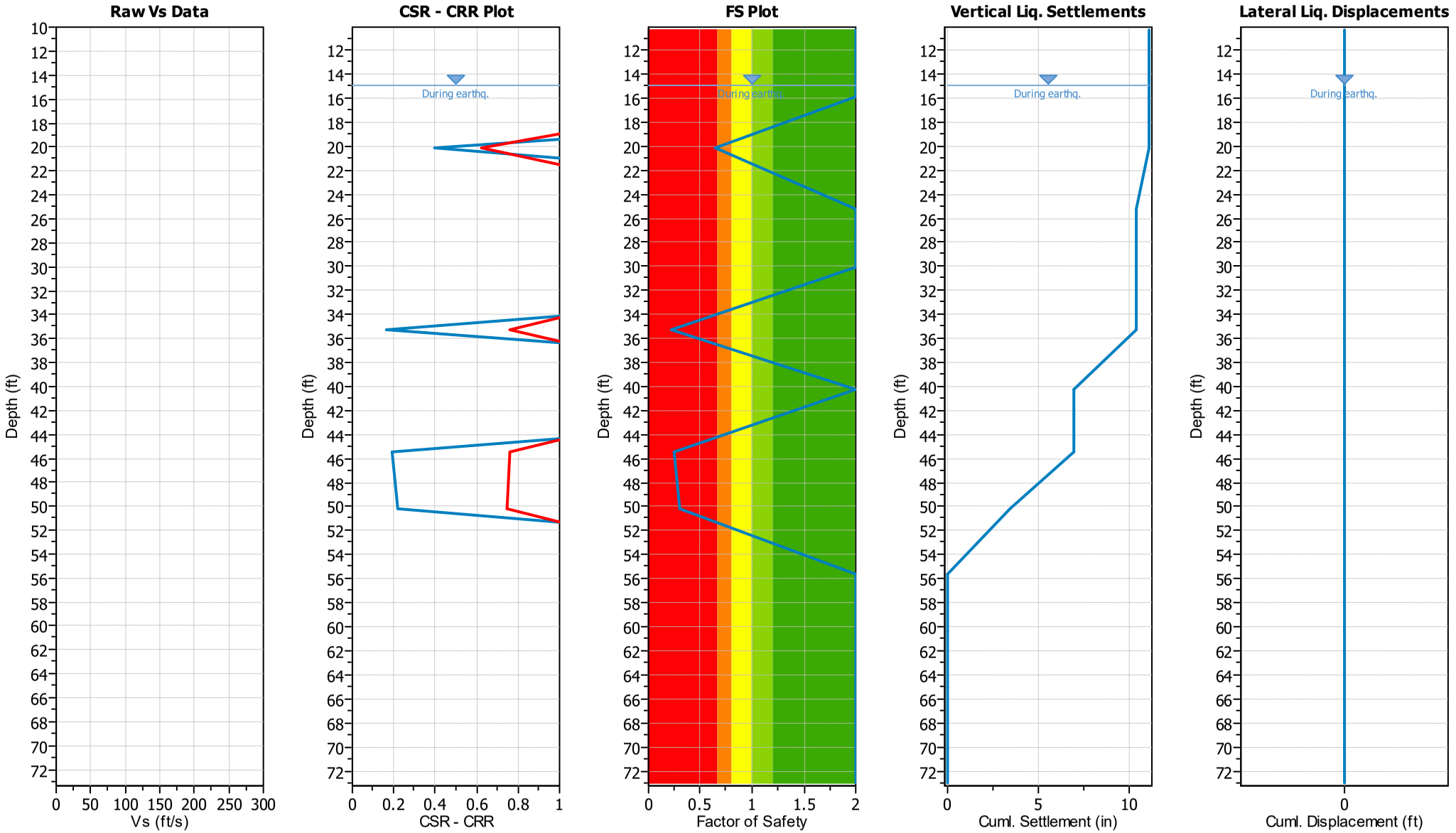

**F.S. color scheme**

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

**LPI color scheme**

- Very high risk
- High risk
- Low risk

## :: Overall Liquefaction Assessment Analysis Plots ::



**:: Field input data ::**

| Test Depth (ft) | $V_s$ Field Value (ft/s) | Fines Content (%) | Unit Weight (pcf) | Infl. Thickness (ft) | Can Liquefy |
|---|---|---|---|---|---|
| 10.33 | 783.20 | 60.00 | 115.00 | 5.00 | Yes |
| 15.91 | 610.60 | 40.00 | 115.00 | 5.00 | No |
| 20.18 | 643.20 | 65.00 | 115.00 | 5.00 | Yes |
| 25.26 | 645.90 | 54.00 | 115.00 | 5.00 | No |
| 30.02 | 940.20 | 30.00 | 129.00 | 5.00 | No |
| 35.27 | 676.40 | 66.00 | 129.00 | 5.00 | Yes |
| 40.19 | 877.90 | 20.00 | 129.00 | 5.00 | Yes |
| 45.44 | 771.40 | 5.00 | 129.00 | 5.00 | Yes |
| 50.20 | 754.60 | 30.00 | 129.00 | 5.00 | Yes |
| 55.61 | 1524.10 | 65.00 | 129.00 | 5.00 | No |
| 60.37 | 1235.10 | 65.00 | 129.00 | 5.00 | No |
| 65.12 | 1145.90 | 65.00 | 129.00 | 5.00 | No |
| 70.21 | 1016.70 | 65.00 | 129.00 | 5.00 | No |
| 73.00 | 1093.30 | 5.00 | 129.00 | 3.00 | No |

**Abbreviations**

Depth: Depth at which test was performed (ft)
Vs Field Value: Measured shear waves velocity (ft/s)
Fines Content: Fines content at test depth (%)
Unit Weight: Unit weight at test depth (pcf)
Infl. Thickness: Thickness of the soil layer to be considered in settlements analysis (ft)
Can Liquefy: User defined switch for excluding/including test depth from the analysis procedure

**:: Cyclic Resistance Ratio (CRR) calculation data ::**

| Depth (ft) | $V_s$ Field Value (ft/s) | Unit Weight (pcf) | $\sigma_v$ (tsf) | $u_o$ (tsf) | $\sigma'_{vo}$ (tsf) | Norm. Factor | $V_{s1}$ (ft/s) | $Vs_{s1}^*$ (ft/s) | $CRR_{7.5}$ |
|---|---|---|---|---|---|---|---|---|---|
| 10.33 | 783.20 | 115.00 | 0.59 | 0.00 | 0.59 | 1.16 | 904.82 | 200.00 | 4.000 |
| 15.91 | 610.60 | 115.00 | 0.91 | 0.00 | 0.91 | 1.04 | 633.22 | 200.00 | 4.000 |
| 20.18 | 643.20 | 115.00 | 1.16 | 0.00 | 1.16 | 0.98 | 628.54 | 200.00 | 0.399 |
| 25.26 | 645.90 | 115.00 | 1.45 | 0.00 | 1.45 | 0.92 | 596.72 | 200.00 | 4.000 |
| 30.02 | 940.20 | 129.00 | 1.76 | 0.00 | 1.76 | 0.88 | 827.96 | 202.50 | 4.000 |
| 35.27 | 676.40 | 129.00 | 2.10 | 0.07 | 2.03 | 0.85 | 574.92 | 200.00 | 0.167 |
| 40.19 | 877.90 | 129.00 | 2.42 | 0.22 | 2.19 | 0.83 | 731.83 | 207.50 | 4.000 |
| 45.44 | 771.40 | 129.00 | 2.75 | 0.39 | 2.37 | 0.82 | 630.83 | 215.00 | 0.192 |
| 50.20 | 754.60 | 129.00 | 3.06 | 0.54 | 2.52 | 0.80 | 607.17 | 202.50 | 0.222 |
| 55.61 | 1524.10 | 129.00 | 3.41 | 0.71 | 2.70 | 0.79 | 1205.37 | 200.00 | 4.000 |
| 60.37 | 1235.10 | 129.00 | 3.72 | 0.85 | 2.86 | 0.78 | 963.00 | 200.00 | 4.000 |
| 65.12 | 1145.90 | 129.00 | 4.02 | 1.00 | 3.02 | 0.77 | 881.52 | 200.00 | 4.000 |
| 70.21 | 1016.70 | 129.00 | 4.35 | 1.16 | 3.19 | 0.76 | 771.53 | 200.00 | 4.000 |
| 73.00 | 1093.30 | 129.00 | 4.53 | 1.25 | 3.28 | 0.75 | 823.72 | 215.00 | 4.000 |

**Abbreviations**

$\sigma_v$: Total stress during SPT test (tsf)
$u_o$: Water pore pressure during SPT test (tsf)
$\sigma'_{vo}$: Effective overburden pressure during SPT test (tsf)
Norm. Factor: overburden-stress correction factor
$V_{S1}$: Overburden-stress corrected shear wave velocity
$V_{s1}^*$: Limiting upper value of $V_{s1}$
$CRR_{7.5}$: Cyclic resistance ratio for M=7.5

**:: Cyclic Stress Ratio calculation (CSR fully adjusted and normalized) ::**

| Depth (ft) | Unit Weight (pcf) | $\sigma_{v,eq}$ (tsf) | $u_{o,eq}$ (tsf) | $\sigma'_{vo,eq}$ (tsf) | $r_d$ | $\alpha$ | CSR | MSF | $CSR_{eq,M=7.5}$ | $K_{sigma}$ | $CSR^*$ | FS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.33 | 115.00 | 0.59 | 0.00 | 0.59 | 0.98 | 1.00 | 0.655 | 1.19 | 0.549 | 1.00 | 0.549 | 2.000 | ● |
| 15.91 | 115.00 | 0.91 | 0.03 | 0.89 | 0.97 | 1.00 | 0.668 | 1.19 | 0.560 | 1.00 | 0.560 | 2.000 | ● |
| 20.18 | 115.00 | 1.16 | 0.16 | 1.00 | 0.96 | 1.00 | 0.744 | 1.19 | 0.624 | 1.00 | 0.624 | 0.640 | ● |
| 25.26 | 115.00 | 1.45 | 0.32 | 1.13 | 0.94 | 1.00 | 0.808 | 1.19 | 0.677 | 0.99 | 0.687 | 2.000 | ● |
| 30.02 | 129.00 | 1.76 | 0.47 | 1.29 | 0.92 | 1.00 | 0.840 | 1.19 | 0.704 | 0.96 | 0.733 | 2.000 | ● |
| 35.27 | 129.00 | 2.10 | 0.63 | 1.47 | 0.89 | 1.00 | 0.852 | 1.19 | 0.714 | 0.94 | 0.762 | 0.219 | ● |
| 40.19 | 129.00 | 2.42 | 0.79 | 1.63 | 0.85 | 1.00 | 0.843 | 1.19 | 0.707 | 0.92 | 0.770 | 2.000 | ● |
| 45.44 | 129.00 | 2.75 | 0.95 | 1.80 | 0.80 | 1.00 | 0.817 | 1.19 | 0.685 | 0.90 | 0.762 | 0.251 | ● |
| 50.20 | 129.00 | 3.06 | 1.10 | 1.96 | 0.75 | 1.00 | 0.784 | 1.19 | 0.657 | 0.88 | 0.744 | 0.299 | ● |
| 55.61 | 129.00 | 3.41 | 1.27 | 2.14 | 0.70 | 1.00 | 0.743 | 1.19 | 0.623 | 0.87 | 0.718 | 2.000 | ● |
| 60.37 | 129.00 | 3.72 | 1.42 | 2.30 | 0.66 | 1.00 | 0.710 | 1.19 | 0.595 | 0.86 | 0.695 | 2.000 | ● |
| 65.12 | 129.00 | 4.02 | 1.56 | 2.46 | 0.62 | 1.00 | 0.680 | 1.19 | 0.570 | 0.84 | 0.675 | 2.000 | ● |
| 70.21 | 129.00 | 4.35 | 1.72 | 2.63 | 0.59 | 1.00 | 0.655 | 1.19 | 0.549 | 0.83 | 0.658 | 2.000 | ● |
| 73.00 | 129.00 | 4.53 | 1.81 | 2.72 | 0.58 | 1.00 | 0.643 | 1.19 | 0.539 | 0.83 | 0.651 | 2.000 | ● |

**Abbreviations**

$\sigma_{v,eq}$: Total overburden pressure at test point, during earthquake (tsf)
$u_{o,eq}$: Water pressure at test point, during earthquake (tsf)
$\sigma'_{vo,eq}$: Effective overburden pressure, during earthquake (tsf)
$r_d$: Nonlinear shear mass factor
$\alpha$: Improvement factor due to stone columns
CSR : Cyclic Stress Ratio
MSF : Magnitude Scaling Factor
$CSR_{eq,M=7.5}$: CSR adjusted for M=7.5
$K_{sigma}$: Effective overburden stress factor
$CSR^*$: CSR fully adjusted
FS: Calculated factor of safety against soil liquefaction

**:: Liquefaction potential according to Iwasaki ::**

| Depth (ft) | FS | F | wz | Thickness (ft) | $I_L$ |
|---|---|---|---|---|---|
| 10.33 | 2.000 | 0.00 | 8.43 | 5.58 | 0.00 |
| 15.91 | 2.000 | 0.00 | 7.58 | 5.58 | 0.00 |
| 20.18 | 0.640 | 0.36 | 6.92 | 4.27 | 3.24 |
| 25.26 | 2.000 | 0.00 | 6.15 | 5.08 | 0.00 |
| 30.02 | 2.000 | 0.00 | 5.42 | 4.76 | 0.00 |
| 35.27 | 0.219 | 0.78 | 4.62 | 5.25 | 5.78 |
| 40.19 | 2.000 | 0.00 | 3.88 | 4.92 | 0.00 |
| 45.44 | 0.251 | 0.75 | 3.07 | 5.25 | 3.68 |
| 50.20 | 0.299 | 0.70 | 2.35 | 4.76 | 2.39 |
| 55.61 | 2.000 | 0.00 | 1.53 | 5.41 | 0.00 |
| 60.37 | 2.000 | 0.00 | 0.80 | 4.76 | 0.00 |
| 65.12 | 2.000 | 0.00 | 0.08 | 4.75 | 0.00 |
| 70.21 | 2.000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 73.00 | 2.000 | 0.00 | 0.00 | 0.00 | 0.00 |

**Overall potential $I_L$ : 15.10**

$I_L$ = 0.00 - No liquefaction
$I_L$ between 0.00 and 5 - Liquefaction not probable
$I_L$ between 5 and 15 - Liquefaction probable
$I_L$ > 15 - Liquefaction certain

**:: Vertical settlements estimation for dry sands ::**

| Depth (ft) | $V_{s1,cs}$ (ft/s) | $(N_1)_{60,cs}$ | $\tau_{av}$ | p | $G_{max}$ (tsf) | α | b | γ | $\varepsilon_{15}$ | $N_c$ | $\varepsilon_{Nc}$ (%) | Δh (ft) | ΔS (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.33 | 1117.68 | 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.000 |

**Cumulative settlemetns: 0.000**

**Abbreviations**

$V_{s1,cs}$: Normalized shear wave velocity clean sand equivalent
$(N_1)_{60,cs}$: Estimated normalized corrected clean sand SPT
$\tau_{av}$: Average cyclic shear stress
p: Average stress
$G_{max}$: Maximum shear modulus (tsf)
α, b: Shear strain formula variables
γ: Average shear strain
$\varepsilon_{15}$: Volumetric strain after 15 cycles
$N_c$: Number of cycles
$\varepsilon_{Nc}$: Volumetric strain for number of cycles $N_c$ (%)
Δh: Thickness of soil layer (in)
ΔS: Settlement of soil layer (in)

**:: Vertical settlements estimation for saturated sands ::**

| Depth (ft) | $V_{s1,cs}$ (ft/s) | $q_{t1N,cs}$ | $e_v$ (%) | Δh (ft) | s (in) |
|---|---|---|---|---|---|
| 15.91 | 673.45 | 29266.67 | 0.00 | 5.00 | 0.000 |
| 20.18 | 667.47 | 28158.22 | 1.11 | 5.00 | 0.667 |
| 25.26 | 627.97 | 21623.15 | 0.00 | 5.00 | 0.000 |
| 30.02 | 945.80 | 127313.62 | 0.00 | 5.00 | 0.000 |
| 35.27 | 601.97 | 18005.64 | 5.80 | 5.00 | 3.480 |
| 40.19 | 771.28 | 52648.24 | 0.00 | 5.00 | 0.000 |
| 45.44 | 630.83 | 22052.17 | 5.80 | 5.00 | 3.480 |
| 50.20 | 635.14 | 22711.27 | 5.80 | 5.00 | 3.480 |
| 55.61 | 1937.50 | 2838607.44 | 0.00 | 5.00 | 0.000 |
| 60.37 | 1244.53 | 417750.36 | 0.00 | 5.00 | 0.000 |
| 65.12 | 1070.51 | 217635.55 | 0.00 | 5.00 | 0.000 |
| 70.21 | 872.95 | 89985.12 | 0.00 | 5.00 | 0.000 |
| 73.00 | 823.72 | 69992.81 | 0.00 | 3.00 | 0.000 |

**Cumulative settlements: 11.106**

**Abbreviations**

$V_{s1,cs}$: Normalized shear wave velocity clean sand equivalent
$q_{t1N,cs}$: Estimated normalized corrected clean sand cone resitance
$e_v$: Post liquefaction volumetric strain (%)
Δh: Thickness of soil layer to be considered (ft)
s: Estimated settlement (in)

**:: Lateral displacements estimation for saturated sands ::**

| Depth (ft) | $V_{s1,cs}$ (ft/s) | $(N_1)_{60,cs}$ | $D_r$ (%) | $\gamma_{max}$ (%) | $d_z$ (ft) | LDI | LD (ft) |
|---|---|---|---|---|---|---|---|
| 10.33 | 1117.68 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 15.91 | 673.45 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 20.18 | 667.47 | 50 | 100.00 | 6.20 | 5.00 | 0.000 | 0.00 |
| 25.26 | 627.97 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 30.02 | 945.80 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 35.27 | 601.97 | 50 | 100.00 | 6.20 | 5.00 | 0.000 | 0.00 |

**:: Lateral displacements estimation for saturated sands ::**

| Depth (ft) | $V_{s1,cs}$ (ft/s) | $(N_1)_{60,cs}$ | $D_r$ (%) | $\gamma_{max}$ (%) | $d_z$ (ft) | LDI | LD (ft) |
|---|---|---|---|---|---|---|---|
| 40.19 | 771.28 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 45.44 | 630.83 | 50 | 100.00 | 6.20 | 5.00 | 0.000 | 0.00 |
| 50.20 | 635.14 | 50 | 100.00 | 6.20 | 5.00 | 0.000 | 0.00 |
| 55.61 | 1937.50 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 60.37 | 1244.53 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 65.12 | 1070.51 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 70.21 | 872.95 | 50 | 100.00 | 0.00 | 5.00 | 0.000 | 0.00 |
| 73.00 | 823.72 | 50 | 100.00 | 0.00 | 3.00 | 0.000 | 0.00 |

**Cumulative lateral displacements: 0.00**

**Abbreviations**

$V_{s1,cs}$: Normalized shear wave velocity clean sand equivalent
$(N_1)_{60,cs}$: Estimated normalized corrected clean sand SPT
$D_r$: Relative density (%)
$\gamma_{max}$: Maximum amplitude of cyclic shear strain (%)
$d_z$: Soil layer thickness (ft)
LDI: Lateral displacement index (ft)
LD: Actual estimated displacement (ft)

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# Excel Spreadsheet Evaluations

## OAKRIDGE GEOSCIENCE, INC.

| | |
|---|---|
| PLATE NUMBER: | **Apricot Farms** |
| PROJECT NUMBER: | **030.004** |
| DATE OF ANALYSIS: | **12/2/17** |



**EARTHQUAKE PARAMETERS**

| | |
|---|---|
| Design Earthquake Magnitude* (Mm): | 7.00 |
| Design Horizontal Acceleration* (g): | 1.03 |
| Calculated Magnitude Weight Factor: | 0.842 |

**GROUNDWATER PARAMETERS**

| | |
|---|---|
| Current Groundwater Level (ft): | 33.0 |
| Historic High Groundwater Level* (ft): | 15.0 |

* Based on the applicable CDMG Seismic Hazard Evaluation Report

**ENERGY & ROD CORRECTIONS**

| | |
|---|---|
| Energy Correction (CE) for N60: | 1.20 |
| Rod Length Correction (CR) (0 or 1): | 1 |
| Bore Diameter Correction (CB): | 1.15 |
| Sampler Correction (CS): | 1.00 |
| Use K Sigma (0 or 1): | 1 |

Methodology after: Seed, H.B., and Idriss, I.M., 1982;
Seed, H.B., and others, 1985;
& Tokimatsu, K., and Seed, H.B., 1987

**LIQUEFACTION ANALYSIS**

| Layer Depth (ft) | Soil Total Unit Wt. (pcf) | Field SPT Count (N) | Depth of SPT (ft) | Fines Content (%) | Liquefaction Susceptibility (0 or 1) | Total Stress (tsf) | Current Eff. Unit Wt. (psf) | Historic Eff. Unit Wt. (psf) | Current Eff. Stress (tsf) | Historic Eff. Stress (tsf) | Fines Content Correction | Rod Length Correction | K Sigma Correction Factor | Eff. Stress for SPT (tsf) | Depth Correction Cn | Final Corrected (N1)60 | Computed CSR M=7.5 | Corrected Resistance CRR | rd Factor | Induced CSR | Liquefaction Safety Factor | Calculated Settlement (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 97 | 4 | 4 | 60 | 1 | 0.049 | 97.0 | 97.0 | 0.049 | 0.049 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 15.3 | 0.1665 | 0.1665 | 0.995 | 0.5613 | **Dry** | 0.229 |
| 2 | 97 | 4 | 4 | 60 | 1 | 0.097 | 97.0 | 97.0 | 0.097 | 0.097 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 15.3 | 0.1665 | 0.1665 | 0.991 | 0.5587 | **Dry** | 0.229 |
| 3 | 97 | 4 | 4 | 60 | 1 | 0.146 | 97.0 | 97.0 | 0.146 | 0.146 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 15.3 | 0.1665 | 0.1665 | 0.986 | 0.5561 | **Dry** | 0.229 |
| 4 | 97 | 4 | 4 | 60 | 1 | 0.194 | 97.0 | 97.0 | 0.194 | 0.194 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 15.3 | 0.1665 | 0.1665 | 0.982 | 0.5535 | **Dry** | 0.229 |
| 5 | 97 | 4 | 4 | 60 | 1 | 0.243 | 97.0 | 97.0 | 0.243 | 0.243 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 15.3 | 0.1665 | 0.1665 | 0.977 | 0.5510 | **Dry** | 0.229 |
| 6 | 97 | 4 | 4 | 60 | 1 | 0.291 | 97.0 | 97.0 | 0.291 | 0.291 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 15.3 | 0.1665 | 0.1665 | 0.973 | 0.5484 | **Dry** | 0.229 |
| 7 | 97 | 10 | 9 | 60 | 1 | 0.340 | 97.0 | 97.0 | 0.340 | 0.340 | 7.0 | 0.75 | 1.000 | 0.437 | 1.56 | 23.1 | 0.2569 | 0.2569 | 0.968 | 0.5458 | **Dry** | 0.159 |
| 8 | 97 | 10 | 9 | 60 | 1 | 0.388 | 97.0 | 97.0 | 0.388 | 0.388 | 7.0 | 0.75 | 1.000 | 0.437 | 1.56 | 23.1 | 0.2569 | 0.2569 | 0.963 | 0.5432 | **Dry** | 0.159 |
| 9 | 97 | 10 | 9 | 6 | 1 | 0.437 | 97.0 | 97.0 | 0.437 | 0.437 | 0.2 | 0.75 | 1.000 | 0.437 | 1.56 | 16.3 | 0.1779 | 0.1779 | 0.959 | 0.5406 | **Dry** | 0.219 |
| 10 | 115 | 10 | 9 | 6 | 1 | 0.494 | 115.0 | 115.0 | 0.494 | 0.494 | 0.2 | 0.75 | 1.000 | 0.437 | 1.56 | 16.3 | 0.1779 | 0.1779 | 0.954 | 0.5381 | **Dry** | 0.219 |
| 11 | 115 | 10 | 9 | 6 | 1 | 0.552 | 115.0 | 115.0 | 0.552 | 0.552 | 0.2 | 0.75 | 1.000 | 0.437 | 1.56 | 16.3 | 0.1779 | 0.1779 | 0.950 | 0.5355 | **Dry** | 0.219 |
| 12 | 115 | 10 | 9 | 6 | 1 | 0.609 | 115.0 | 115.0 | 0.609 | 0.609 | 0.2 | 0.75 | 1.000 | 0.437 | 1.56 | 16.3 | 0.1779 | 0.1779 | 0.945 | 0.5329 | **Dry** | 0.219 |
| 13 | 115 | 18 | 14 | 6 | 1 | 0.667 | 115.0 | 115.0 | 0.667 | 0.667 | 0.2 | 0.78 | 1.000 | 0.724 | 1.21 | 23.8 | 0.2660 | 0.2660 | 0.941 | 0.5303 | **Dry** | 0.153 |
| 14 | 115 | 18 | 14 | 6 | 1 | 0.724 | 115.0 | 115.0 | 0.724 | 0.724 | 0.2 | 0.78 | 1.000 | 0.724 | 1.21 | 23.8 | 0.2660 | 0.2660 | 0.936 | 0.5278 | **Dry** | 0.153 |
| 15 | 115 | 18 | 14 | 6 | 1 | 0.782 | 115.0 | 115.0 | 0.782 | 0.782 | 0.2 | 0.78 | 1.000 | 0.724 | 1.21 | 23.8 | 0.2660 | 0.2660 | 0.931 | 0.5252 | **Dry** | 0.153 |
| 16 | 115 | 18 | 14 | 6 | 1 | 0.839 | 115.0 | 52.6 | 0.839 | 0.808 | 0.2 | 0.78 | 1.000 | 0.724 | 1.21 | 23.8 | 0.2660 | 0.2660 | 0.927 | 0.5428 | **0.490** | 0.153 |
| 17 | 115 | 18 | 14 | 6 | 1 | 0.897 | 115.0 | 52.6 | 0.897 | 0.834 | 0.2 | 0.78 | 1.000 | 0.724 | 1.21 | 23.8 | 0.2660 | 0.2660 | 0.922 | 0.5589 | **0.476** | 0.153 |
| 18 | 115 | 27 | 19 | 6 | 1 | 0.954 | 115.0 | 52.6 | 0.954 | 0.860 | 0.2 | 0.88 | 1.002 | 1.012 | 1.02 | 33.8 | 0.4933 | Infinite | 0.918 | 0.5737 | **Non-Liq.** | 0.017 |
| 19 | 115 | 27 | 19 | 17 | 1 | 1.012 | 115.0 | 52.6 | 1.012 | 0.887 | 2.8 | 0.88 | 1.002 | 1.012 | 1.02 | 36.3 | 0.6639 | Infinite | 0.913 | 0.5873 | **Non-Liq.** | 0.000 |
| 20 | 115 | 27 | 19 | 17 | 1 | 1.069 | 115.0 | 52.6 | 1.069 | 0.913 | 2.8 | 0.88 | 1.002 | 1.012 | 1.02 | 36.3 | 0.6639 | Infinite | 0.909 | 0.5998 | **Non-Liq.** | 0.000 |
| 21 | 115 | 27 | 19 | 17 | 1 | 1.127 | 115.0 | 52.6 | 1.127 | 0.939 | 2.8 | 0.88 | 1.002 | 1.012 | 1.02 | 36.3 | 0.6639 | Infinite | 0.904 | 0.6113 | **Non-Liq.** | 0.000 |
| 22 | 115 | 27 | 19 | 17 | 1 | 1.184 | 115.0 | 52.6 | 1.184 | 0.966 | 2.8 | 0.88 | 1.002 | 1.012 | 1.02 | 36.3 | 0.6639 | Infinite | 0.899 | 0.6218 | **Non-Liq.** | 0.000 |
| 23 | 115 | 39 | 24 | 17 | 1 | 1.242 | 115.0 | 52.6 | 1.242 | 0.992 | 2.8 | 0.94 | 0.972 | 1.299 | 0.90 | 48.7 | -1.0921 | Infinite | 0.895 | 0.6315 | **Non-Liq.** | 0.000 |
| 24 | 115 | 39 | 24 | 17 | 1 | 1.299 | 115.0 | 52.6 | 1.299 | 1.018 | 2.8 | 0.94 | 0.972 | 1.299 | 0.90 | 48.7 | -1.0921 | Infinite | 0.890 | 0.6404 | **Non-Liq.** | 0.000 |
| 25 | 115 | 39 | 24 | 17 | 1 | 1.357 | 115.0 | 52.6 | 1.357 | 1.045 | 2.8 | 0.94 | 0.972 | 1.299 | 0.90 | 48.7 | -1.0921 | Infinite | 0.886 | 0.6486 | **Non-Liq.** | 0.000 |
| 26 | 115 | 39 | 24 | 17 | 1 | 1.414 | 115.0 | 52.6 | 1.414 | 1.071 | 2.8 | 0.94 | 0.972 | 1.299 | 0.90 | 48.7 | -1.0921 | Infinite | 0.881 | 0.6561 | **Non-Liq.** | 0.000 |
| 27 | 115 | 39 | 24 | 17 | 1 | 1.472 | 115.0 | 52.6 | 1.472 | 1.097 | 2.8 | 0.94 | 0.972 | 1.299 | 0.90 | 48.7 | -1.0921 | Infinite | 0.877 | 0.6629 | **Non-Liq.** | 0.000 |
| 28 | 115 | 31 | 29 | 17 | 1 | 1.529 | 115.0 | 52.6 | 1.529 | 1.123 | 2.8 | 0.99 | 0.941 | 1.589 | 0.82 | 37.4 | 0.7253 | Infinite | 0.872 | 0.6692 | **Non-Liq.** | 0.000 |
| 29 | 120 | 31 | 29 | 17 | 1 | 1.589 | 120.0 | 57.6 | 1.589 | 1.152 | 2.8 | 0.99 | 0.941 | 1.589 | 0.82 | 37.4 | 0.7253 | Infinite | 0.867 | 0.6745 | **Non-Liq.** | 0.000 |
| 30 | 120 | 31 | 29 | 17 | 1 | 1.649 | 120.0 | 57.6 | 1.649 | 1.181 | 2.8 | 0.99 | 0.941 | 1.589 | 0.82 | 37.4 | 0.7253 | Infinite | 0.863 | 0.6793 | **Non-Liq.** | 0.000 |
| 31 | 120 | 31 | 29 | 17 | 1 | 1.709 | 120.0 | 57.6 | 1.709 | 1.210 | 2.8 | 0.99 | 0.941 | 1.589 | 0.82 | 37.4 | 0.7253 | Infinite | 0.858 | 0.6836 | **Non-Liq.** | 0.000 |
| 32 | 120 | 31 | 29 | 17 | 1 | 1.769 | 120.0 | 57.6 | 1.769 | 1.239 | 2.8 | 0.99 | 0.941 | 1.589 | 0.82 | 37.4 | 0.7253 | Infinite | 0.854 | 0.6875 | **Non-Liq.** | 0.000 |
| 33 | 120 | 31 | 29 | 17 | 1 | 1.829 | 120.0 | 57.6 | 1.829 | 1.267 | 2.8 | 0.99 | 0.941 | 1.589 | 0.82 | 37.4 | 0.7253 | Infinite | 0.849 | 0.6909 | **Non-Liq.** | 0.000 |
| 34 | 120 | 15 | 34 | 17 | 1 | 1.889 | 57.6 | 57.6 | 1.858 | 1.296 | 2.8 | 1.00 | 0.915 | 1.858 | 0.75 | 18.4 | 0.1831 | 0.1831 | 0.845 | 0.6940 | **0.264** | 0.201 |
| 35 | 120 | 15 | 34 | 17 | 1 | 1.949 | 57.6 | 57.6 | 1.887 | 1.325 | 2.8 | 1.00 | 0.915 | 1.858 | 0.75 | 18.4 | 0.1831 | 0.1831 | 0.840 | 0.6967 | **0.263** | 0.201 |
| 36 | 120 | 15 | 34 | 17 | 1 | 2.009 | 57.6 | 57.6 | 1.915 | 1.354 | 2.8 | 1.00 | 0.915 | 1.858 | 0.75 | 18.4 | 0.1831 | 0.1831 | 0.835 | 0.6990 | **0.262** | 0.201 |
| 37 | 120 | 15 | 34 | 17 | 1 | 2.069 | 57.6 | 57.6 | 1.944 | 1.383 | 2.8 | 1.00 | 0.915 | 1.858 | 0.75 | 18.4 | 0.1831 | 0.1831 | 0.831 | 0.7010 | **0.261** | 0.201 |
| 38 | 120 | 15 | 34 | 17 | 1 | 2.129 | 57.6 | 57.6 | 1.973 | 1.411 | 2.8 | 1.00 | 0.915 | 1.858 | 0.75 | 18.4 | 0.1831 | 0.1831 | 0.826 | 0.7028 | **0.261** | 0.201 |
| 39 | 120 | 12 | 39 | 17 | 0 | 2.189 | 57.6 | 57.6 | 2.002 | 1.440 | 2.8 | 1.00 | 0.901 | 2.002 | 0.73 | 14.8 | 0.1458 | -- | 0.822 | 0.7042 | **--** | 0.000 |
| 40 | 120 | 12 | 39 | 17 | 0 | 2.249 | 57.6 | 57.6 | 2.031 | 1.469 | 2.8 | 1.00 | 0.901 | 2.002 | 0.73 | 14.8 | 0.1458 | -- | 0.817 | 0.7054 | **--** | 0.000 |
| 41 | 120 | 12 | 39 | 17 | 0 | 2.309 | 57.6 | 57.6 | 2.059 | 1.498 | 2.8 | 1.00 | 0.901 | 2.002 | 0.73 | 14.8 | 0.1458 | -- | 0.813 | 0.7063 | **--** | 0.000 |
| 42 | 120 | 12 | 39 | 17 | 0 | 2.369 | 57.6 | 57.6 | 2.088 | 1.527 | 2.8 | 1.00 | 0.901 | 2.002 | 0.73 | 14.8 | 0.1458 | -- | 0.808 | 0.7070 | **--** | 0.000 |
| 43 | 120 | 12 | 39 | 17 | 0 | 2.429 | 57.6 | 57.6 | 2.117 | 1.555 | 2.8 | 1.00 | 0.901 | 2.002 | 0.73 | 14.8 | 0.1458 | -- | 0.803 | 0.7074 | **--** | 0.000 |
| 44 | 120 | 9 | 44 | 17 | 0 | 2.489 | 57.6 | 57.6 | 2.146 | 1.584 | 2.8 | 1.00 | 0.888 | 2.146 | 0.70 | 11.5 | 0.1117 | -- | 0.799 | 0.7077 | **--** | 0.000 |
| 45 | 120 | 9 | 44 | 17 | 0 | 2.549 | 57.6 | 57.6 | 2.175 | 1.613 | 2.8 | 1.00 | 0.888 | 2.146 | 0.70 | 11.5 | 0.1117 | -- | 0.794 | 0.7077 | **--** | 0.000 |
| 46 | 120 | 9 | 44 | 17 | 0 | 2.609 | 57.6 | 57.6 | 2.203 | 1.642 | 2.8 | 1.00 | 0.888 | 2.146 | 0.70 | 11.5 | 0.1117 | -- | 0.790 | 0.7076 | **--** | 0.000 |
| 47 | 120 | 9 | 44 | 17 | 0 | 2.669 | 57.6 | 57.6 | 2.232 | 1.671 | 2.8 | 1.00 | 0.888 | 2.146 | 0.70 | 11.5 | 0.1117 | -- | 0.785 | 0.7072 | **--** | 0.000 |
| 48 | 120 | 9 | 44 | 17 | 0 | 2.729 | 57.6 | 57.6 | 2.261 | 1.699 | 2.8 | 1.00 | 0.888 | 2.146 | 0.70 | 11.5 | 0.1117 | -- | 0.781 | 0.7068 | **--** | 0.000 |
| 49 | 120 | 2 | 49 | 17 | 0 | 2.789 | 57.6 | 57.6 | 2.290 | 1.728 | 2.8 | 1.00 | 0.875 | 2.290 | 0.68 | 4.7 | 0.0561 | -- | 0.776 | 0.7061 | **--** | 0.000 |
| 50 | 120 | 2 | 49 | 17 | 0 | 2.849 | 57.6 | 57.6 | 2.319 | 1.757 | 2.8 | 1.00 | 0.875 | 2.290 | 0.68 | 4.7 | 0.0561 | -- | 0.771 | 0.7053 | **--** | 0.000 |
| | | | | | | | | | | | | | | | | | | | | | **Total Post-Earthquake Shaking Settlement (inches)** | **4.354** |

## OAKRIDGE GEOSCIENCE, INC.

| | |
|---|---|
| PLATE NUMBER: | **RHS** |
| PROJECT NUMBER: | **030.004** |
| DATE OF ANALYSIS: | **12/2/17** |



**EARTHQUAKE PARAMETERS**

| | |
|---|---|
| Design Earthquake Magnitude* (Mm): | 7.00 |
| Design Horizontal Acceleration* (g): | 1.03 |
| Calculated Magnitude Weight Factor: | 0.842 |

**GROUNDWATER PARAMETERS**

| | |
|---|---|
| Current Groundwater Level (ft): | 33.0 |
| Historic High Groundwater Level* (ft): | 15.0 |

* Based on the applicable CDMG Seismic Hazard Evaluation Report

**ENERGY & ROD CORRECTIONS**

| | |
|---|---|
| Energy Correction (CE) for N60: | 1.20 |
| Rod Length Correction (CR) (0 or 1): | 1 |
| Bore Diameter Correction (CB): | 1.15 |
| Sampler Correction (CS): | 1.00 |
| Use K Sigma (0 or 1): | 1 |

Methodology after: Seed, H.B., and Idriss, I.M., 1982;
Seed, H.B., and others, 1985;
& Tokimatsu, K., and Seed, H.B., 1987

**LIQUEFACTION ANALYSIS**

| Layer Depth (ft) | Soil Total Unit Wt. (pcf) | Field SPT Count (N) | Depth of SPT (ft) | Fines Content (%) | Liquefaction Susceptibility (0 or 1) | Total Stress (tsf) | Current Eff. Unit Wt. (psf) | Historic Eff. Unit Wt. (psf) | Current Eff. Stress (tsf) | Historic Eff. Stress (tsf) | Fines Content Correction | Rod Length Correction | K Sigma Correction Factor | Eff. Stress for SPT (tsf) | Depth Correction Cn | Final Corrected (N1)60 | Computed CSR M=7.5 | Corrected Resistance CRR | rd Factor | Induced CSR | Liquefaction Safety Factor | Calculated Settlement (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 97 | 4 | 4 | 30 | 1 | 0.049 | 97.0 | 97.0 | 0.049 | 0.049 | 5.8 | 0.75 | 1.000 | 0.194 | 2.00 | 14.1 | 0.1540 | 0.1540 | 0.995 | 0.5613 | **Dry** | 0.239 |
| 2 | 97 | 4 | 4 | 30 | 1 | 0.097 | 97.0 | 97.0 | 0.097 | 0.097 | 5.8 | 0.75 | 1.000 | 0.194 | 2.00 | 14.1 | 0.1540 | 0.1540 | 0.991 | 0.5587 | **Dry** | 0.239 |
| 3 | 97 | 4 | 4 | 30 | 1 | 0.146 | 97.0 | 97.0 | 0.146 | 0.146 | 5.8 | 0.75 | 1.000 | 0.194 | 2.00 | 14.1 | 0.1540 | 0.1540 | 0.986 | 0.5561 | **Dry** | 0.239 |
| 4 | 97 | 4 | 4 | 30 | 1 | 0.194 | 97.0 | 97.0 | 0.194 | 0.194 | 5.8 | 0.75 | 1.000 | 0.194 | 2.00 | 14.1 | 0.1540 | 0.1540 | 0.982 | 0.5535 | **Dry** | 0.239 |
| 5 | 97 | 4 | 4 | 30 | 1 | 0.243 | 97.0 | 97.0 | 0.243 | 0.243 | 5.8 | 0.75 | 1.000 | 0.194 | 2.00 | 14.1 | 0.1540 | 0.1540 | 0.977 | 0.5510 | **Dry** | 0.239 |
| 6 | 97 | 4 | 4 | 30 | 1 | 0.291 | 97.0 | 97.0 | 0.291 | 0.291 | 5.8 | 0.75 | 1.000 | 0.194 | 2.00 | 14.1 | 0.1540 | 0.1540 | 0.973 | 0.5484 | **Dry** | 0.239 |
| 7 | 103 | 6 | 9 | 30 | 1 | 0.343 | 103.0 | 103.0 | 0.343 | 0.343 | 5.8 | 0.75 | 1.000 | 0.446 | 1.54 | 15.4 | 0.1678 | 0.1678 | 0.968 | 0.5458 | **Dry** | 0.228 |
| 8 | 103 | 6 | 9 | 30 | 1 | 0.394 | 103.0 | 103.0 | 0.394 | 0.394 | 5.8 | 0.75 | 1.000 | 0.446 | 1.54 | 15.4 | 0.1678 | 0.1678 | 0.963 | 0.5432 | **Dry** | 0.228 |
| 9 | 103 | 6 | 9 | 60 | 0 | 0.446 | 103.0 | 103.0 | 0.446 | 0.446 | 7.0 | 0.75 | 1.000 | 0.446 | 1.54 | 16.6 | 0.1803 | -- | 0.959 | 0.5406 | **--** | 0.000 |
| 10 | 115 | 6 | 9 | 60 | 0 | 0.503 | 115.0 | 115.0 | 0.503 | 0.503 | 7.0 | 0.75 | 1.000 | 0.446 | 1.54 | 16.6 | 0.1803 | -- | 0.954 | 0.5381 | **--** | 0.000 |
| 11 | 115 | 6 | 9 | 60 | 0 | 0.561 | 115.0 | 115.0 | 0.561 | 0.561 | 7.0 | 0.75 | 1.000 | 0.446 | 1.54 | 16.6 | 0.1803 | -- | 0.950 | 0.5355 | **--** | 0.000 |
| 12 | 115 | 6 | 9 | 60 | 0 | 0.618 | 115.0 | 115.0 | 0.618 | 0.618 | 7.0 | 0.75 | 1.000 | 0.446 | 1.54 | 16.6 | 0.1803 | -- | 0.945 | 0.5329 | **--** | 0.000 |
| 13 | 115 | 6 | 14 | 40 | 1 | 0.676 | 115.0 | 115.0 | 0.676 | 0.676 | 7.0 | 0.78 | 1.000 | 0.733 | 1.20 | 14.8 | 0.1613 | 0.1613 | 0.941 | 0.5303 | **Dry** | 0.233 |
| 14 | 115 | 6 | 14 | 40 | 1 | 0.733 | 115.0 | 115.0 | 0.733 | 0.733 | 7.0 | 0.78 | 1.000 | 0.733 | 1.20 | 14.8 | 0.1613 | 0.1613 | 0.936 | 0.5278 | **Dry** | 0.233 |
| 15 | 115 | 6 | 14 | 40 | 1 | 0.791 | 115.0 | 115.0 | 0.791 | 0.791 | 7.0 | 0.78 | 1.000 | 0.733 | 1.20 | 14.8 | 0.1613 | 0.1613 | 0.931 | 0.5252 | **Dry** | 0.233 |
| 16 | 115 | 6 | 14 | 40 | 1 | 0.848 | 115.0 | 52.6 | 0.848 | 0.817 | 7.0 | 0.78 | 1.000 | 0.733 | 1.20 | 14.8 | 0.1613 | 0.1613 | 0.927 | 0.5426 | **Clay** | 0.233 |
| 17 | 115 | 6 | 14 | 40 | 1 | 0.906 | 115.0 | 52.6 | 0.906 | 0.843 | 7.0 | 0.78 | 1.000 | 0.733 | 1.20 | 14.8 | 0.1613 | 0.1613 | 0.922 | 0.5585 | **Clay** | 0.233 |
| 18 | 115 | 11 | 19 | 65 | 0 | 0.963 | 115.0 | 52.6 | 0.963 | 0.869 | 7.0 | 0.88 | 1.001 | 1.021 | 1.02 | 20.6 | 0.2252 | -- | 0.918 | 0.5731 | **--** | 0.000 |
| 19 | 115 | 11 | 19 | 65 | 0 | 1.021 | 115.0 | 52.6 | 1.021 | 0.896 | 7.0 | 0.88 | 1.001 | 1.021 | 1.02 | 20.6 | 0.2252 | -- | 0.913 | 0.5866 | **--** | 0.000 |
| 20 | 115 | 11 | 19 | 65 | 0 | 1.078 | 115.0 | 52.6 | 1.078 | 0.922 | 7.0 | 0.88 | 1.001 | 1.021 | 1.02 | 20.6 | 0.2252 | -- | 0.909 | 0.5990 | **--** | 0.000 |
| 21 | 115 | 11 | 19 | 65 | 0 | 1.136 | 115.0 | 52.6 | 1.136 | 0.948 | 7.0 | 0.88 | 1.001 | 1.021 | 1.02 | 20.6 | 0.2252 | -- | 0.904 | 0.6103 | **--** | 0.000 |
| 22 | 115 | 11 | 19 | 65 | 0 | 1.193 | 115.0 | 52.6 | 1.193 | 0.975 | 7.0 | 0.88 | 1.001 | 1.021 | 1.02 | 20.6 | 0.2252 | -- | 0.899 | 0.6208 | **--** | 0.000 |
| 23 | 115 | 8 | 24 | 54 | 0 | 1.251 | 115.0 | 52.6 | 1.251 | 1.001 | 7.0 | 0.94 | 0.971 | 1.308 | 0.90 | 16.4 | 0.1730 | -- | 0.895 | 0.6304 | **--** | 0.000 |
| 24 | 115 | 8 | 24 | 54 | 0 | 1.308 | 115.0 | 52.6 | 1.308 | 1.027 | 7.0 | 0.94 | 0.971 | 1.308 | 0.90 | 16.4 | 0.1730 | -- | 0.890 | 0.6392 | **--** | 0.000 |
| 25 | 115 | 8 | 24 | 54 | 0 | 1.366 | 115.0 | 52.6 | 1.366 | 1.054 | 7.0 | 0.94 | 0.971 | 1.308 | 0.90 | 16.4 | 0.1730 | -- | 0.886 | 0.6473 | **--** | 0.000 |
| 26 | 115 | 8 | 24 | 54 | 0 | 1.423 | 115.0 | 52.6 | 1.423 | 1.080 | 7.0 | 0.94 | 0.971 | 1.308 | 0.90 | 16.4 | 0.1730 | -- | 0.881 | 0.6547 | **--** | 0.000 |
| 27 | 115 | 8 | 24 | 54 | 0 | 1.481 | 115.0 | 52.6 | 1.481 | 1.106 | 7.0 | 0.94 | 0.971 | 1.308 | 0.90 | 16.4 | 0.1730 | -- | 0.877 | 0.6615 | **--** | 0.000 |
| 28 | 129 | 9 | 29 | 30 | 0 | 1.545 | 129.0 | 66.6 | 1.545 | 1.139 | 5.8 | 0.99 | 0.939 | 1.610 | 0.81 | 15.8 | 0.1618 | -- | 0.872 | 0.6667 | **--** | 0.000 |
| 29 | 129 | 9 | 29 | 30 | 1 | 1.610 | 129.0 | 66.6 | 1.610 | 1.173 | 5.8 | 0.99 | 0.939 | 1.610 | 0.81 | 15.8 | 0.1618 | 0.1618 | 0.867 | 0.6713 | **0.241** | 0.224 |
| 30 | 129 | 9 | 29 | 30 | 1 | 1.674 | 129.0 | 66.6 | 1.674 | 1.206 | 5.8 | 0.99 | 0.939 | 1.610 | 0.81 | 15.8 | 0.1618 | 0.1618 | 0.863 | 0.6753 | **0.240** | 0.224 |
| 31 | 129 | 9 | 29 | 30 | 1 | 1.739 | 129.0 | 66.6 | 1.739 | 1.239 | 5.8 | 0.99 | 0.939 | 1.610 | 0.81 | 15.8 | 0.1618 | 0.1618 | 0.858 | 0.6789 | **0.238** | 0.224 |
| 32 | 129 | 9 | 29 | 30 | 1 | 1.803 | 129.0 | 66.6 | 1.803 | 1.273 | 5.8 | 0.99 | 0.939 | 1.610 | 0.81 | 15.8 | 0.1618 | 0.1618 | 0.854 | 0.6820 | **0.237** | 0.224 |
| 33 | 129 | 9 | 29 | 30 | 1 | 1.868 | 129.0 | 66.6 | 1.868 | 1.306 | 5.8 | 0.99 | 0.939 | 1.610 | 0.81 | 15.8 | 0.1618 | 0.1618 | 0.849 | 0.6847 | **0.236** | 0.224 |
| 34 | 129 | 6 | 34 | 66 | 1 | 1.932 | 66.6 | 66.6 | 1.901 | 1.339 | 7.0 | 1.00 | 0.911 | 1.901 | 0.75 | 13.2 | 0.1310 | 0.1310 | 0.845 | 0.6870 | **Clay** | 0.255 |
| 35 | 129 | 6 | 34 | 66 | 0 | 1.997 | 66.6 | 66.6 | 1.934 | 1.373 | 7.0 | 1.00 | 0.911 | 1.901 | 0.75 | 13.2 | 0.1310 | -- | 0.840 | 0.6889 | **--** | 0.000 |
| 36 | 129 | 6 | 34 | 66 | 0 | 2.061 | 66.6 | 66.6 | 1.967 | 1.406 | 7.0 | 1.00 | 0.911 | 1.901 | 0.75 | 13.2 | 0.1310 | -- | 0.835 | 0.6906 | **--** | 0.000 |
| 37 | 129 | 6 | 34 | 66 | 0 | 2.126 | 66.6 | 66.6 | 2.001 | 1.439 | 7.0 | 1.00 | 0.911 | 1.901 | 0.75 | 13.2 | 0.1310 | -- | 0.831 | 0.6919 | **--** | 0.000 |
| 38 | 129 | 6 | 34 | 66 | 0 | 2.190 | 66.6 | 66.6 | 2.034 | 1.472 | 7.0 | 1.00 | 0.911 | 1.901 | 0.75 | 13.2 | 0.1310 | -- | 0.826 | 0.6929 | **--** | 0.000 |
| 39 | 129 | 11 | 39 | 20 | 1 | 2.255 | 66.6 | 66.6 | 2.067 | 1.506 | 3.5 | 1.00 | 0.895 | 2.067 | 0.72 | 14.4 | 0.1402 | 0.1402 | 0.822 | 0.6937 | **0.202** | 0.237 |
| 40 | 129 | 11 | 39 | 20 | 1 | 2.319 | 66.6 | 66.6 | 2.101 | 1.539 | 3.5 | 1.00 | 0.895 | 2.067 | 0.72 | 14.4 | 0.1402 | 0.1402 | 0.817 | 0.6942 | **0.202** | 0.237 |
| 41 | 129 | 11 | 39 | 20 | 1 | 2.384 | 66.6 | 66.6 | 2.134 | 1.572 | 3.5 | 1.00 | 0.895 | 2.067 | 0.72 | 14.4 | 0.1402 | 0.1402 | 0.813 | 0.6945 | **0.202** | 0.237 |
| 42 | 129 | 11 | 39 | 20 | 1 | 2.448 | 66.6 | 66.6 | 2.167 | 1.606 | 3.5 | 1.00 | 0.895 | 2.067 | 0.72 | 14.4 | 0.1402 | 0.1402 | 0.808 | 0.6946 | **0.202** | 0.237 |
| 43 | 129 | 11 | 39 | 20 | 1 | 2.513 | 66.6 | 66.6 | 2.201 | 1.639 | 3.5 | 1.00 | 0.895 | 2.067 | 0.72 | 14.4 | 0.1402 | 0.1402 | 0.803 | 0.6945 | **0.202** | 0.237 |
| 44 | 129 | 14 | 44 | 5 | 1 | 2.577 | 66.6 | 66.6 | 2.234 | 1.672 | 0.0 | 1.00 | 0.880 | 2.234 | 0.69 | 13.3 | 0.1277 | 0.1277 | 0.799 | 0.6941 | **0.184** | 0.253 |
| 45 | 129 | 14 | 44 | 5 | 1 | 2.642 | 66.6 | 66.6 | 2.267 | 1.706 | 0.0 | 1.00 | 0.880 | 2.234 | 0.69 | 13.3 | 0.1277 | 0.1277 | 0.794 | 0.6936 | **0.184** | 0.253 |
| 46 | 129 | 14 | 44 | 5 | 1 | 2.706 | 66.6 | 66.6 | 2.300 | 1.739 | 0.0 | 1.00 | 0.880 | 2.234 | 0.69 | 13.3 | 0.1277 | 0.1277 | 0.790 | 0.6929 | **0.184** | 0.253 |
| 47 | 129 | 14 | 44 | 5 | 1 | 2.771 | 66.6 | 66.6 | 2.334 | 1.772 | 0.0 | 1.00 | 0.880 | 2.234 | 0.69 | 13.3 | 0.1277 | 0.1277 | 0.785 | 0.6921 | **0.185** | 0.253 |
| 48 | 129 | 14 | 44 | 5 | 1 | 2.835 | 66.6 | 66.6 | 2.367 | 1.805 | 0.0 | 1.00 | 0.880 | 2.234 | 0.69 | 13.3 | 0.1277 | 0.1277 | 0.781 | 0.6911 | **0.185** | 0.253 |
| 49 | 129 | 3 | 49 | 30 | 1 | 2.900 | 66.6 | 66.6 | 2.400 | 1.839 | 5.8 | 1.00 | 0.865 | 2.400 | 0.66 | 8.6 | 0.0824 | 0.0824 | 0.776 | 0.6900 | **0.119** | 0.340 |
| 50 | 129 | 3 | 49 | 30 | 1 | 2.964 | 66.6 | 66.6 | 2.434 | 1.872 | 5.8 | 1.00 | 0.865 | 2.400 | 0.66 | 8.6 | 0.0824 | 0.0824 | 0.771 | 0.6887 | **0.120** | 0.340 |
| | | | | | | | | | | | | | | | | | | | | | **Total Post-Earthquake Shaking Settlement (inches)** | **7.557** |

## OAKRIDGE GEOSCIENCE, INC.

| | |
|---|---|
| PLATE NUMBER: | **450 HIGH ST** |
| PROJECT NUMBER: | **030.004** |
| DATE OF ANALYSIS: | **12/13/17** |



**EARTHQUAKE PARAMETERS**

| | |
|---|---|
| Design Earthquake Magnitude* (Mm): | 7.00 |
| Design Horizontal Acceleration* (g): | 1.03 |
| Calculated Magnitude Weight Factor: | 0.842 |

**GROUNDWATER PARAMETERS**

| | |
|---|---|
| Current Groundwater Level (ft): | 38.0 |
| Historic High Groundwater Level* (ft): | 15.0 |

* Based on the applicable CDMG Seismic Hazard Evaluation Report

**ENERGY & ROD CORRECTIONS**

| | |
|---|---|
| Energy Correction (CE) for N60: | 1.20 |
| Rod Length Correction (CR) (0 or 1): | 1 |
| Bore Diameter Correction (CB): | 1.15 |
| Sampler Correction (CS): | 1.00 |
| Use K Sigma (0 or 1): | 1 |

Methodology after: Seed, H.B., and Idriss, I.M., 1982;
Seed, H.B., and others, 1985;
& Tokimatsu, K., and Seed, H.B., 1987

**LIQUEFACTION ANALYSIS**

| Layer Depth (ft) | Soil Total Unit Wt. (pcf) | Field SPT Count (N) | Depth of SPT (ft) | Fines Content (%) | Liquefaction Susceptibility (0 or 1) | Total Stress (tsf) | Current Eff. Unit Wt. (psf) | Historic Eff. Unit Wt. (psf) | Current Eff. Stress (tsf) | Historic Eff. Stress (tsf) | Fines Content Correction | Rod Length Correction | K Sigma Correction Factor | Eff. Stress for SPT (tsf) | Depth Correction Cn | Final Corrected (N1)60 | Computed CSR M=7.5 | Corrected Resistance CRR | rd Factor | Induced CSR | Liquefaction Safety Factor | Calculated Settlement (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 97 | 1 | 4 | 60 | 0 | 0.049 | 97.0 | 97.0 | 0.049 | 0.049 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 9.1 | 0.1001 | -- | 0.995 | 0.5613 | **--** | 0.000 |
| 2 | 97 | 1 | 4 | 60 | 0 | 0.097 | 97.0 | 97.0 | 0.097 | 0.097 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 9.1 | 0.1001 | -- | 0.991 | 0.5587 | **--** | 0.000 |
| 3 | 97 | 1 | 4 | 60 | 0 | 0.146 | 97.0 | 97.0 | 0.146 | 0.146 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 9.1 | 0.1001 | -- | 0.986 | 0.5561 | **--** | 0.000 |
| 4 | 97 | 1 | 4 | 60 | 0 | 0.194 | 97.0 | 97.0 | 0.194 | 0.194 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 9.1 | 0.1001 | -- | 0.982 | 0.5535 | **--** | 0.000 |
| 5 | 97 | 1 | 4 | 60 | 0 | 0.243 | 97.0 | 97.0 | 0.243 | 0.243 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 9.1 | 0.1001 | -- | 0.977 | 0.5510 | **--** | 0.000 |
| 6 | 97 | 1 | 4 | 60 | 0 | 0.291 | 97.0 | 97.0 | 0.291 | 0.291 | 7.0 | 0.75 | 1.000 | 0.194 | 2.00 | 9.1 | 0.1001 | -- | 0.973 | 0.5484 | **--** | 0.000 |
| 7 | 110 | 7 | 9 | 60 | 0 | 0.346 | 110.0 | 110.0 | 0.346 | 0.346 | 7.0 | 0.75 | 1.000 | 0.456 | 1.52 | 18.0 | 0.1960 | -- | 0.968 | 0.5458 | **--** | 0.000 |
| 8 | 110 | 7 | 9 | 60 | 0 | 0.401 | 110.0 | 110.0 | 0.401 | 0.401 | 7.0 | 0.75 | 1.000 | 0.456 | 1.52 | 18.0 | 0.1960 | -- | 0.963 | 0.5432 | **--** | 0.000 |
| 9 | 110 | 7 | 9 | 35 | 1 | 0.456 | 110.0 | 110.0 | 0.456 | 0.456 | 7.0 | 0.75 | 1.000 | 0.456 | 1.52 | 18.0 | 0.1960 | 0.1960 | 0.959 | 0.5406 | **Dry** | 0.204 |
| 10 | 115 | 7 | 9 | 35 | 1 | 0.514 | 115.0 | 115.0 | 0.514 | 0.514 | 7.0 | 0.75 | 1.000 | 0.456 | 1.52 | 18.0 | 0.1960 | 0.1960 | 0.954 | 0.5381 | **Dry** | 0.204 |
| 11 | 115 | 7 | 9 | 35 | 1 | 0.571 | 115.0 | 115.0 | 0.571 | 0.571 | 7.0 | 0.75 | 1.000 | 0.456 | 1.52 | 18.0 | 0.1960 | 0.1960 | 0.950 | 0.5355 | **Dry** | 0.204 |
| 12 | 115 | 7 | 9 | 35 | 1 | 0.629 | 115.0 | 115.0 | 0.629 | 0.629 | 7.0 | 0.75 | 1.000 | 0.456 | 1.52 | 18.0 | 0.1960 | 0.1960 | 0.945 | 0.5329 | **Dry** | 0.204 |
| 13 | 115 | 8 | 14 | 35 | 1 | 0.686 | 115.0 | 115.0 | 0.686 | 0.686 | 7.0 | 0.78 | 1.000 | 0.744 | 1.19 | 17.3 | 0.1883 | 0.1883 | 0.941 | 0.5303 | **Dry** | 0.211 |
| 14 | 115 | 8 | 14 | 35 | 1 | 0.744 | 115.0 | 115.0 | 0.744 | 0.744 | 7.0 | 0.78 | 1.000 | 0.744 | 1.19 | 17.3 | 0.1883 | 0.1883 | 0.936 | 0.5278 | **Dry** | 0.211 |
| 15 | 115 | 8 | 14 | 35 | 1 | 0.801 | 115.0 | 115.0 | 0.801 | 0.801 | 7.0 | 0.78 | 1.000 | 0.744 | 1.19 | 17.3 | 0.1883 | 0.1883 | 0.931 | 0.5252 | **Dry** | 0.211 |
| 16 | 115 | 8 | 14 | 35 | 0 | 0.859 | 115.0 | 52.6 | 0.859 | 0.827 | 7.0 | 0.78 | 1.000 | 0.744 | 1.19 | 17.3 | 0.1883 | -- | 0.927 | 0.5423 | **--** | 0.000 |
| 17 | 115 | 8 | 14 | 35 | 0 | 0.916 | 115.0 | 52.6 | 0.916 | 0.854 | 7.0 | 0.78 | 1.000 | 0.744 | 1.19 | 17.3 | 0.1883 | -- | 0.922 | 0.5580 | **--** | 0.000 |
| 18 | 115 | 34 | 19 | 35 | 0 | 0.974 | 115.0 | 52.6 | 0.974 | 0.880 | 7.0 | 0.88 | 1.000 | 1.031 | 1.01 | 48.8 | -1.0898 | -- | 0.918 | 0.5725 | **--** | 0.000 |
| 19 | 115 | 34 | 19 | 6 | 1 | 1.031 | 115.0 | 52.6 | 1.031 | 0.906 | 0.2 | 0.88 | 1.000 | 1.031 | 1.01 | 42.1 | 2.4893 | Infinite | 0.913 | 0.5858 | **Non-Liq.** | 0.000 |
| 20 | 115 | 34 | 19 | 6 | 1 | 1.089 | 115.0 | 52.6 | 1.089 | 0.933 | 0.2 | 0.88 | 1.000 | 1.031 | 1.01 | 42.1 | 2.4893 | Infinite | 0.909 | 0.5980 | **Non-Liq.** | 0.000 |
| 21 | 115 | 34 | 19 | 6 | 1 | 1.146 | 115.0 | 52.6 | 1.146 | 0.959 | 0.2 | 0.88 | 1.000 | 1.031 | 1.01 | 42.1 | 2.4893 | Infinite | 0.904 | 0.6092 | **Non-Liq.** | 0.000 |
| 22 | 115 | 34 | 19 | 6 | 1 | 1.204 | 115.0 | 52.6 | 1.204 | 0.985 | 0.2 | 0.88 | 1.000 | 1.031 | 1.01 | 42.1 | 2.4893 | Infinite | 0.899 | 0.6196 | **Non-Liq.** | 0.000 |
| 23 | 115 | 7 | 24 | 6 | 1 | 1.261 | 115.0 | 52.6 | 1.261 | 1.011 | 0.2 | 0.94 | 0.970 | 1.319 | 0.90 | 8.4 | 0.0907 | 0.0907 | 0.895 | 0.6291 | **0.144** | 0.343 |
| 24 | 115 | 7 | 24 | 40 | 1 | 1.319 | 115.0 | 52.6 | 1.319 | 1.038 | 7.0 | 0.94 | 0.970 | 1.319 | 0.90 | 15.2 | 0.1603 | 0.1603 | 0.890 | 0.6378 | **Clay** | 0.230 |
| 25 | 115 | 7 | 24 | 40 | 1 | 1.376 | 115.0 | 52.6 | 1.376 | 1.064 | 7.0 | 0.94 | 0.970 | 1.319 | 0.90 | 15.2 | 0.1603 | 0.1603 | 0.886 | 0.6458 | **Clay** | 0.230 |
| 26 | 115 | 7 | 24 | 40 | 1 | 1.434 | 115.0 | 52.6 | 1.434 | 1.090 | 7.0 | 0.94 | 0.970 | 1.319 | 0.90 | 15.2 | 0.1603 | 0.1603 | 0.881 | 0.6532 | **Clay** | 0.230 |
| 27 | 115 | 7 | 24 | 40 | 1 | 1.491 | 115.0 | 52.6 | 1.491 | 1.117 | 7.0 | 0.94 | 0.970 | 1.319 | 0.90 | 15.2 | 0.1603 | 0.1603 | 0.877 | 0.6600 | **Clay** | 0.230 |
| 28 | 115 | 18 | 29 | 40 | 1 | 1.549 | 115.0 | 52.6 | 1.549 | 1.143 | 7.0 | 0.99 | 0.940 | 1.604 | 0.81 | 27.0 | 0.3048 | 0.3048 | 0.872 | 0.6661 | **Clay** | 0.124 |
| 29 | 110 | 18 | 29 | 40 | 1 | 1.604 | 110.0 | 47.6 | 1.604 | 1.167 | 7.0 | 0.99 | 0.940 | 1.604 | 0.81 | 27.0 | 0.3048 | 0.3048 | 0.867 | 0.6722 | **Clay** | 0.124 |
| 30 | 110 | 18 | 29 | 40 | 1 | 1.659 | 110.0 | 47.6 | 1.659 | 1.191 | 7.0 | 0.99 | 0.940 | 1.604 | 0.81 | 27.0 | 0.3048 | 0.3048 | 0.863 | 0.6778 | **Clay** | 0.124 |
| 31 | 110 | 18 | 29 | 40 | 1 | 1.714 | 110.0 | 47.6 | 1.714 | 1.214 | 7.0 | 0.99 | 0.940 | 1.604 | 0.81 | 27.0 | 0.3048 | 0.3048 | 0.858 | 0.6829 | **Clay** | 0.124 |
| 32 | 110 | 18 | 29 | 40 | 1 | 1.769 | 110.0 | 47.6 | 1.769 | 1.238 | 7.0 | 0.99 | 0.940 | 1.604 | 0.81 | 27.0 | 0.3048 | 0.3048 | 0.854 | 0.6876 | **Clay** | 0.124 |
| 33 | 110 | 19 | 29 | 40 | 1 | 1.824 | 110.0 | 47.6 | 1.824 | 1.262 | 7.0 | 0.99 | 0.940 | 1.604 | 0.81 | 28.1 | 0.3319 | 0.3319 | 0.849 | 0.6918 | **Clay** | 0.112 |
| 34 | 110 | 19 | 34 | 6 | 1 | 1.879 | 110.0 | 47.6 | 1.879 | 1.286 | 0.2 | 1.00 | 0.913 | 1.879 | 0.75 | 19.9 | 0.1979 | 0.1979 | 0.845 | 0.6958 | **0.284** | 0.187 |
| 35 | 110 | 19 | 34 | 6 | 1 | 1.934 | 110.0 | 47.6 | 1.934 | 1.310 | 0.2 | 1.00 | 0.913 | 1.879 | 0.75 | 19.9 | 0.1979 | 0.1979 | 0.840 | 0.6993 | **0.283** | 0.187 |
| 36 | 110 | 19 | 34 | 6 | 1 | 1.989 | 110.0 | 47.6 | 1.989 | 1.333 | 0.2 | 1.00 | 0.913 | 1.879 | 0.75 | 19.9 | 0.1979 | 0.1979 | 0.835 | 0.7025 | **0.282** | 0.187 |
| 37 | 110 | 19 | 34 | 6 | 1 | 2.044 | 110.0 | 47.6 | 2.044 | 1.357 | 0.2 | 1.00 | 0.913 | 1.879 | 0.75 | 19.9 | 0.1979 | 0.1979 | 0.831 | 0.7054 | **0.281** | 0.187 |
| 38 | 110 | 19 | 34 | 6 | 1 | 2.099 | 110.0 | 47.6 | 2.099 | 1.381 | 0.2 | 1.00 | 0.913 | 1.879 | 0.75 | 19.9 | 0.1979 | 0.1979 | 0.826 | 0.7080 | **0.280** | 0.187 |
| 39 | 110 | 2 | 39 | 37 | 1 | 2.154 | 47.6 | 47.6 | 2.122 | 1.405 | 7.0 | 1.00 | 0.890 | 2.122 | 0.71 | 8.9 | 0.0879 | 0.0879 | 0.822 | 0.7103 | **Clay** | 0.333 |
| 40 | 110 | 2 | 39 | 37 | 1 | 2.209 | 47.6 | 47.6 | 2.146 | 1.429 | 7.0 | 1.00 | 0.890 | 2.122 | 0.71 | 8.9 | 0.0879 | 0.0879 | 0.817 | 0.7123 | **Clay** | 0.333 |
| 41 | 110 | 2 | 39 | 37 | 1 | 2.264 | 47.6 | 47.6 | 2.170 | 1.452 | 7.0 | 1.00 | 0.890 | 2.122 | 0.71 | 8.9 | 0.0879 | 0.0879 | 0.813 | 0.7141 | **Clay** | 0.333 |
| 42 | 110 | 2 | 39 | 37 | 1 | 2.319 | 47.6 | 47.6 | 2.194 | 1.476 | 7.0 | 1.00 | 0.890 | 2.122 | 0.71 | 8.9 | 0.0879 | 0.0879 | 0.808 | 0.7156 | **Clay** | 0.333 |
| 43 | 110 | 2 | 39 | 37 | 1 | 2.374 | 47.6 | 47.6 | 2.218 | 1.500 | 7.0 | 1.00 | 0.890 | 2.122 | 0.71 | 8.9 | 0.0879 | 0.0879 | 0.803 | 0.7168 | **Clay** | 0.333 |
| 44 | 110 | 8 | 44 | 37 | 1 | 2.429 | 47.6 | 47.6 | 2.241 | 1.524 | 7.0 | 1.00 | 0.879 | 2.241 | 0.69 | 14.6 | 0.1398 | 0.1398 | 0.799 | 0.7179 | **Clay** | 0.235 |
| 45 | 110 | 8 | 44 | 37 | 1 | 2.484 | 47.6 | 47.6 | 2.265 | 1.548 | 7.0 | 1.00 | 0.879 | 2.241 | 0.69 | 14.6 | 0.1398 | 0.1398 | 0.794 | 0.7187 | **Clay** | 0.235 |
| 46 | 110 | 8 | 44 | 37 | 1 | 2.539 | 47.6 | 47.6 | 2.289 | 1.571 | 7.0 | 1.00 | 0.879 | 2.241 | 0.69 | 14.6 | 0.1398 | 0.1398 | 0.790 | 0.7193 | **Clay** | 0.235 |
| 47 | 110 | 8 | 44 | 37 | 1 | 2.594 | 47.6 | 47.6 | 2.313 | 1.595 | 7.0 | 1.00 | 0.879 | 2.241 | 0.69 | 14.6 | 0.1398 | 0.1398 | 0.785 | 0.7198 | **Clay** | 0.235 |
| 48 | 110 | 8 | 44 | 37 | 1 | 2.649 | 47.6 | 47.6 | 2.337 | 1.619 | 7.0 | 1.00 | 0.879 | 2.241 | 0.69 | 14.6 | 0.1398 | 0.1398 | 0.781 | 0.7200 | **Clay** | 0.235 |
| 49 | 110 | 14 | 49 | 37 | 1 | 2.704 | 47.6 | 47.6 | 2.360 | 1.643 | 7.0 | 1.00 | 0.869 | 2.360 | 0.67 | 19.9 | 0.1886 | 0.1886 | 0.776 | 0.7201 | **Clay** | 0.187 |
| 50 | 110 | 14 | 49 | 37 | 1 | 2.759 | 47.6 | 47.6 | 2.384 | 1.667 | 7.0 | 1.00 | 0.869 | 2.360 | 0.67 | 19.9 | 0.1886 | 0.1886 | 0.771 | 0.7200 | **Clay** | 0.187 |
| | | | | | | | | | | | | | | | | | | | | | **Total Post-Earthquake Shaking Settlement (inches)** | **7.595** |

## OAKRIDGE GEOSCIENCE, INC.

| | |
|---|---|
| PLATE NUMBER: | **450 HIGH ST** |
| PROJECT NUMBER: | **030.004** |
| DATE OF ANALYSIS: | **12/13/17** |



**EARTHQUAKE PARAMETERS**

| | |
|---|---|
| Design Earthquake Magnitude* (Mm): | 7.00 |
| Design Horizontal Acceleration* (g): | 1.03 |
| Calculated Magnitude Weight Factor: | 0.842 |

**GROUNDWATER PARAMETERS**

| | |
|---|---|
| Current Groundwater Level (ft): | 38.0 |
| Historic High Groundwater Level* (ft): | 15.0 |

* Based on the applicable CDMG Seismic Hazard Evaluation Report

**ENERGY & ROD CORRECTIONS**

| | |
|---|---|
| Energy Correction (CE) for N60: | 1.20 |
| Rod Length Correction (CR) (0 or 1): | 1 |
| Bore Diameter Correction (CB): | 1.15 |
| Sampler Correction (CS): | 1.00 |
| Use K Sigma (0 or 1): | 1 |

Methodology after: Seed, H.B., and Idriss, I.M., 1982;
Seed, H.B., and others, 1985;
& Tokimatsu, K., and Seed, H.B., 1987

**LIQUEFACTION ANALYSIS**

| Layer Depth (ft) | Soil Total Unit Wt. (pcf) | Field SPT Count (N) | Depth of SPT (ft) | Fines Content (%) | Liquefaction Susceptibility (0 or 1) | Total Stress (tsf) | Current Eff. Unit Wt. (psf) | Historic Eff. Unit Wt. (psf) | Current Eff. Stress (tsf) | Historic Eff. Stress (tsf) | Fines Content Correction | Rod Length Correction | K Sigma Correction Factor | Eff. Stress for SPT (tsf) | Depth Correction Cn | Final Corrected (N1)60 | Computed CSR M=7.5 | Corrected Resistance CRR | rd Factor | Induced CSR | Liquefaction Safety Factor | Calculated Settlement (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 102 | 5 | 4 | 60 | 1 | 0.051 | 102.0 | 102.0 | 0.051 | 0.051 | 7.0 | 0.75 | 1.000 | 0.204 | 2.00 | 17.4 | 0.1886 | 0.1886 | 0.995 | 0.5613 | **Dry** | 0.210 |
| 2 | 102 | 5 | 4 | 60 | 1 | 0.102 | 102.0 | 102.0 | 0.102 | 0.102 | 7.0 | 0.75 | 1.000 | 0.204 | 2.00 | 17.4 | 0.1886 | 0.1886 | 0.991 | 0.5587 | **Dry** | 0.210 |
| 3 | 102 | 5 | 4 | 60 | 1 | 0.153 | 102.0 | 102.0 | 0.153 | 0.153 | 7.0 | 0.75 | 1.000 | 0.204 | 2.00 | 17.4 | 0.1886 | 0.1886 | 0.986 | 0.5561 | **Dry** | 0.210 |
| 4 | 102 | 5 | 4 | 60 | 1 | 0.204 | 102.0 | 102.0 | 0.204 | 0.204 | 7.0 | 0.75 | 1.000 | 0.204 | 2.00 | 17.4 | 0.1886 | 0.1886 | 0.982 | 0.5535 | **Dry** | 0.210 |
| 5 | 102 | 5 | 4 | 60 | 1 | 0.255 | 102.0 | 102.0 | 0.255 | 0.255 | 7.0 | 0.75 | 1.000 | 0.204 | 2.00 | 17.4 | 0.1886 | 0.1886 | 0.977 | 0.5510 | **Dry** | 0.210 |
| 6 | 102 | 5 | 4 | 60 | 1 | 0.306 | 102.0 | 102.0 | 0.306 | 0.306 | 7.0 | 0.75 | 1.000 | 0.204 | 2.00 | 17.4 | 0.1886 | 0.1886 | 0.973 | 0.5484 | **Dry** | 0.210 |
| 7 | 102 | 5 | 9 | 60 | 1 | 0.357 | 102.0 | 102.0 | 0.357 | 0.357 | 7.0 | 0.75 | 1.000 | 0.461 | 1.52 | 14.8 | 0.1618 | 0.1618 | 0.968 | 0.5458 | **Dry** | 0.232 |
| 8 | 102 | 5 | 9 | 60 | 1 | 0.408 | 102.0 | 102.0 | 0.408 | 0.408 | 7.0 | 0.75 | 1.000 | 0.461 | 1.52 | 14.8 | 0.1618 | 0.1618 | 0.963 | 0.5432 | **Dry** | 0.232 |
| 9 | 105 | 5 | 9 | 35 | 1 | 0.461 | 105.0 | 105.0 | 0.461 | 0.461 | 7.0 | 0.75 | 1.000 | 0.461 | 1.52 | 14.8 | 0.1618 | 0.1618 | 0.959 | 0.5406 | **Dry** | 0.232 |
| 10 | 105 | 5 | 9 | 35 | 1 | 0.513 | 105.0 | 105.0 | 0.513 | 0.513 | 7.0 | 0.75 | 1.000 | 0.461 | 1.52 | 14.8 | 0.1618 | 0.1618 | 0.954 | 0.5381 | **Dry** | 0.232 |
| 11 | 105 | 5 | 9 | 35 | 1 | 0.566 | 105.0 | 105.0 | 0.566 | 0.566 | 7.0 | 0.75 | 1.000 | 0.461 | 1.52 | 14.8 | 0.1618 | 0.1618 | 0.950 | 0.5355 | **Dry** | 0.232 |
| 12 | 105 | 5 | 9 | 35 | 1 | 0.618 | 105.0 | 105.0 | 0.618 | 0.618 | 7.0 | 0.75 | 1.000 | 0.461 | 1.52 | 14.8 | 0.1618 | 0.1618 | 0.945 | 0.5329 | **Dry** | 0.232 |
| 13 | 105 | 11 | 14 | 35 | 1 | 0.671 | 105.0 | 105.0 | 0.671 | 0.671 | 7.0 | 0.78 | 1.000 | 0.726 | 1.21 | 21.4 | 0.2340 | 0.2340 | 0.941 | 0.5303 | **Dry** | 0.175 |
| 14 | 110 | 11 | 14 | 35 | 1 | 0.726 | 110.0 | 110.0 | 0.726 | 0.726 | 7.0 | 0.78 | 1.000 | 0.726 | 1.21 | 21.4 | 0.2340 | 0.2340 | 0.936 | 0.5278 | **Dry** | 0.175 |
| 15 | 110 | 11 | 14 | 35 | 1 | 0.781 | 110.0 | 110.0 | 0.781 | 0.781 | 7.0 | 0.78 | 1.000 | 0.726 | 1.21 | 21.4 | 0.2340 | 0.2340 | 0.931 | 0.5252 | **Dry** | 0.175 |
| 16 | 110 | 11 | 14 | 35 | 1 | 0.836 | 110.0 | 47.6 | 0.836 | 0.804 | 7.0 | 0.78 | 1.000 | 0.726 | 1.21 | 21.4 | 0.2340 | 0.2340 | 0.927 | 0.5429 | **0.431** | 0.175 |
| 17 | 110 | 11 | 14 | 35 | 1 | 0.891 | 110.0 | 47.6 | 0.891 | 0.828 | 7.0 | 0.78 | 1.000 | 0.726 | 1.21 | 21.4 | 0.2340 | 0.2340 | 0.922 | 0.5592 | **0.418** | 0.175 |
| 18 | 110 | 30 | 19 | 35 | 1 | 0.946 | 110.0 | 47.6 | 0.946 | 0.852 | 7.0 | 0.88 | 1.003 | 1.003 | 1.03 | 44.4 | -18.2727 | Infinite | 0.918 | 0.5743 | **Non-Liq.** | 0.000 |
| 19 | 115 | 30 | 19 | 6 | 1 | 1.003 | 115.0 | 52.6 | 1.003 | 0.878 | 0.2 | 0.88 | 1.003 | 1.003 | 1.03 | 37.7 | 0.8007 | Infinite | 0.913 | 0.5880 | **Non-Liq.** | 0.000 |
| 20 | 115 | 30 | 19 | 6 | 1 | 1.061 | 115.0 | 52.6 | 1.061 | 0.905 | 0.2 | 0.88 | 1.003 | 1.003 | 1.03 | 37.7 | 0.8007 | Infinite | 0.909 | 0.6006 | **Non-Liq.** | 0.000 |
| 21 | 115 | 30 | 19 | 6 | 1 | 1.118 | 115.0 | 52.6 | 1.118 | 0.931 | 0.2 | 0.88 | 1.003 | 1.003 | 1.03 | 37.7 | 0.8007 | Infinite | 0.904 | 0.6122 | **Non-Liq.** | 0.000 |
| 22 | 115 | 30 | 19 | 6 | 1 | 1.176 | 115.0 | 52.6 | 1.176 | 0.957 | 0.2 | 0.88 | 1.003 | 1.003 | 1.03 | 37.7 | 0.8007 | Infinite | 0.899 | 0.6229 | **Non-Liq.** | 0.000 |
| 23 | 130 | 50 | 24 | 13 | 1 | 1.241 | 130.0 | 67.6 | 1.241 | 0.991 | 1.9 | 0.94 | 0.971 | 1.306 | 0.90 | 60.6 | -0.2972 | Infinite | 0.895 | 0.6316 | **Non-Liq.** | 0.000 |
| 24 | 130 | 50 | 24 | 13 | 1 | 1.306 | 130.0 | 67.6 | 1.306 | 1.025 | 1.9 | 0.94 | 0.971 | 1.306 | 0.90 | 60.6 | -0.2972 | Infinite | 0.890 | 0.6395 | **Non-Liq.** | 0.000 |
| 25 | 130 | 50 | 24 | 13 | 1 | 1.371 | 130.0 | 67.6 | 1.371 | 1.059 | 1.9 | 0.94 | 0.971 | 1.306 | 0.90 | 60.6 | -0.2972 | Infinite | 0.886 | 0.6466 | **Non-Liq.** | 0.000 |
| 26 | 130 | 50 | 24 | 13 | 1 | 1.436 | 130.0 | 67.6 | 1.436 | 1.092 | 1.9 | 0.94 | 0.971 | 1.306 | 0.90 | 60.6 | -0.2972 | Infinite | 0.881 | 0.6529 | **Non-Liq.** | 0.000 |
| 27 | 130 | 50 | 24 | 13 | 1 | 1.501 | 130.0 | 67.6 | 1.501 | 1.126 | 1.9 | 0.94 | 0.971 | 1.306 | 0.90 | 60.6 | -0.2972 | Infinite | 0.877 | 0.6586 | **Non-Liq.** | 0.000 |
| 28 | 130 | 50 | 29 | 13 | 1 | 1.566 | 130.0 | 67.6 | 1.566 | 1.160 | 1.9 | 0.99 | 0.938 | 1.621 | 0.81 | 57.2 | -0.3636 | Infinite | 0.872 | 0.6636 | **Non-Liq.** | 0.000 |
| 29 | 110 | 50 | 29 | 13 | 1 | 1.621 | 110.0 | 47.6 | 1.621 | 1.184 | 1.9 | 0.99 | 0.938 | 1.621 | 0.81 | 57.2 | -0.3636 | Infinite | 0.867 | 0.6696 | **Non-Liq.** | 0.000 |
| 30 | 110 | 50 | 29 | 13 | 1 | 1.676 | 110.0 | 47.6 | 1.676 | 1.208 | 1.9 | 0.99 | 0.938 | 1.621 | 0.81 | 57.2 | -0.3636 | Infinite | 0.863 | 0.6751 | **Non-Liq.** | 0.000 |
| 31 | 0 | | 29 | 0 | 0 | 1.676 | 0.0 | -62.4 | 1.676 | 1.176 | 0.0 | 0.99 | 0.938 | 1.621 | 0.81 | 0.0 | 0.0454 | -- | 0.858 | 0.6893 | -- | 0.000 |
| 32 | 0 | | 29 | 0 | 0 | 1.676 | 0.0 | -62.4 | 1.676 | 1.145 | 0.0 | 0.99 | 0.938 | 1.621 | 0.81 | 0.0 | 0.0454 | -- | 0.854 | 0.7043 | -- | 0.000 |
| 33 | 0 | | 29 | 0 | 0 | 1.676 | 0.0 | -62.4 | 1.676 | 1.114 | 0.0 | 0.99 | 0.938 | 1.621 | 0.81 | 0.0 | 0.0454 | -- | 0.849 | 0.7202 | -- | 0.000 |
| 34 | 0 | | 34 | 0 | 0 | 1.676 | 0.0 | -62.4 | 1.676 | 1.083 | 0.0 | 1.00 | 0.933 | 1.676 | 0.79 | 0.0 | 0.0452 | -- | 0.845 | 0.7369 | -- | 0.000 |
| 35 | 0 | | 34 | 0 | 0 | 1.676 | 0.0 | -62.4 | 1.676 | 1.052 | 0.0 | 1.00 | 0.933 | 1.676 | 0.79 | 0.0 | 0.0452 | -- | 0.840 | 0.7547 | -- | 0.000 |
| 36 | 0 | | 34 | 0 | 0 | 1.676 | 0.0 | -62.4 | 1.676 | 1.020 | 0.0 | 1.00 | 0.933 | 1.676 | 0.79 | 0.0 | 0.0452 | -- | 0.835 | 0.7735 | -- | 0.000 |
| 37 | 0 | | 34 | 0 | 0 | 1.676 | 0.0 | -62.4 | 1.676 | 0.989 | 0.0 | 1.00 | 0.933 | 1.676 | 0.79 | 0.0 | 0.0452 | -- | 0.831 | 0.7936 | -- | 0.000 |
| 38 | 0 | | 34 | 0 | 0 | 1.676 | 0.0 | -62.4 | 1.676 | 0.958 | 0.0 | 1.00 | 0.933 | 1.676 | 0.79 | 0.0 | 0.0452 | -- | 0.826 | 0.8149 | -- | 0.000 |
| 39 | 0 | | 39 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.644 | 0.927 | 0.0 | 1.00 | 0.936 | 1.644 | 0.80 | 0.0 | 0.0453 | -- | 0.822 | 0.8377 | -- | 0.000 |
| 40 | 0 | | 39 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.613 | 0.896 | 0.0 | 1.00 | 0.936 | 1.644 | 0.80 | 0.0 | 0.0453 | -- | 0.817 | 0.8620 | -- | 0.000 |
| 41 | 0 | | 39 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.582 | 0.864 | 0.0 | 1.00 | 0.936 | 1.644 | 0.80 | 0.0 | 0.0453 | -- | 0.813 | 0.8882 | -- | 0.000 |
| 42 | 0 | | 39 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.551 | 0.833 | 0.0 | 1.00 | 0.936 | 1.644 | 0.80 | 0.0 | 0.0453 | -- | 0.808 | 0.9162 | -- | 0.000 |
| 43 | 0 | | 39 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.520 | 0.802 | 0.0 | 1.00 | 0.936 | 1.644 | 0.80 | 0.0 | 0.0453 | -- | 0.803 | 0.9465 | -- | 0.000 |
| 44 | 0 | | 44 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.488 | 0.771 | 0.0 | 1.00 | 0.952 | 1.488 | 0.84 | 0.0 | 0.0461 | -- | 0.799 | 0.9792 | -- | 0.000 |
| 45 | 0 | | 44 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.457 | 0.740 | 0.0 | 1.00 | 0.952 | 1.488 | 0.84 | 0.0 | 0.0461 | -- | 0.794 | 1.0147 | -- | 0.000 |
| 46 | 0 | | 44 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.426 | 0.708 | 0.0 | 1.00 | 0.952 | 1.488 | 0.84 | 0.0 | 0.0461 | -- | 0.790 | 1.0533 | -- | 0.000 |
| 47 | 0 | | 44 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.395 | 0.677 | 0.0 | 1.00 | 0.952 | 1.488 | 0.84 | 0.0 | 0.0461 | -- | 0.785 | 1.0954 | -- | 0.000 |
| 48 | 0 | | 44 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.364 | 0.646 | 0.0 | 1.00 | 0.952 | 1.488 | 0.84 | 0.0 | 0.0461 | -- | 0.781 | 1.1417 | -- | 0.000 |
| 49 | 0 | | 49 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.332 | 0.615 | 0.0 | 1.00 | 0.968 | 1.332 | 0.89 | 0.0 | 0.0469 | -- | 0.776 | 1.1926 | -- | 0.000 |
| 50 | 0 | | 49 | 0 | 0 | 1.676 | -62.4 | -62.4 | 1.301 | 0.584 | 0.0 | 1.00 | 0.968 | 1.332 | 0.89 | 0.0 | 0.0469 | -- | 0.771 | 1.2489 | -- | 0.000 |
| | | | | | | | | | | | | | | | | | | | | | **Total Post-Earthquake Shaking Settlement (inches)** | **3.529** |

## OAKRIDGE GEOSCIENCE, INC.

| | |
|---|---|
| PLATE NUMBER: | **347 MP AVE** |
| PROJECT NUMBER: | **030.004** |
| DATE OF ANALYSIS: | **11/21/17** |



**EARTHQUAKE PARAMETERS**

| | |
|---|---|
| Design Earthquake Magnitude* (Mm): | 7.00 |
| Design Horizontal Acceleration* (g): | 1.02 |
| Calculated Magnitude Weight Factor: | 0.842 |

**GROUNDWATER PARAMETERS**

| | |
|---|---|
| Current Groundwater Level (ft): | 28.0 |
| Historic High Groundwater Level* (ft): | 15.0 |

* Based on the applicable CDMG Seismic Hazard Evaluation Report

**ENERGY & ROD CORRECTIONS**

| | |
|---|---|
| Energy Correction (CE) for N60: | 1.20 |
| Rod Length Correction (CR) (0 or 1): | 1 |
| Bore Diameter Correction (CB): | 1.15 |
| Sampler Correction (CS): | 1.00 |
| Use K Sigma (0 or 1): | 1 |

Methodology after: Seed, H.B., and Idriss, I.M., 1982;
Seed, H.B., and others, 1985;
& Tokimatsu, K., and Seed, H.B., 1987

**LIQUEFACTION ANALYSIS**

| Layer Depth (ft) | Soil Total Unit Wt. (pcf) | Field SPT Count (N) | Depth of SPT (ft) | Fines Content (%) | Liquefaction Susceptibility (0 or 1) | Total Stress (tsf) | Current Eff. Unit Wt. (psf) | Historic Eff. Unit Wt. (psf) | Current Eff. Stress (tsf) | Historic Eff. Stress (tsf) | Fines Content Correction | Rod Length Correction | K Sigma Correction Factor | Eff. Stress for SPT (tsf) | Depth Correction Cn | Final Corrected (N1)60 | Computed CSR M=7.5 | Corrected Resistance CRR | rd Factor | Induced CSR | Liquefaction Safety Factor | Calculated Settlement (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 106 | 6 | 5 | 27 | 1 | 0.053 | 106.0 | 106.0 | 0.053 | 0.053 | 5.1 | 0.75 | 1.000 | 0.265 | 2.00 | 17.5 | 0.1907 | 0.1907 | 0.995 | 0.5558 | **Dry** | 0.209 |
| 2 | 106 | 6 | 5 | 27 | 1 | 0.106 | 106.0 | 106.0 | 0.106 | 0.106 | 5.1 | 0.75 | 1.000 | 0.265 | 2.00 | 17.5 | 0.1907 | 0.1907 | 0.991 | 0.5533 | **Dry** | 0.209 |
| 3 | 106 | 6 | 5 | 27 | 1 | 0.159 | 106.0 | 106.0 | 0.159 | 0.159 | 5.1 | 0.75 | 1.000 | 0.265 | 2.00 | 17.5 | 0.1907 | 0.1907 | 0.986 | 0.5507 | **Dry** | 0.209 |
| 4 | 106 | 6 | 5 | 27 | 1 | 0.212 | 106.0 | 106.0 | 0.212 | 0.212 | 5.1 | 0.75 | 1.000 | 0.265 | 2.00 | 17.5 | 0.1907 | 0.1907 | 0.982 | 0.5482 | **Dry** | 0.209 |
| 5 | 106 | 6 | 5 | 27 | 1 | 0.265 | 106.0 | 106.0 | 0.265 | 0.265 | 5.1 | 0.75 | 1.000 | 0.265 | 2.00 | 17.5 | 0.1907 | 0.1907 | 0.977 | 0.5456 | **Dry** | 0.209 |
| 6 | 106 | 6 | 5 | 27 | 1 | 0.318 | 106.0 | 106.0 | 0.318 | 0.318 | 5.1 | 0.75 | 1.000 | 0.265 | 2.00 | 17.5 | 0.1907 | 0.1907 | 0.973 | 0.5430 | **Dry** | 0.209 |
| 7 | 106 | 11 | 9 | 27 | 1 | 0.371 | 106.0 | 106.0 | 0.371 | 0.371 | 5.1 | 0.75 | 1.000 | 0.477 | 1.49 | 22.1 | 0.2432 | 0.2432 | 0.968 | 0.5405 | **Dry** | 0.168 |
| 8 | 106 | 11 | 9 | 27 | 1 | 0.424 | 106.0 | 106.0 | 0.424 | 0.424 | 5.1 | 0.75 | 1.000 | 0.477 | 1.49 | 22.1 | 0.2432 | 0.2432 | 0.963 | 0.5379 | **Dry** | 0.168 |
| 9 | 106 | 11 | 9 | 5 | 1 | 0.477 | 106.0 | 106.0 | 0.477 | 0.477 | 0.0 | 0.75 | 1.000 | 0.477 | 1.49 | 17.0 | 0.1844 | 0.1844 | 0.959 | 0.5354 | **Dry** | 0.214 |
| 10 | 112 | 11 | 9 | 5 | 1 | 0.533 | 112.0 | 112.0 | 0.533 | 0.533 | 0.0 | 0.75 | 1.000 | 0.477 | 1.49 | 17.0 | 0.1844 | 0.1844 | 0.954 | 0.5328 | **Dry** | 0.214 |
| 11 | 112 | 11 | 9 | 5 | 1 | 0.589 | 112.0 | 112.0 | 0.589 | 0.589 | 0.0 | 0.75 | 1.000 | 0.477 | 1.49 | 17.0 | 0.1844 | 0.1844 | 0.950 | 0.5303 | **Dry** | 0.214 |
| 12 | 112 | 11 | 9 | 5 | 1 | 0.645 | 112.0 | 112.0 | 0.645 | 0.645 | 0.0 | 0.75 | 1.000 | 0.477 | 1.49 | 17.0 | 0.1844 | 0.1844 | 0.945 | 0.5277 | **Dry** | 0.214 |
| 13 | 112 | 8 | 14 | 5 | 1 | 0.701 | 112.0 | 112.0 | 0.701 | 0.701 | 0.0 | 0.78 | 1.000 | 0.757 | 1.18 | 10.2 | 0.1120 | 0.1120 | 0.941 | 0.5252 | **Dry** | 0.310 |
| 14 | 112 | 8 | 14 | 5 | 1 | 0.757 | 112.0 | 112.0 | 0.757 | 0.757 | 0.0 | 0.78 | 1.000 | 0.757 | 1.18 | 10.2 | 0.1120 | 0.1120 | 0.936 | 0.5226 | **Dry** | 0.310 |
| 15 | 115 | 8 | 14 | 5 | 1 | 0.815 | 115.0 | 115.0 | 0.815 | 0.815 | 0.0 | 0.78 | 1.000 | 0.757 | 1.18 | 10.2 | 0.1120 | 0.1120 | 0.931 | 0.5201 | **Dry** | 0.310 |
| 16 | 115 | 8 | 14 | 5 | 1 | 0.872 | 115.0 | 52.6 | 0.872 | 0.841 | 0.0 | 0.78 | 1.000 | 0.757 | 1.18 | 10.2 | 0.1120 | 0.1120 | 0.927 | 0.5367 | **0.209** | 0.310 |
| 17 | 115 | 8 | 14 | 5 | 1 | 0.930 | 115.0 | 52.6 | 0.930 | 0.867 | 0.0 | 0.78 | 1.000 | 0.757 | 1.18 | 10.2 | 0.1120 | 0.1120 | 0.922 | 0.5520 | **0.203** | 0.310 |
| 18 | 115 | 8 | 14 | 5 | 1 | 0.987 | 115.0 | 52.6 | 0.987 | 0.893 | 0.0 | 0.78 | 1.000 | 0.757 | 1.18 | 10.2 | 0.1120 | 0.1120 | 0.918 | 0.5661 | **0.198** | 0.310 |
| 19 | 119 | 39 | 14 | 5 | 1 | 1.047 | 119.0 | 56.6 | 1.047 | 0.922 | 0.0 | 0.78 | 1.000 | 0.757 | 1.18 | 49.8 | -0.8950 | Infinite | 0.913 | 0.5789 | **Non-Liq.** | 0.000 |
| 20 | 119 | 39 | 19 | 5 | 1 | 1.106 | 119.0 | 56.6 | 1.106 | 0.950 | 0.0 | 0.88 | 0.999 | 1.047 | 1.01 | 47.6 | -1.4666 | Infinite | 0.909 | 0.5906 | **Non-Liq.** | 0.000 |
| 21 | 119 | 39 | 19 | 5 | 1 | 1.166 | 119.0 | 56.6 | 1.166 | 0.978 | 0.0 | 0.88 | 0.999 | 1.047 | 1.01 | 47.6 | -1.4666 | Infinite | 0.904 | 0.6013 | **Non-Liq.** | 0.000 |
| 22 | 119 | 39 | 19 | 5 | 1 | 1.225 | 119.0 | 56.6 | 1.225 | 1.007 | 0.0 | 0.88 | 0.999 | 1.047 | 1.01 | 47.6 | -1.4666 | Infinite | 0.899 | 0.6112 | **Non-Liq.** | 0.000 |
| 23 | 119 | 39 | 19 | 5 | 1 | 1.285 | 119.0 | 56.6 | 1.285 | 1.035 | 0.0 | 0.88 | 0.999 | 1.047 | 1.01 | 47.6 | -1.4666 | Infinite | 0.895 | 0.6202 | **Non-Liq.** | 0.000 |
| 24 | 119 | 28 | 24 | 5 | 1 | 1.344 | 119.0 | 56.6 | 1.344 | 1.063 | 0.0 | 0.94 | 0.967 | 1.344 | 0.89 | 32.4 | 0.4088 | Infinite | 0.890 | 0.6284 | **Non-Liq.** | 0.051 |
| 25 | 119 | 28 | 24 | 5 | 1 | 1.404 | 119.0 | 56.6 | 1.404 | 1.092 | 0.0 | 0.94 | 0.967 | 1.344 | 0.89 | 32.4 | 0.4088 | Infinite | 0.886 | 0.6359 | **Non-Liq.** | 0.051 |
| 26 | 119 | 28 | 24 | 5 | 1 | 1.463 | 119.0 | 56.6 | 1.463 | 1.120 | 0.0 | 0.94 | 0.967 | 1.344 | 0.89 | 32.4 | 0.4088 | Infinite | 0.881 | 0.6428 | **Non-Liq.** | 0.051 |
| 27 | 119 | 28 | 24 | 5 | 1 | 1.523 | 119.0 | 56.6 | 1.523 | 1.148 | 0.0 | 0.94 | 0.967 | 1.344 | 0.89 | 32.4 | 0.4088 | Infinite | 0.877 | 0.6491 | **Non-Liq.** | 0.051 |
| 28 | 119 | 28 | 24 | 5 | 1 | 1.582 | 119.0 | 56.6 | 1.582 | 1.176 | 0.0 | 0.94 | 0.967 | 1.344 | 0.89 | 32.4 | 0.4088 | Infinite | 0.872 | 0.6548 | **Non-Liq.** | 0.051 |
| 29 | 119 | 20 | 29 | 3 | 1 | 1.642 | 56.6 | 56.6 | 1.610 | 1.205 | 0.0 | 0.99 | 0.939 | 1.610 | 0.81 | 22.2 | 0.2296 | 0.2296 | 0.867 | 0.6599 | **0.348** | 0.167 |
| 30 | 119 | 20 | 29 | 3 | 1 | 1.701 | 56.6 | 56.6 | 1.639 | 1.233 | 0.0 | 0.99 | 0.939 | 1.610 | 0.81 | 22.2 | 0.2296 | 0.2296 | 0.863 | 0.6647 | **0.345** | 0.167 |
| 31 | 119 | 20 | 29 | 3 | 1 | 1.761 | 56.6 | 56.6 | 1.667 | 1.261 | 0.0 | 0.99 | 0.939 | 1.610 | 0.81 | 22.2 | 0.2296 | 0.2296 | 0.858 | 0.6689 | **0.343** | 0.167 |
| 32 | 119 | 20 | 29 | 3 | 1 | 1.820 | 56.6 | 56.6 | 1.695 | 1.290 | 0.0 | 0.99 | 0.939 | 1.610 | 0.81 | 22.2 | 0.2296 | 0.2296 | 0.854 | 0.6727 | **0.341** | 0.167 |
| 33 | 119 | 20 | 29 | 3 | 1 | 1.880 | 56.6 | 56.6 | 1.724 | 1.318 | 0.0 | 0.99 | 0.939 | 1.610 | 0.81 | 22.2 | 0.2296 | 0.2296 | 0.849 | 0.6762 | **0.340** | 0.167 |
| 34 | 119 | 21 | 34 | 3 | 1 | 1.939 | 56.6 | 56.6 | 1.752 | 1.346 | 0.0 | 1.00 | 0.925 | 1.752 | 0.78 | 22.5 | 0.2302 | 0.2302 | 0.845 | 0.6792 | **0.339** | 0.164 |
| 35 | 119 | 21 | 34 | 3 | 1 | 1.999 | 56.6 | 56.6 | 1.780 | 1.375 | 0.0 | 1.00 | 0.925 | 1.752 | 0.78 | 22.5 | 0.2302 | 0.2302 | 0.840 | 0.6819 | **0.338** | 0.164 |
| 36 | 119 | 21 | 34 | 3 | 1 | 2.058 | 56.6 | 56.6 | 1.808 | 1.403 | 0.0 | 1.00 | 0.925 | 1.752 | 0.78 | 22.5 | 0.2302 | 0.2302 | 0.835 | 0.6843 | **0.336** | 0.164 |
| 37 | 119 | 21 | 34 | 3 | 1 | 2.118 | 56.6 | 56.6 | 1.837 | 1.431 | 0.0 | 1.00 | 0.925 | 1.752 | 0.78 | 22.5 | 0.2302 | 0.2302 | 0.831 | 0.6864 | **0.335** | 0.164 |
| 38 | 119 | 21 | 34 | 3 | 1 | 2.177 | 56.6 | 56.6 | 1.865 | 1.459 | 0.0 | 1.00 | 0.925 | 1.752 | 0.78 | 22.5 | 0.2302 | 0.2302 | 0.826 | 0.6882 | **0.334** | 0.164 |
| 39 | 119 | 21 | 39 | 3 | 1 | 2.237 | 56.6 | 56.6 | 1.893 | 1.488 | 0.0 | 1.00 | 0.911 | 1.893 | 0.75 | 21.7 | 0.2167 | 0.2167 | 0.822 | 0.6897 | **0.314** | 0.172 |
| 40 | 119 | 21 | 39 | 3 | 1 | 2.296 | 56.6 | 56.6 | 1.922 | 1.516 | 0.0 | 1.00 | 0.911 | 1.893 | 0.75 | 21.7 | 0.2167 | 0.2167 | 0.817 | 0.6910 | **0.314** | 0.172 |
| 41 | 119 | 21 | 39 | 3 | 1 | 2.356 | 56.6 | 56.6 | 1.950 | 1.544 | 0.0 | 1.00 | 0.911 | 1.893 | 0.75 | 21.7 | 0.2167 | 0.2167 | 0.813 | 0.6920 | **0.313** | 0.172 |
| 42 | 119 | 21 | 39 | 3 | 1 | 2.415 | 56.6 | 56.6 | 1.978 | 1.573 | 0.0 | 1.00 | 0.911 | 1.893 | 0.75 | 21.7 | 0.2167 | 0.2167 | 0.808 | 0.6928 | **0.313** | 0.172 |
| 43 | 119 | 21 | 39 | 3 | 1 | 2.475 | 56.6 | 56.6 | 2.007 | 1.601 | 0.0 | 1.00 | 0.911 | 1.893 | 0.75 | 21.7 | 0.2167 | 0.2167 | 0.803 | 0.6934 | **0.312** | 0.172 |
| 44 | 119 | 48 | 44 | 3 | 1 | 2.534 | 56.6 | 56.6 | 2.035 | 1.629 | 0.0 | 1.00 | 0.898 | 2.035 | 0.72 | 47.8 | -1.2685 | Infinite | 0.799 | 0.6938 | **Non-Liq.** | 0.000 |
| 45 | 119 | 48 | 44 | 3 | 1 | 2.594 | 56.6 | 56.6 | 2.063 | 1.658 | 0.0 | 1.00 | 0.898 | 2.035 | 0.72 | 47.8 | -1.2685 | Infinite | 0.794 | 0.6939 | **Non-Liq.** | 0.000 |
| 46 | 119 | 48 | 44 | 3 | 1 | 2.653 | 56.6 | 56.6 | 2.091 | 1.686 | 0.0 | 1.00 | 0.898 | 2.035 | 0.72 | 47.8 | -1.2685 | Infinite | 0.790 | 0.6939 | **Non-Liq.** | 0.000 |
| 47 | 119 | 48 | 44 | 3 | 1 | 2.713 | 56.6 | 56.6 | 2.120 | 1.714 | 0.0 | 1.00 | 0.898 | 2.035 | 0.72 | 47.8 | -1.2685 | Infinite | 0.785 | 0.6937 | **Non-Liq.** | 0.000 |
| 48 | 119 | 48 | 44 | 3 | 1 | 2.772 | 56.6 | 56.6 | 2.148 | 1.742 | 0.0 | 1.00 | 0.898 | 2.035 | 0.72 | 47.8 | -1.2685 | Infinite | 0.781 | 0.6934 | **Non-Liq.** | 0.000 |
| 49 | 119 | 26 | 49 | 3 | 1 | 2.832 | 56.6 | 56.6 | 2.176 | 1.771 | 0.0 | 1.00 | 0.885 | 2.176 | 0.70 | 25.0 | 0.2529 | 0.2529 | 0.776 | 0.6929 | **0.365** | 0.142 |
| 50 | 119 | 26 | 49 | 3 | 1 | 2.891 | 56.6 | 56.6 | 2.205 | 1.799 | 0.0 | 1.00 | 0.885 | 2.176 | 0.70 | 25.0 | 0.2529 | 0.2529 | 0.771 | 0.6922 | **0.365** | 0.142 |
| | | | | | | | | | | | | | | | | | | | | | **Total Post-Earthquake Shaking Settlement (inches)** | **7.354** |

## OAKRIDGE GEOSCIENCE, INC.

| | |
|---|---|
| PLATE NUMBER: | **500LA AVE** |
| PROJECT NUMBER: | **030.00** |
| DATE OF ANALYSIS: | **10/30/17** |



**EARTHQUAKE PARAMETERS**

| | |
|---|---|
| Design Earthquake Magnitude* (Mm): | 7.00 |
| Design Horizontal Acceleration* (g): | 1.00 |
| Calculated Magnitude Weight Factor: | 0.842 |

**GROUNDWATER PARAMETERS**

| | |
|---|---|
| Current Groundwater Level (ft): | 21.0 |
| Historic High Groundwater Level* (ft): | 15.0 |

* Based on the applicable CDMG Seismic Hazard Evaluation Report

**ENERGY & ROD CORRECTIONS**

| | |
|---|---|
| Energy Correction (CE) for N60: | 1.20 |
| Rod Length Correction (CR) (0 or 1): | 1 |
| Bore Diameter Correction (CB): | 1.15 |
| Sampler Correction (CS): | 1.00 |
| Use K Sigma (0 or 1): | 1 |

Methodology after: Seed, H.B., and Idriss, I.M., 1982;
Seed, H.B., and others, 1985;
& Tokimatsu, K., and Seed, H.B., 1987

**LIQUEFACTION ANALYSIS**

| Layer Depth (ft) | Soil Total Unit Wt. (pcf) | Field SPT Count (N) | Depth of SPT (ft) | Fines Content (%) | Liquefaction Susceptibility (0 or 1) | Total Stress (tsf) | Current Eff. Unit Wt. (psf) | Historic Eff. Unit Wt. (psf) | Current Eff. Stress (tsf) | Historic Eff. Stress (tsf) | Fines Content Correction | Rod Length Correction | K Sigma Correction Factor | Eff. Stress for SPT (tsf) | Depth Correction Cn | Final Corrected (N1)60 | Computed CSR M=7.5 | Corrected Resistance CRR | rd Factor | Induced CSR | Liquefaction Safety Factor | Calculated Settlement (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 107 | 2 | 4 | 27 | 1 | 0.054 | 107.0 | 107.0 | 0.054 | 0.054 | 5.1 | 0.75 | 1.000 | 0.214 | 2.00 | 9.3 | 0.1021 | 0.1021 | 0.995 | 0.5449 | **Dry** | 0.327 |
| 2 | 107 | 2 | 4 | 27 | 1 | 0.107 | 107.0 | 107.0 | 0.107 | 0.107 | 5.1 | 0.75 | 1.000 | 0.214 | 2.00 | 9.3 | 0.1021 | 0.1021 | 0.991 | 0.5424 | **Dry** | 0.327 |
| 3 | 107 | 2 | 4 | 27 | 1 | 0.161 | 107.0 | 107.0 | 0.161 | 0.161 | 5.1 | 0.75 | 1.000 | 0.214 | 2.00 | 9.3 | 0.1021 | 0.1021 | 0.986 | 0.5399 | **Dry** | 0.327 |
| 4 | 107 | 2 | 4 | 27 | 1 | 0.214 | 107.0 | 107.0 | 0.214 | 0.214 | 5.1 | 0.75 | 1.000 | 0.214 | 2.00 | 9.3 | 0.1021 | 0.1021 | 0.982 | 0.5374 | **Dry** | 0.327 |
| 5 | 107 | 2 | 4 | 27 | 1 | 0.268 | 107.0 | 107.0 | 0.268 | 0.268 | 5.1 | 0.75 | 1.000 | 0.214 | 2.00 | 9.3 | 0.1021 | 0.1021 | 0.977 | 0.5349 | **Dry** | 0.327 |
| 6 | 107 | 2 | 4 | 27 | 1 | 0.321 | 107.0 | 107.0 | 0.321 | 0.321 | 5.1 | 0.75 | 1.000 | 0.214 | 2.00 | 9.3 | 0.1021 | 0.1021 | 0.973 | 0.5324 | **Dry** | 0.327 |
| 7 | 107 | 4 | 9 | 27 | 1 | 0.375 | 107.0 | 107.0 | 0.375 | 0.375 | 5.1 | 0.75 | 1.000 | 0.482 | 1.48 | 11.3 | 0.1232 | 0.1232 | 0.968 | 0.5299 | **Dry** | 0.290 |
| 8 | 107 | 4 | 9 | 27 | 1 | 0.428 | 107.0 | 107.0 | 0.428 | 0.428 | 5.1 | 0.75 | 1.000 | 0.482 | 1.48 | 11.3 | 0.1232 | 0.1232 | 0.963 | 0.5274 | **Dry** | 0.290 |
| 9 | 107 | 4 | 9 | 27 | 1 | 0.482 | 107.0 | 107.0 | 0.482 | 0.482 | 5.1 | 0.75 | 1.000 | 0.482 | 1.48 | 11.3 | 0.1232 | 0.1232 | 0.959 | 0.5249 | **Dry** | 0.290 |
| 10 | 112 | 4 | 9 | 27 | 1 | 0.538 | 112.0 | 112.0 | 0.538 | 0.538 | 5.1 | 0.75 | 1.000 | 0.482 | 1.48 | 11.3 | 0.1232 | 0.1232 | 0.954 | 0.5224 | **Dry** | 0.290 |
| 11 | 112 | 4 | 9 | 27 | 1 | 0.594 | 112.0 | 112.0 | 0.594 | 0.594 | 5.1 | 0.75 | 1.000 | 0.482 | 1.48 | 11.3 | 0.1232 | 0.1232 | 0.950 | 0.5199 | **Dry** | 0.290 |
| 12 | 112 | 4 | 9 | 27 | 1 | 0.650 | 112.0 | 112.0 | 0.650 | 0.650 | 5.1 | 0.75 | 1.000 | 0.482 | 1.48 | 11.3 | 0.1232 | 0.1232 | 0.945 | 0.5174 | **Dry** | 0.290 |
| 13 | 112 | 9 | 14 | 27 | 1 | 0.706 | 112.0 | 112.0 | 0.706 | 0.706 | 5.1 | 0.78 | 1.000 | 0.762 | 1.18 | 16.6 | 0.1806 | 0.1806 | 0.941 | 0.5149 | **Dry** | 0.217 |
| 14 | 112 | 9 | 14 | 27 | 1 | 0.762 | 112.0 | 112.0 | 0.762 | 0.762 | 5.1 | 0.78 | 1.000 | 0.762 | 1.18 | 16.6 | 0.1806 | 0.1806 | 0.936 | 0.5124 | **Dry** | 0.217 |
| 15 | 119 | 9 | 14 | 27 | 1 | 0.821 | 119.0 | 119.0 | 0.821 | 0.821 | 5.1 | 0.78 | 1.000 | 0.762 | 1.18 | 16.6 | 0.1806 | 0.1806 | 0.931 | 0.5099 | **Dry** | 0.217 |
| 16 | 119 | 9 | 14 | 27 | 1 | 0.881 | 119.0 | 56.6 | 0.881 | 0.849 | 5.1 | 0.78 | 1.000 | 0.762 | 1.18 | 16.6 | 0.1806 | 0.1806 | 0.927 | 0.5260 | **0.343** | 0.217 |
| 17 | 119 | 9 | 14 | 27 | 1 | 0.940 | 119.0 | 56.6 | 0.940 | 0.878 | 5.1 | 0.78 | 1.000 | 0.762 | 1.18 | 16.6 | 0.1806 | 0.1806 | 0.922 | 0.5408 | **0.334** | 0.217 |
| 18 | 119 | 9 | 19 | 27 | 1 | 1.000 | 119.0 | 56.6 | 1.000 | 0.906 | 5.1 | 0.88 | 0.997 | 1.062 | 1.00 | 16.0 | 0.1741 | 0.1741 | 0.918 | 0.5543 | **0.314** | 0.222 |
| 19 | 125 | 12 | 19 | 5 | 1 | 1.062 | 125.0 | 62.6 | 1.062 | 0.937 | 0.0 | 0.88 | 0.997 | 1.062 | 1.00 | 14.5 | 0.1582 | 0.1582 | 0.913 | 0.5664 | **0.279** | 0.235 |
| 20 | 125 | 12 | 19 | 5 | 1 | 1.125 | 125.0 | 62.6 | 1.125 | 0.969 | 0.0 | 0.88 | 0.997 | 1.062 | 1.00 | 14.5 | 0.1582 | 0.1582 | 0.909 | 0.5775 | **0.274** | 0.235 |
| 21 | 125 | 12 | 19 | 5 | 1 | 1.187 | 125.0 | 62.6 | 1.187 | 1.000 | 0.0 | 0.88 | 0.997 | 1.062 | 1.00 | 14.5 | 0.1582 | 0.1582 | 0.904 | 0.5875 | **0.269** | 0.235 |
| 22 | 125 | 12 | 19 | 5 | 1 | 1.250 | 62.6 | 62.6 | 1.218 | 1.031 | 0.0 | 0.88 | 0.997 | 1.062 | 1.00 | 14.5 | 0.1582 | 0.1582 | 0.899 | 0.5966 | **0.265** | 0.235 |
| 23 | 125 | 12 | 24 | 5 | 1 | 1.312 | 62.6 | 62.6 | 1.250 | 1.062 | 0.0 | 0.94 | 0.973 | 1.281 | 0.91 | 14.2 | 0.1510 | 0.1510 | 0.895 | 0.6049 | **0.250** | 0.238 |
| 24 | 125 | 19 | 24 | 5 | 1 | 1.375 | 62.6 | 62.6 | 1.281 | 1.094 | 0.0 | 0.94 | 0.973 | 1.281 | 0.91 | 22.5 | 0.2421 | 0.2421 | 0.890 | 0.6125 | **0.395** | 0.164 |
| 25 | 125 | 19 | 24 | 5 | 1 | 1.437 | 62.6 | 62.6 | 1.312 | 1.125 | 0.0 | 0.94 | 0.973 | 1.281 | 0.91 | 22.5 | 0.2421 | 0.2421 | 0.886 | 0.6193 | **0.391** | 0.164 |
| 26 | 125 | 19 | 24 | 5 | 1 | 1.500 | 62.6 | 62.6 | 1.344 | 1.156 | 0.0 | 0.94 | 0.973 | 1.281 | 0.91 | 22.5 | 0.2421 | 0.2421 | 0.881 | 0.6255 | **0.387** | 0.164 |
| 27 | 125 | 19 | 24 | 5 | 1 | 1.562 | 62.6 | 62.6 | 1.375 | 1.188 | 0.0 | 0.94 | 0.973 | 1.281 | 0.91 | 22.5 | 0.2421 | 0.2421 | 0.877 | 0.6311 | **0.384** | 0.164 |
| 28 | 125 | 19 | 29 | 5 | 1 | 1.625 | 62.6 | 62.6 | 1.406 | 1.219 | 0.0 | 0.99 | 0.957 | 1.437 | 0.86 | 22.3 | 0.2355 | 0.2355 | 0.872 | 0.6362 | **0.370** | 0.166 |
| 29 | 125 | 6 | 29 | 5 | 1 | 1.687 | 62.6 | 62.6 | 1.437 | 1.250 | 0.0 | 0.99 | 0.957 | 1.437 | 0.86 | 7.0 | 0.0777 | 0.0777 | 0.867 | 0.6407 | **0.121** | 0.382 |
| 30 | 125 | 6 | 29 | 5 | 1 | 1.750 | 62.6 | 62.6 | 1.469 | 1.282 | 0.0 | 0.99 | 0.957 | 1.437 | 0.86 | 7.0 | 0.0777 | 0.0777 | 0.863 | 0.6448 | **0.120** | 0.382 |
| 31 | 125 | 6 | 29 | 5 | 1 | 1.812 | 62.6 | 62.6 | 1.500 | 1.313 | 0.0 | 0.99 | 0.957 | 1.437 | 0.86 | 7.0 | 0.0777 | 0.0777 | 0.858 | 0.6485 | **0.120** | 0.382 |
| 32 | 125 | 6 | 29 | 5 | 1 | 1.875 | 62.6 | 62.6 | 1.531 | 1.344 | 0.0 | 0.99 | 0.957 | 1.437 | 0.86 | 7.0 | 0.0777 | 0.0777 | 0.854 | 0.6517 | **0.119** | 0.382 |
| 33 | 125 | 6 | 34 | 5 | 1 | 1.937 | 62.6 | 62.6 | 1.563 | 1.375 | 0.0 | 1.00 | 0.941 | 1.594 | 0.81 | 6.7 | 0.0740 | 0.0740 | 0.849 | 0.6546 | **0.113** | 0.396 |
| 34 | 125 | 31 | 34 | 5 | 1 | 2.000 | 62.6 | 62.6 | 1.594 | 1.407 | 0.0 | 1.00 | 0.941 | 1.594 | 0.81 | 34.9 | 0.5211 | Infinite | 0.845 | 0.6572 | **Non-Liq.** | 0.000 |
| 35 | 125 | 31 | 34 | 5 | 1 | 2.062 | 62.6 | 62.6 | 1.625 | 1.438 | 0.0 | 1.00 | 0.941 | 1.594 | 0.81 | 34.9 | 0.5211 | Infinite | 0.840 | 0.6594 | **Non-Liq.** | 0.000 |
| 36 | 125 | 31 | 34 | 5 | 1 | 2.125 | 62.6 | 62.6 | 1.657 | 1.469 | 0.0 | 1.00 | 0.941 | 1.594 | 0.81 | 34.9 | 0.5211 | Infinite | 0.835 | 0.6613 | **Non-Liq.** | 0.000 |
| 37 | 125 | 31 | 34 | 5 | 1 | 2.187 | 62.6 | 62.6 | 1.688 | 1.501 | 0.0 | 1.00 | 0.941 | 1.594 | 0.81 | 34.9 | 0.5211 | Infinite | 0.831 | 0.6629 | **Non-Liq.** | 0.000 |
| 38 | 125 | 31 | 39 | 5 | 1 | 2.250 | 62.6 | 62.6 | 1.719 | 1.532 | 0.0 | 1.00 | 0.925 | 1.750 | 0.78 | 33.3 | 0.4311 | Infinite | 0.826 | 0.6642 | **Non-Liq.** | 0.030 |
| 39 | 125 | 12 | 39 | 5 | 1 | 2.312 | 62.6 | 62.6 | 1.750 | 1.563 | 0.0 | 1.00 | 0.925 | 1.750 | 0.78 | 12.9 | 0.1301 | 0.1301 | 0.822 | 0.6653 | **0.196** | 0.261 |
| 40 | 125 | 12 | 39 | 5 | 1 | 2.375 | 62.6 | 62.6 | 1.782 | 1.595 | 0.0 | 1.00 | 0.925 | 1.750 | 0.78 | 12.9 | 0.1301 | 0.1301 | 0.817 | 0.6661 | **0.195** | 0.261 |
| 41 | 125 | 12 | 39 | 5 | 1 | 2.437 | 62.6 | 62.6 | 1.813 | 1.626 | 0.0 | 1.00 | 0.925 | 1.750 | 0.78 | 12.9 | 0.1301 | 0.1301 | 0.813 | 0.6667 | **0.195** | 0.261 |
| 42 | 125 | 12 | 39 | 5 | 1 | 2.500 | 62.6 | 62.6 | 1.844 | 1.657 | 0.0 | 1.00 | 0.925 | 1.750 | 0.78 | 12.9 | 0.1301 | 0.1301 | 0.808 | 0.6672 | **0.195** | 0.261 |
| 43 | 125 | 12 | 44 | 5 | 1 | 2.562 | 62.6 | 62.6 | 1.876 | 1.688 | 0.0 | 1.00 | 0.910 | 1.907 | 0.74 | 12.3 | 0.1226 | 0.1226 | 0.803 | 0.6674 | **0.184** | 0.271 |
| 44 | 125 | 9 | 44 | 5 | 1 | 2.625 | 62.6 | 62.6 | 1.907 | 1.720 | 0.0 | 1.00 | 0.910 | 1.907 | 0.74 | 9.3 | 0.0927 | 0.0927 | 0.799 | 0.6674 | **0.139** | 0.328 |
| 45 | 125 | 9 | 44 | 5 | 0 | 2.687 | 62.6 | 62.6 | 1.938 | 1.751 | 0.0 | 1.00 | 0.910 | 1.907 | 0.74 | 9.3 | 0.0927 | -- | 0.794 | 0.6672 | **--** | 0.000 |
| 46 | 125 | 9 | 44 | 5 | 0 | 2.750 | 62.6 | 62.6 | 1.970 | 1.782 | 0.0 | 1.00 | 0.910 | 1.907 | 0.74 | 9.3 | 0.0927 | -- | 0.790 | 0.6669 | **--** | 0.000 |
| 47 | 125 | 9 | 44 | 5 | 0 | 2.812 | 62.6 | 62.6 | 2.001 | 1.814 | 0.0 | 1.00 | 0.910 | 1.907 | 0.74 | 9.3 | 0.0927 | -- | 0.785 | 0.6664 | **--** | 0.000 |
| 48 | 125 | 9 | 49 | 5 | 0 | 2.875 | 62.6 | 62.6 | 2.032 | 1.845 | 0.0 | 1.00 | 0.895 | 2.063 | 0.72 | 8.9 | 0.0880 | -- | 0.781 | 0.6657 | **--** | 0.000 |
| 49 | 125 | 2 | 49 | 5 | 0 | 2.937 | 62.6 | 62.6 | 2.063 | 1.876 | 0.0 | 1.00 | 0.895 | 2.063 | 0.72 | 2.0 | 0.0470 | -- | 0.776 | 0.6650 | **--** | 0.000 |
| 50 | 125 | 2 | 49 | 5 | 0 | 3.000 | 62.6 | 62.6 | 2.095 | 1.908 | 0.0 | 1.00 | 0.895 | 2.063 | 0.72 | 2.0 | 0.0470 | -- | 0.771 | 0.6640 | **--** | 0.000 |
| | | | | | | | | | | | | | | | | | | | | | **Total Post-Earthquake Shaking Settlement (inches)** | **10.609** |

## OAKRIDGE GEOSCIENCE, INC.

| | |
|---|---|
| PLATE NUMBER: | **WCRN** |
| PROJECT NUMBER: | **030.004** |
| DATE OF ANALYSIS: | **12/13/17** |



**EARTHQUAKE PARAMETERS**

| | |
|---|---|
| Design Earthquake Magnitude* (Mm): | 7.00 |
| Design Horizontal Acceleration* (g): | 1.06 |
| Calculated Magnitude Weight Factor: | 0.842 |

**GROUNDWATER PARAMETERS**

| | |
|---|---|
| Current Groundwater Level (ft): | 60.0 |
| Historic High Groundwater Level* (ft): | 60.0 |

* Based on the applicable CDMG Seismic Hazard Evaluation Report

**ENERGY & ROD CORRECTIONS**

| | |
|---|---|
| Energy Correction (CE) for N60: | 1.20 |
| Rod Length Correction (CR) (0 or 1): | 1 |
| Bore Diameter Correction (CB): | 1.15 |
| Sampler Correction (CS): | 1.00 |
| Use K Sigma (0 or 1): | 1 |

Methodology after: Seed, H.B., and Idriss, I.M., 1982;
Seed, H.B., and others, 1985;
& Tokimatsu, K., and Seed, H.B., 1987

**LIQUEFACTION ANALYSIS**

| Layer Depth (ft) | Soil Total Unit Wt. (pcf) | Field SPT Count (N) | Depth of SPT (ft) | Fines Content (%) | Liquefaction Susceptibility (0 or 1) | Total Stress (tsf) | Current Eff. Unit Wt. (psf) | Historic Eff. Unit Wt. (psf) | Current Eff. Stress (tsf) | Historic Eff. Stress (tsf) | Fines Content Correction | Rod Length Correction | K Sigma Correction Factor | Eff. Stress for SPT (tsf) | Depth Correction Cn | Final Corrected (N1)60 | Computed CSR M=7.5 | Corrected Resistance CRR | rd Factor | Induced CSR | Liquefaction Safety Factor | Calculated Settlement (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 113 | 6 | 4 | 60 | 1 | 0.057 | 113.0 | 113.0 | 0.057 | 0.057 | 7.0 | 0.75 | 1.000 | 0.226 | 2.00 | 19.4 | 0.2113 | 0.2113 | 0.995 | 0.5776 | **Dry** | 0.192 |
| 2 | 113 | 6 | 4 | 60 | 1 | 0.113 | 113.0 | 113.0 | 0.113 | 0.113 | 7.0 | 0.75 | 1.000 | 0.226 | 2.00 | 19.4 | 0.2113 | 0.2113 | 0.991 | 0.5750 | **Dry** | 0.192 |
| 3 | 113 | 6 | 4 | 60 | 1 | 0.170 | 113.0 | 113.0 | 0.170 | 0.170 | 7.0 | 0.75 | 1.000 | 0.226 | 2.00 | 19.4 | 0.2113 | 0.2113 | 0.986 | 0.5723 | **Dry** | 0.192 |
| 4 | 113 | 6 | 4 | 60 | 1 | 0.226 | 113.0 | 113.0 | 0.226 | 0.226 | 7.0 | 0.75 | 1.000 | 0.226 | 2.00 | 19.4 | 0.2113 | 0.2113 | 0.982 | 0.5697 | **Dry** | 0.192 |
| 5 | 113 | 6 | 4 | 12 | 1 | 0.283 | 113.0 | 113.0 | 0.283 | 0.283 | 1.6 | 0.75 | 1.000 | 0.226 | 2.00 | 14.1 | 0.1533 | 0.1533 | 0.977 | 0.5670 | **Dry** | 0.240 |
| 6 | 113 | 6 | 4 | 12 | 1 | 0.339 | 113.0 | 113.0 | 0.339 | 0.339 | 1.6 | 0.75 | 1.000 | 0.226 | 2.00 | 14.1 | 0.1533 | 0.1533 | 0.973 | 0.5643 | **Dry** | 0.240 |
| 7 | 113 | 15 | 9 | 12 | 1 | 0.396 | 113.0 | 113.0 | 0.396 | 0.396 | 1.6 | 0.75 | 1.000 | 0.509 | 1.44 | 24.0 | 0.2701 | 0.2701 | 0.968 | 0.5617 | **Dry** | 0.151 |
| 8 | 113 | 15 | 9 | 12 | 1 | 0.452 | 113.0 | 113.0 | 0.452 | 0.452 | 1.6 | 0.75 | 1.000 | 0.509 | 1.44 | 24.0 | 0.2701 | 0.2701 | 0.963 | 0.5590 | **Dry** | 0.151 |
| 9 | 113 | 15 | 9 | 6 | 1 | 0.509 | 113.0 | 113.0 | 0.509 | 0.509 | 0.2 | 0.75 | 1.000 | 0.509 | 1.44 | 22.6 | 0.2502 | 0.2502 | 0.959 | 0.5564 | **Dry** | 0.163 |
| 10 | 113 | 15 | 9 | 6 | 1 | 0.565 | 113.0 | 113.0 | 0.565 | 0.565 | 0.2 | 0.75 | 1.000 | 0.509 | 1.44 | 22.6 | 0.2502 | 0.2502 | 0.954 | 0.5537 | **Dry** | 0.163 |
| 11 | 113 | 15 | 9 | 6 | 1 | 0.622 | 113.0 | 113.0 | 0.622 | 0.622 | 0.2 | 0.75 | 1.000 | 0.509 | 1.44 | 22.6 | 0.2502 | 0.2502 | 0.950 | 0.5511 | **Dry** | 0.163 |
| 12 | 113 | 15 | 9 | 6 | 1 | 0.678 | 113.0 | 113.0 | 0.678 | 0.678 | 0.2 | 0.75 | 1.000 | 0.509 | 1.44 | 22.6 | 0.2502 | 0.2502 | 0.945 | 0.5484 | **Dry** | 0.163 |
| 13 | 125 | 11 | 14 | 6 | 1 | 0.741 | 125.0 | 125.0 | 0.741 | 0.741 | 0.2 | 0.78 | 1.000 | 0.803 | 1.15 | 13.9 | 0.1515 | 0.1515 | 0.941 | 0.5458 | **Dry** | 0.242 |
| 14 | 125 | 11 | 14 | 35 | 1 | 0.803 | 125.0 | 125.0 | 0.803 | 0.803 | 7.0 | 0.78 | 1.000 | 0.803 | 1.15 | 20.6 | 0.2254 | 0.2254 | 0.936 | 0.5431 | **Dry** | 0.181 |
| 15 | 125 | 11 | 14 | 35 | 1 | 0.866 | 125.0 | 125.0 | 0.866 | 0.866 | 7.0 | 0.78 | 1.000 | 0.803 | 1.15 | 20.6 | 0.2254 | 0.2254 | 0.931 | 0.5405 | **Dry** | 0.181 |
| 16 | 125 | 11 | 14 | 35 | 1 | 0.928 | 125.0 | 125.0 | 0.928 | 0.928 | 7.0 | 0.78 | 1.000 | 0.803 | 1.15 | 20.6 | 0.2254 | 0.2254 | 0.927 | 0.5378 | **Dry** | 0.181 |
| 17 | 125 | 11 | 14 | 35 | 1 | 0.991 | 125.0 | 125.0 | 0.991 | 0.991 | 7.0 | 0.78 | 1.000 | 0.803 | 1.15 | 20.6 | 0.2254 | 0.2254 | 0.922 | 0.5352 | **Dry** | 0.181 |
| 18 | 125 | 28 | 19 | 6 | 1 | 1.053 | 125.0 | 125.0 | 1.053 | 1.053 | 0.2 | 0.88 | 0.992 | 1.111 | 0.98 | 33.4 | 0.4704 | Infinite | 0.918 | 0.5325 | **Dry** | 0.026 |
| 19 | 115 | 28 | 19 | 6 | 1 | 1.111 | 115.0 | 115.0 | 1.111 | 1.111 | 0.2 | 0.88 | 0.992 | 1.111 | 0.98 | 33.4 | 0.4704 | Infinite | 0.913 | 0.5299 | **Dry** | 0.026 |
| 20 | 115 | 28 | 19 | 6 | 1 | 1.168 | 115.0 | 115.0 | 1.168 | 1.168 | 0.2 | 0.88 | 0.992 | 1.111 | 0.98 | 33.4 | 0.4704 | Infinite | 0.909 | 0.5272 | **Dry** | 0.026 |
| 21 | 115 | 28 | 19 | 6 | 1 | 1.226 | 115.0 | 115.0 | 1.226 | 1.226 | 0.2 | 0.88 | 0.992 | 1.111 | 0.98 | 33.4 | 0.4704 | Infinite | 0.904 | 0.5246 | **Dry** | 0.026 |
| 22 | 115 | 28 | 19 | 6 | 1 | 1.283 | 115.0 | 115.0 | 1.283 | 1.283 | 0.2 | 0.88 | 0.992 | 1.111 | 0.98 | 33.4 | 0.4704 | Infinite | 0.899 | 0.5219 | **Dry** | 0.026 |
| 23 | 129 | 23 | 24 | 32 | 1 | 1.348 | 129.0 | 129.0 | 1.348 | 1.348 | 6.3 | 0.94 | 0.960 | 1.412 | 0.87 | 32.3 | 0.3993 | Infinite | 0.895 | 0.5192 | **Dry** | 0.054 |
| 24 | 129 | 23 | 24 | 32 | 1 | 1.412 | 129.0 | 129.0 | 1.412 | 1.412 | 6.3 | 0.94 | 0.960 | 1.412 | 0.87 | 32.3 | 0.3993 | Infinite | 0.890 | 0.5166 | **Dry** | 0.054 |
| 25 | 129 | 23 | 24 | 32 | 1 | 1.477 | 129.0 | 129.0 | 1.477 | 1.477 | 6.3 | 0.94 | 0.960 | 1.412 | 0.87 | 32.3 | 0.3993 | Infinite | 0.886 | 0.5139 | **Dry** | 0.054 |
| 26 | 129 | 23 | 24 | 32 | 1 | 1.541 | 129.0 | 129.0 | 1.541 | 1.541 | 6.3 | 0.94 | 0.960 | 1.412 | 0.87 | 32.3 | 0.3993 | Infinite | 0.881 | 0.5113 | **Dry** | 0.054 |
| 27 | 129 | 23 | 24 | 32 | 1 | 1.606 | 129.0 | 129.0 | 1.606 | 1.606 | 6.3 | 0.94 | 0.960 | 1.412 | 0.87 | 32.3 | 0.3993 | Infinite | 0.877 | 0.5086 | **Dry** | 0.054 |
| 28 | 129 | 27 | 29 | 32 | 1 | 1.670 | 129.0 | 129.0 | 1.670 | 1.670 | 6.3 | 0.99 | 0.927 | 1.735 | 0.78 | 35.2 | 0.5318 | Infinite | 0.872 | 0.5060 | **Dry** | 0.000 |
| 29 | 129 | 27 | 29 | 32 | 1 | 1.735 | 129.0 | 129.0 | 1.735 | 1.735 | 6.3 | 0.99 | 0.927 | 1.735 | 0.78 | 35.2 | 0.5318 | Infinite | 0.867 | 0.5033 | **Dry** | 0.000 |
| 30 | 129 | 27 | 29 | 32 | 1 | 1.799 | 129.0 | 129.0 | 1.799 | 1.799 | 6.3 | 0.99 | 0.927 | 1.735 | 0.78 | 35.2 | 0.5318 | Infinite | 0.863 | 0.5007 | **Dry** | 0.000 |
| 31 | 129 | 27 | 29 | 32 | 1 | 1.864 | 129.0 | 129.0 | 1.864 | 1.864 | 6.3 | 0.99 | 0.927 | 1.735 | 0.78 | 35.2 | 0.5318 | Infinite | 0.858 | 0.4980 | **Dry** | 0.000 |
| 32 | 129 | 27 | 29 | 32 | 1 | 1.928 | 129.0 | 129.0 | 1.928 | 1.928 | 6.3 | 0.99 | 0.927 | 1.735 | 0.78 | 35.2 | 0.5318 | Infinite | 0.854 | 0.4954 | **Dry** | 0.000 |
| 33 | 129 | 57 | 29 | 13 | 1 | 1.993 | 129.0 | 129.0 | 1.993 | 1.993 | 1.9 | 0.99 | 0.927 | 1.735 | 0.78 | 62.8 | -0.2487 | Infinite | 0.849 | 0.4927 | **Dry** | 0.000 |
| 34 | 115 | 57 | 34 | 13 | 1 | 2.050 | 115.0 | 115.0 | 2.050 | 2.050 | 1.9 | 1.00 | 0.896 | 2.050 | 0.72 | 58.4 | -0.3173 | Infinite | 0.845 | 0.4901 | **Dry** | 0.000 |
| 35 | 115 | 57 | 34 | 13 | 1 | 2.108 | 115.0 | 115.0 | 2.108 | 2.108 | 1.9 | 1.00 | 0.896 | 2.050 | 0.72 | 58.4 | -0.3173 | Infinite | 0.840 | 0.4874 | **Dry** | 0.000 |
| 36 | 115 | 57 | 34 | 13 | 1 | 2.165 | 115.0 | 115.0 | 2.165 | 2.165 | 1.9 | 1.00 | 0.896 | 2.050 | 0.72 | 58.4 | -0.3173 | Infinite | 0.835 | 0.4848 | **Dry** | 0.000 |
| 37 | 115 | 57 | 34 | 13 | 1 | 2.223 | 115.0 | 115.0 | 2.223 | 2.223 | 1.9 | 1.00 | 0.896 | 2.050 | 0.72 | 58.4 | -0.3173 | Infinite | 0.831 | 0.4821 | **Dry** | 0.000 |
| 38 | 115 | 57 | 34 | 13 | 1 | 2.280 | 115.0 | 115.0 | 2.280 | 2.280 | 1.9 | 1.00 | 0.896 | 2.050 | 0.72 | 58.4 | -0.3173 | Infinite | 0.826 | 0.4795 | **Dry** | 0.000 |
| 39 | 115 | 40 | 39 | 60 | 1 | 2.338 | 115.0 | 115.0 | 2.338 | 2.338 | 7.0 | 1.00 | 0.871 | 2.338 | 0.67 | 44.1 | 1533.1842 | Infinite | 0.822 | 0.4768 | **Dry** | 0.000 |
| 40 | 115 | 40 | 39 | 60 | 1 | 2.395 | 115.0 | 115.0 | 2.395 | 2.395 | 7.0 | 1.00 | 0.871 | 2.338 | 0.67 | 44.1 | 1533.1842 | Infinite | 0.817 | 0.4741 | **Dry** | 0.000 |
| 41 | 115 | 40 | 39 | 60 | 1 | 2.453 | 115.0 | 115.0 | 2.453 | 2.453 | 7.0 | 1.00 | 0.871 | 2.338 | 0.67 | 44.1 | 1533.1842 | Infinite | 0.813 | 0.4715 | **Dry** | 0.000 |
| 42 | 115 | 40 | 39 | 60 | 1 | 2.510 | 115.0 | 115.0 | 2.510 | 2.510 | 7.0 | 1.00 | 0.871 | 2.338 | 0.67 | 44.1 | 1533.1842 | Infinite | 0.808 | 0.4688 | **Dry** | 0.000 |
| 43 | 115 | 40 | 39 | 60 | 1 | 2.568 | 115.0 | 115.0 | 2.568 | 2.568 | 7.0 | 1.00 | 0.871 | 2.338 | 0.67 | 44.1 | 1533.1842 | Infinite | 0.803 | 0.4662 | **Dry** | 0.000 |
| 44 | 115 | 92 | 44 | 13 | 1 | 2.625 | 115.0 | 115.0 | 2.625 | 2.625 | 1.9 | 1.00 | 0.846 | 2.625 | 0.63 | 82.5 | -0.1083 | Infinite | 0.799 | 0.4635 | **Dry** | 0.000 |
| 45 | 115 | 92 | 44 | 13 | 1 | 2.683 | 115.0 | 115.0 | 2.683 | 2.683 | 1.9 | 1.00 | 0.846 | 2.625 | 0.63 | 82.5 | -0.1083 | Infinite | 0.794 | 0.4609 | **Dry** | 0.000 |
| 46 | 115 | 92 | 44 | 13 | 1 | 2.740 | 115.0 | 115.0 | 2.740 | 2.740 | 1.9 | 1.00 | 0.846 | 2.625 | 0.63 | 82.5 | -0.1083 | Infinite | 0.790 | 0.4582 | **Dry** | 0.000 |
| 47 | 115 | 92 | 44 | 13 | 1 | 2.798 | 115.0 | 115.0 | 2.798 | 2.798 | 1.9 | 1.00 | 0.846 | 2.625 | 0.63 | 82.5 | -0.1083 | Infinite | 0.785 | 0.4556 | **Dry** | 0.000 |
| 48 | 115 | 92 | 44 | 13 | 1 | 2.855 | 115.0 | 115.0 | 2.855 | 2.855 | 1.9 | 1.00 | 0.846 | 2.625 | 0.63 | 82.5 | -0.1083 | Infinite | 0.781 | 0.4529 | **Dry** | 0.000 |
| 49 | 115 | 66 | 49 | 13 | 1 | 2.913 | 115.0 | 115.0 | 2.913 | 2.913 | 1.9 | 1.00 | 0.824 | 2.913 | 0.60 | 56.8 | -0.3299 | Infinite | 0.776 | 0.4503 | **Dry** | 0.000 |
| 50 | 115 | 66 | 49 | 13 | 1 | 2.970 | 115.0 | 115.0 | 2.970 | 2.970 | 1.9 | 1.00 | 0.824 | 2.913 | 0.60 | 56.8 | -0.3299 | Infinite | 0.771 | 0.4476 | **Dry** | 0.000 |
| | | | | | | | | | | | | | | | | | | | | | **Total Post-Earthquake Shaking Settlement (inches)** | **3.565** |

## OAKRIDGE GEOSCIENCE, INC.

| | |
|---|---|
| PLATE NUMBER: | **WCRS** |
| PROJECT NUMBER: | **030.004** |
| DATE OF ANALYSIS: | **12/13/17** |



**EARTHQUAKE PARAMETERS**

| | |
|---|---|
| Design Earthquake Magnitude* (Mm): | 7.00 |
| Design Horizontal Acceleration* (g): | 1.06 |
| Calculated Magnitude Weight Factor: | 0.842 |

**GROUNDWATER PARAMETERS**

| | |
|---|---|
| Current Groundwater Level (ft): | 60.0 |
| Historic High Groundwater Level* (ft): | 60.0 |

* Based on the applicable CDMG Seismic Hazard Evaluation Report

**ENERGY & ROD CORRECTIONS**

| | |
|---|---|
| Energy Correction (CE) for N60: | 1.20 |
| Rod Length Correction (CR) (0 or 1): | 1 |
| Bore Diameter Correction (CB): | 1.15 |
| Sampler Correction (CS): | 1.00 |
| Use K Sigma (0 or 1): | 1 |

Methodology after: Seed, H.B., and Idriss, I.M., 1982;
Seed, H.B., and others, 1985;
& Tokimatsu, K., and Seed, H.B., 1987

**LIQUEFACTION ANALYSIS**

| Layer Depth (ft) | Soil Total Unit Wt. (pcf) | Field SPT Count (N) | Depth of SPT (ft) | Fines Content (%) | Liquefaction Susceptibility (0 or 1) | Total Stress (tsf) | Current Eff. Unit Wt. (psf) | Historic Eff. Unit Wt. (psf) | Current Eff. Stress (tsf) | Historic Eff. Stress (tsf) | Fines Content Correction | Rod Length Correction | K Sigma Correction Factor | Eff. Stress for SPT (tsf) | Depth Correction Cn | Final Corrected (N1)60 | Computed CSR M=7.5 | Corrected Resistance CRR | rd Factor | Induced CSR | Liquefaction Safety Factor | Calculated Settlement (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 115 | 3 | 4 | 16 | 1 | 0.058 | 115.0 | 115.0 | 0.058 | 0.058 | 2.6 | 0.75 | 1.000 | 0.230 | 2.00 | 8.8 | 0.0971 | 0.0971 | 0.995 | 0.5776 | **Dry** | 0.336 |
| 2 | 115 | 3 | 4 | 16 | 1 | 0.115 | 115.0 | 115.0 | 0.115 | 0.115 | 2.6 | 0.75 | 1.000 | 0.230 | 2.00 | 8.8 | 0.0971 | 0.0971 | 0.991 | 0.5750 | **Dry** | 0.336 |
| 3 | 115 | 3 | 4 | 16 | 1 | 0.173 | 115.0 | 115.0 | 0.173 | 0.173 | 2.6 | 0.75 | 1.000 | 0.230 | 2.00 | 8.8 | 0.0971 | 0.0971 | 0.986 | 0.5723 | **Dry** | 0.336 |
| 4 | 115 | 3 | 4 | 16 | 1 | 0.230 | 115.0 | 115.0 | 0.230 | 0.230 | 2.6 | 0.75 | 1.000 | 0.230 | 2.00 | 8.8 | 0.0971 | 0.0971 | 0.982 | 0.5697 | **Dry** | 0.336 |
| 5 | 115 | 3 | 4 | 16 | 1 | 0.288 | 115.0 | 115.0 | 0.288 | 0.288 | 2.6 | 0.75 | 1.000 | 0.230 | 2.00 | 8.8 | 0.0971 | 0.0971 | 0.977 | 0.5670 | **Dry** | 0.336 |
| 6 | 115 | 3 | 4 | 16 | 1 | 0.345 | 115.0 | 115.0 | 0.345 | 0.345 | 2.6 | 0.75 | 1.000 | 0.230 | 2.00 | 8.8 | 0.0971 | 0.0971 | 0.973 | 0.5643 | **Dry** | 0.336 |
| 7 | 113 | 12 | 9 | 16 | 1 | 0.402 | 113.0 | 113.0 | 0.402 | 0.402 | 2.6 | 0.75 | 1.000 | 0.515 | 1.43 | 20.4 | 0.2222 | 0.2222 | 0.968 | 0.5617 | **Dry** | 0.183 |
| 8 | 113 | 12 | 9 | 16 | 1 | 0.458 | 113.0 | 113.0 | 0.458 | 0.458 | 2.6 | 0.75 | 1.000 | 0.515 | 1.43 | 20.4 | 0.2222 | 0.2222 | 0.963 | 0.5590 | **Dry** | 0.183 |
| 9 | 113 | 12 | 9 | 16 | 1 | 0.515 | 113.0 | 113.0 | 0.515 | 0.515 | 2.6 | 0.75 | 1.000 | 0.515 | 1.43 | 20.4 | 0.2222 | 0.2222 | 0.959 | 0.5564 | **Dry** | 0.183 |
| 10 | 113 | 12 | 9 | 16 | 1 | 0.571 | 113.0 | 113.0 | 0.571 | 0.571 | 2.6 | 0.75 | 1.000 | 0.515 | 1.43 | 20.4 | 0.2222 | 0.2222 | 0.954 | 0.5537 | **Dry** | 0.183 |
| 11 | 113 | 12 | 9 | 16 | 1 | 0.628 | 113.0 | 113.0 | 0.628 | 0.628 | 2.6 | 0.75 | 1.000 | 0.515 | 1.43 | 20.4 | 0.2222 | 0.2222 | 0.950 | 0.5511 | **Dry** | 0.183 |
| 12 | 113 | 12 | 9 | 16 | 1 | 0.684 | 113.0 | 113.0 | 0.684 | 0.684 | 2.6 | 0.75 | 1.000 | 0.515 | 1.43 | 20.4 | 0.2222 | 0.2222 | 0.945 | 0.5484 | **Dry** | 0.183 |
| 13 | 110 | 8 | 14 | 16 | 1 | 0.739 | 110.0 | 110.0 | 0.739 | 0.739 | 2.6 | 0.78 | 1.000 | 0.794 | 1.15 | 12.5 | 0.1371 | 0.1371 | 0.941 | 0.5458 | **Dry** | 0.267 |
| 14 | 110 | 8 | 14 | 10 | 1 | 0.794 | 110.0 | 110.0 | 0.794 | 0.794 | 1.2 | 0.78 | 1.000 | 0.794 | 1.15 | 11.1 | 0.1219 | 0.1219 | 0.936 | 0.5431 | **Dry** | 0.293 |
| 15 | 110 | 8 | 14 | 10 | 1 | 0.849 | 110.0 | 110.0 | 0.849 | 0.849 | 1.2 | 0.78 | 1.000 | 0.794 | 1.15 | 11.1 | 0.1219 | 0.1219 | 0.931 | 0.5405 | **Dry** | 0.293 |
| 16 | 110 | 8 | 14 | 6 | 1 | 0.904 | 110.0 | 110.0 | 0.904 | 0.904 | 0.2 | 0.78 | 1.000 | 0.794 | 1.15 | 10.2 | 0.1119 | 0.1119 | 0.927 | 0.5378 | **Dry** | 0.310 |
| 17 | 110 | 8 | 14 | 6 | 1 | 0.959 | 110.0 | 110.0 | 0.959 | 0.959 | 0.2 | 0.78 | 1.000 | 0.794 | 1.15 | 10.2 | 0.1119 | 0.1119 | 0.922 | 0.5352 | **Dry** | 0.310 |
| 18 | 110 | 23 | 19 | 6 | 1 | 1.014 | 110.0 | 110.0 | 1.014 | 1.014 | 0.2 | 0.88 | 0.996 | 1.069 | 0.99 | 28.0 | 0.3488 | 0.3488 | 0.918 | 0.5325 | **Dry** | 0.113 |
| 19 | 110 | 23 | 19 | 6 | 1 | 1.069 | 110.0 | 110.0 | 1.069 | 1.069 | 0.2 | 0.88 | 0.996 | 1.069 | 0.99 | 28.0 | 0.3488 | 0.3488 | 0.913 | 0.5299 | **Dry** | 0.113 |
| 20 | 110 | 23 | 19 | 6 | 1 | 1.124 | 110.0 | 110.0 | 1.124 | 1.124 | 0.2 | 0.88 | 0.996 | 1.069 | 0.99 | 28.0 | 0.3488 | 0.3488 | 0.909 | 0.5272 | **Dry** | 0.113 |
| 21 | 110 | 23 | 19 | 6 | 1 | 1.179 | 110.0 | 110.0 | 1.179 | 1.179 | 0.2 | 0.88 | 0.996 | 1.069 | 0.99 | 28.0 | 0.3488 | 0.3488 | 0.904 | 0.5246 | **Dry** | 0.113 |
| 22 | 110 | 23 | 19 | 6 | 1 | 1.234 | 110.0 | 110.0 | 1.234 | 1.234 | 0.2 | 0.88 | 0.996 | 1.069 | 0.99 | 28.0 | 0.3488 | 0.3488 | 0.899 | 0.5219 | **Dry** | 0.113 |
| 23 | 115 | 16 | 24 | 6 | 1 | 1.292 | 115.0 | 115.0 | 1.292 | 1.292 | 0.2 | 0.94 | 0.966 | 1.349 | 0.89 | 18.7 | 0.1965 | 0.1965 | 0.895 | 0.5192 | **Dry** | 0.198 |
| 24 | 115 | 16 | 24 | 6 | 1 | 1.349 | 115.0 | 115.0 | 1.349 | 1.349 | 0.2 | 0.94 | 0.966 | 1.349 | 0.89 | 18.7 | 0.1965 | 0.1965 | 0.890 | 0.5166 | **Dry** | 0.198 |
| 25 | 115 | 16 | 24 | 6 | 1 | 1.407 | 115.0 | 115.0 | 1.407 | 1.407 | 0.2 | 0.94 | 0.966 | 1.349 | 0.89 | 18.7 | 0.1965 | 0.1965 | 0.886 | 0.5139 | **Dry** | 0.198 |
| 26 | 115 | 16 | 24 | 6 | 1 | 1.464 | 115.0 | 115.0 | 1.464 | 1.464 | 0.2 | 0.94 | 0.966 | 1.349 | 0.89 | 18.7 | 0.1965 | 0.1965 | 0.881 | 0.5113 | **Dry** | 0.198 |
| 27 | 115 | 16 | 24 | 6 | 1 | 1.522 | 115.0 | 115.0 | 1.522 | 1.522 | 0.2 | 0.94 | 0.966 | 1.349 | 0.89 | 18.7 | 0.1965 | 0.1965 | 0.877 | 0.5086 | **Dry** | 0.198 |
| 28 | 115 | 10 | 29 | 6 | 1 | 1.579 | 115.0 | 115.0 | 1.579 | 1.579 | 0.2 | 0.99 | 0.936 | 1.639 | 0.80 | 11.2 | 0.1149 | 0.1149 | 0.872 | 0.5060 | **Dry** | 0.291 |
| 29 | 120 | 10 | 29 | 28 | 1 | 1.639 | 120.0 | 120.0 | 1.639 | 1.639 | 5.4 | 0.99 | 0.936 | 1.639 | 0.80 | 16.4 | 0.1667 | 0.1667 | 0.867 | 0.5033 | **Dry** | 0.219 |
| 30 | 120 | 10 | 29 | 28 | 1 | 1.699 | 120.0 | 120.0 | 1.699 | 1.699 | 5.4 | 0.99 | 0.936 | 1.639 | 0.80 | 16.4 | 0.1667 | 0.1667 | 0.863 | 0.5007 | **Dry** | 0.219 |
| 31 | 120 | 10 | 29 | 28 | 1 | 1.759 | 120.0 | 120.0 | 1.759 | 1.759 | 5.4 | 0.99 | 0.936 | 1.639 | 0.80 | 16.4 | 0.1667 | 0.1667 | 0.858 | 0.4980 | **Dry** | 0.219 |
| 32 | 120 | 10 | 29 | 28 | 1 | 1.819 | 120.0 | 120.0 | 1.819 | 1.819 | 5.4 | 0.99 | 0.936 | 1.639 | 0.80 | 16.4 | 0.1667 | 0.1667 | 0.854 | 0.4954 | **Dry** | 0.219 |
| 33 | 120 | 11 | 34 | 28 | 1 | 1.879 | 120.0 | 120.0 | 1.879 | 1.879 | 5.4 | 1.00 | 0.907 | 1.939 | 0.74 | 16.6 | 0.1636 | 0.1636 | 0.849 | 0.4927 | **Dry** | 0.217 |
| 34 | 120 | 11 | 34 | 28 | 1 | 1.939 | 120.0 | 120.0 | 1.939 | 1.939 | 5.4 | 1.00 | 0.907 | 1.939 | 0.74 | 16.6 | 0.1636 | 0.1636 | 0.845 | 0.4901 | **Dry** | 0.217 |
| 35 | 120 | 11 | 34 | 28 | 1 | 1.999 | 120.0 | 120.0 | 1.999 | 1.999 | 5.4 | 1.00 | 0.907 | 1.939 | 0.74 | 16.6 | 0.1636 | 0.1636 | 0.840 | 0.4874 | **Dry** | 0.217 |
| 36 | 120 | 11 | 34 | 28 | 1 | 2.059 | 120.0 | 120.0 | 2.059 | 2.059 | 5.4 | 1.00 | 0.907 | 1.939 | 0.74 | 16.6 | 0.1636 | 0.1636 | 0.835 | 0.4848 | **Dry** | 0.217 |
| 37 | 120 | 11 | 34 | 28 | 1 | 2.119 | 120.0 | 120.0 | 2.119 | 2.119 | 5.4 | 1.00 | 0.907 | 1.939 | 0.74 | 16.6 | 0.1636 | 0.1636 | 0.831 | 0.4821 | **Dry** | 0.217 |
| 38 | 120 | 11 | 34 | 28 | 1 | 2.179 | 120.0 | 120.0 | 2.179 | 2.179 | 5.4 | 1.00 | 0.907 | 1.939 | 0.74 | 16.6 | 0.1636 | 0.1636 | 0.826 | 0.4795 | **Dry** | 0.217 |
| 39 | 120 | 11 | 39 | 28 | 1 | 2.239 | 120.0 | 120.0 | 2.239 | 2.239 | 5.4 | 1.00 | 0.879 | 2.239 | 0.69 | 15.8 | 0.1513 | 0.1513 | 0.822 | 0.4768 | **Dry** | 0.224 |
| 40 | 120 | 11 | 39 | 28 | 1 | 2.299 | 120.0 | 120.0 | 2.299 | 2.299 | 5.4 | 1.00 | 0.879 | 2.239 | 0.69 | 15.8 | 0.1513 | 0.1513 | 0.817 | 0.4741 | **Dry** | 0.224 |
| 41 | 120 | 11 | 39 | 28 | 1 | 2.359 | 120.0 | 120.0 | 2.359 | 2.359 | 5.4 | 1.00 | 0.879 | 2.239 | 0.69 | 15.8 | 0.1513 | 0.1513 | 0.813 | 0.4715 | **Dry** | 0.224 |
| 42 | 120 | 11 | 39 | 28 | 1 | 2.419 | 120.0 | 120.0 | 2.419 | 2.419 | 5.4 | 1.00 | 0.879 | 2.239 | 0.69 | 15.8 | 0.1513 | 0.1513 | 0.808 | 0.4688 | **Dry** | 0.224 |
| 43 | 120 | 38 | 44 | 28 | 1 | 2.479 | 120.0 | 120.0 | 2.479 | 2.479 | 5.4 | 1.00 | 0.853 | 2.539 | 0.65 | 39.2 | 0.8972 | Infinite | 0.803 | 0.4662 | **Dry** | 0.000 |
| 44 | 120 | 38 | 44 | 9 | 1 | 2.539 | 120.0 | 120.0 | 2.539 | 2.539 | 0.9 | 1.00 | 0.853 | 2.539 | 0.65 | 34.8 | 0.4690 | Infinite | 0.799 | 0.4635 | **Dry** | 0.000 |
| 45 | 120 | 38 | 44 | 9 | 1 | 2.599 | 120.0 | 120.0 | 2.599 | 2.599 | 0.9 | 1.00 | 0.853 | 2.539 | 0.65 | 34.8 | 0.4690 | Infinite | 0.794 | 0.4609 | **Dry** | 0.000 |
| 46 | 120 | 38 | 44 | 9 | 1 | 2.659 | 120.0 | 120.0 | 2.659 | 2.659 | 0.9 | 1.00 | 0.853 | 2.539 | 0.65 | 34.8 | 0.4690 | Infinite | 0.790 | 0.4582 | **Dry** | 0.000 |
| 47 | 120 | 38 | 44 | 9 | 1 | 2.719 | 120.0 | 120.0 | 2.719 | 2.719 | 0.9 | 1.00 | 0.853 | 2.539 | 0.65 | 34.8 | 0.4690 | Infinite | 0.785 | 0.4556 | **Dry** | 0.000 |
| 48 | 120 | 38 | 44 | 9 | 1 | 2.779 | 120.0 | 120.0 | 2.779 | 2.779 | 0.9 | 1.00 | 0.853 | 2.539 | 0.65 | 34.8 | 0.4690 | Infinite | 0.781 | 0.4529 | **Dry** | 0.000 |
| 49 | 120 | 14 | 49 | 28 | 1 | 2.839 | 120.0 | 120.0 | 2.839 | 2.839 | 5.4 | 1.00 | 0.830 | 2.839 | 0.61 | 17.2 | 0.1548 | 0.1548 | 0.776 | 0.4503 | **Dry** | 0.212 |
| 50 | 120 | 14 | 49 | 28 | 1 | 2.899 | 120.0 | 120.0 | 2.899 | 2.899 | 5.4 | 1.00 | 0.830 | 2.839 | 0.61 | 17.2 | 0.1548 | 0.1548 | 0.771 | 0.4476 | **Dry** | 0.212 |
| | | | | | | | | | | | | | | | | | | | | | **Total Post-Earthquake Shaking Settlement (inches)** | **9.935** |

# Appendix H

Phase I Environmental Site Assessment



# Phase I Environmental Site Assessment

## High Street Station Mixed Use Development, Moorpark, California

*prepared for*
Daly Group Inc.

*prepared by*
**Rincon Consultants, Inc.**

**June 12, 2018**

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June 12, 2018
Project 18-05844

Mr. Jasch Janowicz
Daly Group Inc.
31255 Cedar Valley Drive, Suite 323
Westlake Village, CA 91362
*Via email: jjanowicz@dalygroupinc.com*

**Subject:** **Phase I Environmental Site Assessment**
**High Street Station Mixed Use Development**
**Moorpark, California**

Dear Mr. Janowicz:

This report presents the findings of a Phase I Environmental Site Assessment (ESA) completed by Rincon Consultants, Inc. for the High Street Station Mixed Use Development in Moorpark, California. The Phase I ESA was performed in accordance with our proposal and contract dated May 16, 2018.

The accompanying report presents our findings and provides an opinion regarding the presence of recognized environmental conditions. Our work program for this project, as referenced in our contract, is intended to meet the guidelines outlined in the American Society for Testing and Materials (ASTM), Standard Practice for Environmental Site Assessments: *Phase I Environmental Site Assessment Process* (ASTM Standard E-1527-13). Our scope of services, pursuant to ASTM practice, did not include any inquiries with respect to asbestos, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, vapor intrusion or other indoor air quality, mold, or high voltage power lines.

Thank you for selecting Rincon for this project. If you have any questions, or if we can be of any future assistance, please contact us.

Sincerely,

**RINCON CONSULTANTS, INC.**

Sarah A. Larese
Senior Environmental Scientist

Walt Hamann, PG, CEG, CHG
Vice President, Environmental Services

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# Executive Summary

This report presents the findings of a Phase I Environmental Site Assessment (ESA) for the High Street Station Mixed Use Development in Moorpark, California (Figure 1, Vicinity Map). The Phase I ESA was performed for Daly Group Inc. by Rincon Consultants, Inc. (Rincon). Daly Group Inc. has requested this assessment and will use the information for the purposes of purchasing and redeveloping the subject property. The subject property is currently occupied by five vacant buildings which include a former restaurant, a former thrift store and several structures associated with a former onsite grain storage/milling facility.

Rincon performed a reconnaissance of the subject property on June 5, 2018. The purpose of the reconnaissance was to observe existing conditions and to obtain information indicating the presence of recognized environmental conditions in connection with the subject property. The use, storage or disposal of hazardous materials on the subject property was not observed during the site reconnaissance, except for the following small quantities:

- The storage area at the former Maria's Restaurant contains small quantities of oil based protective enamel, contact cement, polyurethane, and paint & primer.
- One unmarked 55-gallon drum with unknown contents located adjacent to the former "One More Time" thrift shop (220 E High St.) on the subject property.

Rincon did not observe indications of releases from these containers.

Adjacent businesses/properties include various commercial and retail properties to the north, The City of Moorpark Chamber of Commerce (18 E High St.) to the west, a dirt lot used for parking to the east and the railroad right-of-way to the south.

Environmental Data Resources, Inc. (EDR) was contracted to provide a database search of public lists of sites that generate, store, treat or dispose of hazardous materials or sites for which a release or incident has occurred. The EDR search was conducted for the subject property and included data from surrounding sites within a specified radius of the property. The subject property was not listed in any of the databases searched by EDR. Two adjacent properties were listed in databases searched by EDR. Further information regarding the adjacent property listings is in the Additional Environmental Record Sources section of this report.

Historical sources reviewed as part of the Phase I ESA include aerial photographs, topographic maps, city directories and former Phase I ESA reports for the subject property. The 2017 Phase I ESA completed by EFI Global for the entire APN of which the subject property is a part of indicated the following historical use of the property:

*"the southwest portion of the subject property was developed with a two-story train depot building in 1910 associated with the south adjoining Southern Pacific Railroad. . . The remaining portions of the subject property consisted of vacant, unused land at this time. This train depot structure remained onsite until 1964 when it was demolished due to disinterest in passenger rail. In 1949, a small cafe structure was constructed to the north of the train depot along East High Street (68 East High Street) and was occupied by the Redwood Cafe and Bar-B-Que Joint. This building was demolished in 2008. Sometime between 1947 and 1954 two grain mills/grain storage structures were constructed on the southern perimeter of the subject property along with four large silos associated with Egg City (a poultry production facility elsewhere in Moorpark). By 1956, these grain*

*storage structures were replaced with the existing storage grain structures (192 East High Street) observed onsite today. The four large silos remained onsite until 2008 when they were removed. In 1954, the existing commercial structure located near the northeast/northcentral portion of the property (220/222 East High Street) was constructed. Historical occupants have included a hardware store, electronics store, rental and sales shop, senior citizens meeting space, sheet metal shop, and thrift store. In 1958, two commercial/light industrial structures were constructed on the east side of the subject property (224/226 East High Street). These structures were originally built as a chicken hatching farm but later became used for retail, various commercial, and medical office purposes. In addition, the 226 East High Street building was utilized by Tony's Auto & Truck Repair in at least 1993. These buildings were demolished sometime between 1998 and 2003. In 1964, the existing restaurant building located near the northwest/ northcentral portion of the property (104 East High Street) was constructed. Former occupants have included Eppie's Frosti, The Donut Shop, La Playita, Maria's, and some retail occupants including a stereo shop and sporting goods shop . . . The last structure to be built on the subject property was the granary building (192 East High Street) which processed feed for Egg City (a poultry production facility located approximately three-quarters of a mile southwest of the subject property). The granary building was constructed to look like a train depot and was labeled "False Depot" to hide the four silos located behind the building."*

In February 2017 FCG Environmental performed hazardous materials surveys at Maria's Restaurant Building and the Old Granary Building and Grain Elevator Façade Building, which included asbestos bulk sampling and lead-based paint testing. According to the report none of the painted surfaces or coatings tested were found to contain lead at concentrations above the regulatory level of 1.0 milligrams per square centimeter ($mg/cm^2$). Asbestos Containing Materials (ACM) were identified in both structures and would require abatement or special handling as part of proposed demolition activities.

Based on the findings of this Phase I ESA, it is our opinion that there are no Recognized Environmental Conditions (RECs) in connection with the subject property. However, there are two Potential RECs in connection with the adjacent properties as follows.

## Potential Recognized Environmental Conditions

1. Existing railroad tracks adjacent to south of the subject property.
2. The presence of a former gasoline service station located adjacent to the west of the subject property.

**Existing railroad tracks adjacent to south of the subject property.** A railroad right-of-way has been present adjacent to the south of the subject property since at least 1903. Railroad ties were historically treated with creosote, and the track beds were historically treated with herbicides for weed management. Therefore, hydrocarbons, metals, herbicides, and semi volatile organic compounds from the railroad activities are potentially present in the soils surrounding the railroad tracks. The presence of the adjacent railroad is a potential REC.

To evaluate the adjacent railroad tracks, we recommend a shallow soil sampling assessment on the southern portion of the subject property adjacent to the railroad tracks to determine if hydrocarbons, metals, herbicides, and semi volatile organic compounds from the railroad activities are present in the shallow soil near the railroad tracks. In addition, based on the historical agricultural use of the area, we also recommend that soil samples be analyzed for pesticides, as these chemicals may have been transported via railcars/railroad tracks.

**The presence of a former gasoline service station located adjacent to the west of the subject property.** The A & P ARCO site was formerly located adjacent to the west of the subject property where the existing Moorpark Chamber of Commerce building is located. According to the EDR Hist Auto database, in 1976 the site was occupied by A & P ARCO and in use as a gasoline service station. The site was not listed in the GeoTracker or EnviroStor databases. In addition, records for the site were not identified on the VCEHD website. In the 2017 Phase I ESA report, a document titled Soils Exploration by Testing Laboratory Inc. was referenced with information pertaining to the former gasoline service station (18 E High Street). The document states, "*The underground tanks have been removed and the locations are not within the proposed building area*." However, the document shows no indication of soil sampling for contaminants in the location of the former USTs. Based on the documents reviewed and the lack of assessment data for the former USTs, there is the potential for contaminated soil gas migration and vapor intrusion of contaminants originating from the former gasoline service station onto the subject property. The presence of the adjacent former gasoline station is a potential REC.

To evaluate the former adjacent gasoline station to the west, we recommend that a soil vapor assessment be conducted on the subject property adjacent to the former gasoline station, to determine if there is VOC-impacted soil vapor migrating beneath the subject property from the adjacent property.

# Introduction

This report presents the findings of a Phase I ESA conducted for the property located at the High Street Station Mixed Use Development in Moorpark, California (Figure 1, Vicinity Map). The Phase I ESA was performed by Rincon Consultants, Inc. (Rincon) for Daly Group Inc. in general conformance with ASTM E 1527-13, our contract dated May 17, 2018 and our proposal dated May 16, 2018. The following sections present our findings and provide our opinion as to the presence of recognized environmental conditions on the subject property.

## Purpose

Daly Group Inc. has requested this assessment and will use the information for the purposes of purchasing and redeveloping the subject property. The purpose of this Phase I ESA was to determine if there are recognized environmental conditions on the subject property, taking into account commonly and reasonably ascertainable information and to qualify for Landowner Liability Protections under the Brownfields Amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

A recognized environmental condition (REC) is defined pursuant to ASTM E 1527-13 as,

> "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment; 2) under conditions indicative of a release to the environment; 3) under conditions that pose a material threat of a future release to the environment".

A Controlled REC is defined pursuant to ASTM E 1527-13 as,

> "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report".

A Historical REC is defined pursuant to ASTM E 1527-13 as,

> "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by regulatory authority, without subjecting the property to any required controls (for example, use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in

> the regulatory criteria). If the EP [Environmental Professional] considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition".

A *de minimis* condition is defined pursuant to ASTM E 1527-13 as,

> "a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions nor controlled recognized environmental conditions".

# Scope of Services

The scope of services conducted during this study is outlined below:

- Performed a reconnaissance of the subject property to identify obvious indicators of the existence of hazardous materials.
- Observed adjacent or nearby properties from public thoroughfares in an attempt to see if such properties are likely to use, store, generate, or dispose of hazardous materials.
- Obtained and reviewed an environmental records database search to obtain information about the potential for hazardous materials to exist at the subject property or at properties located in the vicinity of the subject property.
- Reviewed files for the subject property and immediately adjacent properties as identified in the database report, as applicable.
- Reviewed the current U.S. Geological Survey (USGS) topographic map to obtain information about the subject property and regional topography and uses of the subject property and surrounding sites.
- Reviewed additional pertinent record sources (e.g., California Division of Oil and Gas records, online databases of hazardous substance release sites), as necessary, to identify the presence of RECs at the subject property.
- Reviewed reasonably ascertainable historical resources (e.g., aerial photographs, topographic maps, fire insurance maps, city directories) to assess the historical land use of the subject property and adjacent properties.
- Provided a user interview questionnaire to a representative of the client, the user of the Phase I ESA.
- Provided a property owner interview questionnaire to the property owner or a designated subject property representative identified to Rincon by the client.
- Conducted interviews with other property representatives (e.g., key site manager, occupants), as applicable.
- Reviewed available client-provided information (e.g., previous environmental reports, title documentation).

# Significant Assumptions, Limitations, Deviations, Exceptions, Special Terms, and Conditions

This work is intended to adhere to good commercial, customary, and generally accepted environmental investigation practices for similar investigations conducted at this time and in this geographic area. No guarantee or warranties, expressed or implied are provided. The findings and opinions conveyed in this report are based on findings derived from a site reconnaissance, review of an environmental database report, specified regulatory records and historical sources, and comments made by interviewees. This report is not intended as a comprehensive site characterization and should not be construed as such. Standard data sources relied upon during the completion of Phase I ESAs may vary with regard to accuracy and completeness. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research.

Rincon has not found evidence that hazardous materials or petroleum products exist at the subject property at levels likely to warrant mitigation. Rincon does not under any circumstances warrant or guarantee that not finding evidence of hazardous materials or petroleum products means that hazardous materials or petroleum products do not exist on the subject property. Additional research, including surface or subsurface sampling and analysis, can reduce the client's risks, but no techniques commonly employed can eliminate these risks altogether.

In addition, pursuant to ASTM E 1527-13 practice, our scope of services did not include any inquiries with respect to asbestos containing building materials, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to release of hazardous substances or petroleum products into the environment, industrial hygiene, lead-based paint, lead in drinking water, mold, radon, regulatory compliance, wetlands, or high voltage power lines.

# User Reliance

Daly Group Inc. has requested this assessment and will use the information for the purposes of purchasing and redeveloping the subject property. This Phase I ESA was prepared for use solely and exclusively by Daly Group Inc. No other use or disclosure is intended or authorized by Rincon. Also, this report is issued with the understanding that it is to be used only in its entirety. It is intended for use only by the client, and no other person or entity may rely upon the report without the express written consent of Rincon.

# Site Description

## Location

The subject property is a 2.15-acre parcel located south of East High Street, north of the railroad right-of-way, east of Moorpark Avenue and west of Spring Road in California (Figure 2, Site Map). The property is identified as a portion of Assessor's Parcel Number (APN) 512-0-090-115. The following addresses are associated with the subject property: 192, 220, 222, 224, 226 E High Street, Moorpark, California.

## Subject Property and Vicinity General Characteristics

The subject property is currently occupied by five vacant buildings which include a former restaurant, a former thrift store and several structures associated with the former onsite grain storage/milling facility. Adjacent businesses/properties include various commercial and retail properties to the north, The City of Moorpark Chamber of Commerce (18 E High St.) to the west, a dirt lot used for parking to the east and the railroad right-of-way to the south.

The current adjacent land uses are described in Table 1 and depicted on Figure 3, Adjacent Land Use Map.

**Table 1 Current Uses of Adjacent Properties**

| Area | Use |
|---|---|
| Northern Properties | East High St. followed by commercial-retail use. |
| Eastern Properties | Unpaved parking lot. |
| Southern Properties | Railroad right-of-way, Metro station and associated parking lot. |
| Western Properties | Moorpark Chamber of Commerce (18 E High St.) and associated parking lot. |

## Descriptions of Structures, Roads, Other Improvements on the Site

During the site reconnaissance, five vacant buildings were observed on the subject property:

- 104 E High St. - One single-story building with associated unpaved parking lot located in the northwest portion of the subject property (formerly Maria's Restaurant).
- 192 E High St. –Three two-story buildings located in the central portion of the subject property (formerly granary mill /storage buildings) consisting of: a truck tunnel containing a floor scale, a storage building containing about 10 grain storage tanks (reportedly empty) and two screw driven fill tanks, and a large sheet metal building on a raised slab foundation.
- 220 E High St. – One single-story building with a partly paved back yard located in the northeast portion of the subject property (formerly One More Time thrift shop).

A chain-link fence was noted around the perimeter of the three granary mill buildings. One More Time thrift store contained a chain-link fence around the perimeter of the back yard. Maria's Restaurant did not have a fence surrounding the perimeter.

The unpaved parking lot on the eastern portion of the subject property includes a driveway accessing an adjacent unpaved parking lot to the east. A public sidewalk runs east-west along E High Street, north of the subject property boundary.

Access to the subject property is available from three driveways on E High Street.

The following utility providers service the subject property:

- Electrical Service – None (previously Southern California Edison)
- Natural Gas – Southern California Gas Company
- Water Service – Ventura County Waterworks District
- Sewer – Ventura County Waterworks District
- Solid Waste – Waste Management

# User-Provided Information

As described in ASTM E 1527-13 Section 6, Daly Group Inc. was interviewed for actual knowledge pertaining to the subject property to help identify recognized environmental conditions. Jasch Janowicz of Daly Group Inc., completed the User Questionnaire as provided by ASTM Appendix X3 prior to completion of the site reconnaissance. A copy of the completed questionnaire is included as Appendix A.

Based on our review of the completed questionnaire, the user reviewed the following sources of information and is unaware of information regarding the following:

- Recorded land title records (or judicial records, where appropriate) that identify any environmental liens filed or recorded against the subject property
- Recorded land title records (or judicial records, where appropriate) that identify any activity and land use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the subject property under federal, tribal, state or local law
- Title Report that identifies information pertaining to environmental cleanup liens or AULs for the subject property

Based on our review of the completed questionnaire, the user is unaware of information regarding the following:

- Specialized knowledge or experience related to the subject property or nearby properties
- Commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases
- Obvious indicators that point to the presence or likely presence of releases at the subject property
- Pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the subject property
- Pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property
- Notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products

Additionally, the user indicated that the purchase price being paid for the subject property reasonably reflects the fair market value of the property, and he is not aware of a reduction in value for the subject property relative to any known environmental issues.

The following documents regarding the subject property were provided by the City of Moorpark (the current property owner):

- *Phase I Environmental Site Assessment, 192 East High Street, Moorpark, California, A.G.I. Geotechnical, Inc., November 30, 2007.*

This 2007 Phase I ESA was completed for the entire APN of which the subject property is a part. The currently adjacent properties to the west and east of the current subject property were included as part of the site in the 2007 Phase I ESA. The report indicates the following:

> "AGI recommends a Phase II Environments Study be performed on the eastern portion of the site in the vicinity of 220/222 East High Street (presently One More Time Thrift Shop) and the former location of 224/226 East High Street, just east of the thrift shop. Several documents and historical records indicate that enterprises associated with hazardous materials (e.g., solvents, fuels, paints) occupied this portion of the property.
>
> 1. A Zoning clearance on file at the City of Moorpark Department of Building and Safety dated November 20, 1989 listed the proposed use of 224/226 East High Street as "Auto Detailing".
> 2. A Memo dated October 6, 1993 on file at the City of Moorpark Department of Building and Safety outlines the storage of paints, thinner, gas, and unidentified materials at 224/226 East High Street.
> 3. The 1993 GTE Phone Directory listed Tony's Auto and Truck Repair at 226 East High Street. "

According to the report, "These documents show the potential of adverse environmental impact to the subject property at this location (224/226 East High Street) from past storage and use of hazardous materials. The present potential for hazardous materials contamination from other properties appears to be low. At the time of the border zone reconnaissance there was no evidence which would indicate any environmental hazards from possible nearby sources. We reviewed the data provided by the government agencies in the EDR report and found that any "open cases" being studied by the regulatory agencies will not have an adverse impact on the site due to the location of nearby case sites with respect to the subject site. Based on information obtained during this Phase I Environmental Site Assessment, further action toward the determination of the presence of any hazardous materials on the site is warranted based on the data outlined above."

- *Limited Phase II Investigation Report, 192 East High Street, Moorpark, California, AGI Geotechnical Inc., December 21, 2007.*

This 2007 Phase II Investigation was conducted based on the findings of the 2007 Phase I ESA summarized above. According to the report, AGI "performed a limited phase II site investigation on the eastern portion of the site in the vicinity of 220/222 East High Street (presently One More Time Thrift Shop) and the former location of 224/222 East High Street, immediately east of the thrift shop. The fieldwork was performed on November 16, 2007. Five soil borings were advanced with hand-held augering and sampling equipment with soil samples collected at discrete depths from 1 foot below ground surface (bgs) to a maximum depth of approximately 8 feet bgs. No groundwater was encountered during sampling. Laboratory analyses of select soil samples collected from the borings indicated that concentrations of total petroleum hydrocarbons as gasoline (TPH-G) were not detected, total petroleum hydrocarbons as diesel (TPH-D) were not detected and total petroleum hydrocarbons as waste oil (TPH-W.O.) were below laboratory reporting limits to 532 mg/kg. Analysis on select soil samples did not detect Volatile Organic Compounds in all samples analyzed. CAM 17 metals analytical results in select soil samples were reported below 10 X Soluble Threshold Limit

Concentrations (STLC) in all samples analyzed. Based on our field observations and laboratory analytical results as resented in this report, no chemical constituents were encountered above action levels. No additional site investigation seems to be necessary for the Property."

- *Phase I Environmental Site Assessment Report, 192 East High Street, Moorpark, California, EFI Global, January 19, 2017.*

This 2017 Phase I ESA was completed for the entire APN of which the subject property is a part. The currently adjacent properties to the west and east of the current subject property were included as part of the site in the 2017 Phase I ESA. According to the report, the historical use of the site was described as follows: "the southwest portion of the subject property was developed with a two-story train depot building in 1910 associated with the south adjoining Southern Pacific Railroad. The second floor of the depot building was reportedly utilized as a living space for the railroad agents while freight and passenger rail operations took place on the bottom floor. The remaining portions of the subject property consisted of vacant, unused land at this time. This train depot structure remained onsite until 1964 when it was demolished due to disinterest in passenger rail. In 1949, a small cafe structure was constructed to the north of the train depot along East High Street (68 East High Street) and was occupied by the Redwood Cafe and Bar-B-Que Joint. This building was demolished in 2008. Sometime between 1947 and 1954 two grain mills/grain storage structures were constructed on the southern perimeter of the subject property along with four large silos associated with Egg City (a poultry production facility elsewhere in Moorpark). By 1956, these grain storage structures were replaced with the existing storage grain structures (192 East High Street) observed onsite today. The four large silos remained onsite until 2008 when they were removed. In 1954, the existing commercial structure located near the northeast/northcentral portion of the property (220/222 East High Street) was constructed. Historical occupants have included a hardware store, electronics store, rental and sales shop, senior citizens meeting space, sheet metal shop, and thrift store. In 1958, two commercial/light industrial structures were constructed on the east side of the subject property (224/226 East High Street). These structures were originally built as a chicken hatching farm but later became used for retail, various commercial, and medical office purposes. In addition, the 226 East High Street building was utilized by Tony's Auto & Truck Repair in at least 1993. These buildings were demolished sometime between 1998 and 2003. In 1964, the existing restaurant building located near the northwest/ northcentral portion of the property (104 East High Street) was constructed. Former occupants have included Eppie's Frosti, The Donut Shop, La Playita, Maria's, and some retail occupants including a stereo shop and sporting goods shop. A gasoline service station occupied the northwest corner of the subject property from 1966 to 1978. The gas station was occupied by ARCO (Atlantic Richfield Company). By 1978, the gas station was demolished, and the existing chamber of commerce building was constructed in its place (18 East High Street) in 1979. This building was originally utilized as a bank and was occupied by Citizens Savings and Loan and First National Savings through 1986. Sometime after 1986, the building was converted for use by the Moorpark Chamber of Commerce. The last structure to be built on the subject property was the granary building (192 East High Street) which processed feed for Egg City (a poultry production facility located approximately three-quarters of a mile southwest of the subject property). The granary building was constructed to look like a train depot and was labeled "False Depot" to hide the four silos located behind the building."

EFI Global indicated the following: "This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property, with the exception of the following: The former presence of a gasoline service station on the northwest corner of the subject

property (current location of the Moorpark Chamber of Commerce building) from 1966 to 1978 is considered a REC. While the former gas station does constitute a REC, the proposed property line changes place the former gas station outside of the area that the User is planning to acquire. Therefore, the only concern associated with the former gas station in regard to the portion of the subject property the User is planning to acquire is a potential vapor intrusion concern for the proposed commercial building."

- *Pre- Demolition Asbestos & Lead Survey, 104 E High Street, Moorpark, FCG Environmental, February 8, 2017*.

FCG Environmental (FCG) performed a hazardous materials survey at Maria's Restaurant Building, which included asbestos bulk sampling and lead-based paint testing. According to the report none of the painted surfaces or coatings tested were found to contain lead at concentrations above the regulatory level of 1.0 milligrams per square centimeter ($mg/cm^2$). Based on these findings, no Lead-Based Paint was found at the site.

The following Asbestos Containing Materials (ACM) were identified:

- ACMs that contain greater than 1% asbestos and are regulated under current federal, state and local regulations:
    - Roofing penetration/patching mastic: Black mastic is found at roofing penetrations (pipes, vents, etc.) and in random areas for patching purposes. Roofing mastic is considered a Class I, non-friable material.
- Trace Asbestos Materials: The following materials contain a "trace" or <1% asbestos and may be managed as an Asbestos Containing Construction Material (ACCM) under Cal/OSHA requirements unless more quantitative testing is conducted to determine the actual concentration of asbestos:
    - Acoustic ceiling texture: This material is found in the small dining room located on the west side of the restaurant. This is a friable material.

- *Pre-Demolition Asbestos & Lead Paint Survey, 192 E High Street, Moorpark, FCG Environmental, February 7, 2017.*

FCG performed a hazardous materials survey at Old Granary Building and Grain Elevator Façade Building, which included asbestos bulk sampling and lead-based paint testing. According to the report, none of the interior or exterior painted surfaces showed lead concentrations at or above the 1.0 $mg/cm^2$ level. Therefore, none of the painted surfaces tested meet the definition of lead-based paint. A white porcelain sink located in the south granary building tested positive for lead in the glazing compound above the regulated level of 1.0 $mg/cm^2$. Although not covered by the EPA's RRP rule, disturbance or damage to this component may create a lead hazard which is regulated under current OSHA and state regulations.

The following Asbestos Containing Materials (ACM) were identified:

- ACMs that contain greater than 1% total asbestos and are regulated under current federal, state and local regulations:
    - North Façade Building: Black flooring mastic under vinyl floor tile: This mastic is found under off-white vinyl floor tile in the front office of the north facade building.
    - North Façade Building: Roofing layers – (tar on interior roof system): A black tar layer is found on an older roof section found inside the north façade building. This roofing system is covered by the larger structure. This roof was accessible from the

2nd level of the building and has a tar layer with 3% chrysotile asbestos under the composite roofing layer.

- South Granary Building: Roofing penetration mastics: Black mastics found at roofing penetrations on the south granary building.

# Records Review

## Physical Setting Sources

### Topography

The current USGS topographic map (Moorpark Quadrangle, 2012) indicates that the subject property is situated at an elevation of about 520 feet above mean sea level with topography sloping down to the west. The adjacent topography consists of relatively flat terrain which gradually steepens to the north.

### Geology and Hydrogeology

The subject property is located within the Transverse Ranges geologic province of California. The Transverse Ranges are characterized by east-west trending faults, folds, and mountain ranges. Mountain ranges in the Transverse Ranges are comprised of rocks that are progressively older from the west to east. Rocks within the Transverse Range include Precambrian metamorphic and igneous rocks that comprise the core of the San Gabriel and Santa Monica Mountains. These rocks are overlain by Miocene aged marine sediments of the Pico, Monterey, Repetto, and other formations. East-west trending folds and faults are predominating in this area. Valleys, faults, and downwarps separate the mountain ranges in this area. Mid to late Pleistocene faulting uplifted the area, resulting in the present-day landforms.

Mountain ranges within this province include the Santa Ynez, Santa Susana, Topatopa, San Gabriel, Sierra Pelona, and San Bernadino Mountains. Sedimentary basins include the Santa Clara River, Big Tujunga Canyon, San Gabriel River, and Los Angeles River. Geologic environments represented in the rocks found in the Transverse Ranges includes periods of non-marine deposits (Saugus, Mint Canyon, Sespe formations), marine deposits (Pico, Repetto, Monterey, San Fransisquito), volcanics (Conejo Volcanic series), and metamorphic or igneous rocks (Lowe Grandiorite, Pelona Schist, Mendenhall Gneiss). Important faults within this province include the San Andreas, San Gabriel, Red Mountain, Cucamonga, Raymond Hill, San Fernando, and Ventura faults. Many historical earthquakes have been documented along these and other faults.

### Site Geology

According to the U.S. Geological Survey, (Geologic Map of the Moorpark Quadrangle Ventura County, California, 1992) the subject property is underlain by surficial sediments, which is described as unconsolidated alluvial deposits; generally, undissected silt, sand and gravel of valley and floodplain areas.

## Regional Groundwater Occurrence and Quality

According to the California Department of Water Resources Groundwater Bulletin 118 (2003), the subject property is located within the Las Posas Valley groundwater basin.

During the preparation of this Phase I ESA, we reviewed the California State Water Resources Control Board's (SWRCB's) online GeoTracker database to determine groundwater flow direction in the vicinity of the subject property:

- First Quarter 2006 Groundwater Monitoring Report, J.E. Clark II Corporation, 450 High Street, Moorpark, California prepared by CapRock Geology and Environmental and dated May 15, 2006- According to this report groundwater is encountered at approximately 50 feet below ground surface and flows to the west to north-west. This site is located about 630 feet to the east of the subject property.

# Standard Environmental Record Sources

EDR was contracted to provide a database search of public lists of sites that generate, store, treat or dispose of hazardous materials or sites for which a release or incident has occurred. The EDR search was conducted for the subject property and included data from surrounding sites within specified radii of the property. A copy of the EDR report, which specifies the ASTM search distance for each public list, is included as Appendix B. As shown on the attached EDR report, federal, state and county lists were reviewed as part of the research effort. Please refer to Appendix B for a complete listing of sites reported by EDR and a description of the databases reviewed.

The Map Findings Summary, included in the EDR report, provides a summary of the databases searched, the number of reported facilities within the search radii, and whether the facility is located onsite or adjacent to the subject property. The following information is based on our review of the Map Findings Summary and the information contained in the EDR report.

## Subject Property

The subject property was not listed on any of the regulatory databases reviewed.

## Offsite Properties

Offsite properties listed by EDR fall under two general categories of databases: those reporting unauthorized releases of hazardous substances (e.g., LUST, National Priority List [a.k.a. Superfund sites], and corrective action facilities), and databases of businesses permitted to use hazardous materials or generate hazardous wastes, for which an unauthorized release has not been reported to a regulatory agency.

Rincon reviewed the EDR Radius Map and select detailed listings to evaluate their potential to impact the subject property, based on the following factors:

- Reported distance of the facility from the subject property
- The nature of the database on which the facility is listed, and/or whether the facility was listed on a database reporting unauthorized releases of hazardous materials, petroleum products, or hazardous wastes
- Reported case type (e.g., soil only, failed UST test only)
- Reported substance released (e.g., chlorinated solvents, gasoline, metals)

- Reported regulatory agency status (e.g., case closed, "no further action")
- Location of the facility with respect to the reported groundwater flow direction (discussed in the Geology and Hydrogeology section of this report)

Facilities/properties that were interpreted by Rincon to be of potential environmental concern to the subject property, based on one or more of the factors listed above, are summarized in Table 2. In accordance with ASTM, contamination migration pathways in soil, groundwater, and soil vapor were considered in our analysis of offsite properties of potential environmental concern.

**Table 2 EDR Listing Summary of Select Sites Within One-Quarter Mile of the Subject Site**

| Site Name | EDR Site ID | Site Address | Distance from Subject Property (feet) | Database Reference |
|---|---|---|---|---|
| **Adjacent Properties** | | | | |
| Clyde S Richfield Service | 3 | 213 High St. | Adjacent Property-North | EDR Hist Auto |
| A & P ARCO | A4, B7 | 18 E High St. | Adjacent Property-West | EDR Hist Auto |
| **Upgradient Release Sites** | | | | |
| J.E. Clark II Corp | D14, D15, D16 | 450 E High St. | Approximately 630 feet to the East | LUST, HIST CORTESE |
| **Nearby Sites** | | | | |
| Unocal #1696 | B7 | 18 W High St. | Approximately 250 feet to the West | LUST, UST |

Regulatory agency information reviewed for the listings in the table above are summarized in the Additional Environmental Record Sources section of this report.

### Orphan Listings

EDR reported one orphan or unmapped site listing, which EDR is unable to plot due to insufficient address information. Based on Rincon's review of the limited address information or site descriptions for the orphan listing, the listing is not expected to impact the subject property.

## Additional Environmental Record Sources

### Review of Agency Files

As a follow-up to the database search, Rincon reviewed regulatory information for facilities within the specified search radii that were interpreted to have the potential to impact the subject property, based on one or more factors previously discussed (e.g., distance, open case status, upgradient location, soil vapor migration).

The following is a summary of our review of regulatory information obtained from review of online sources (e.g., SWRCB GeoTracker database, DTSC EnviroStor database) and/or files requested from the applicable regulatory agency, as described below.

## Subject Property

The subject property was not listed in any of the databases searched by EDR.

## Adjacent Properties

Three adjacent properties were listed in databases searched by EDR.

- **Clyde S Richfield Service – 213 High St**: This former gasoline station property is located adjacent to the north of the subject property. According to the EDR Hist Auto database, in 1961 the site was occupied by Clyde Richfield Service as a gasoline station and in 2014 occupied by Moorpark Auto Glass as a general automobile repair shop. The City directories indicate 213 E High Street was occupied by Swinks Texaco in 1968, Tire Town from 1970 to 1971, Four Suns Bike Shop from 1975 to 1985, and The Gas Station from 1993 to 2002. The site was not listed in the GeoTracker or EnviroStor databases. However, according to documents reviewed on the Ventura County Environmental Health Division (VCEHD) website, five USTs were removed from the site in 2010. Soil samples were collected from beneath the USTs following their removal. The following summarizes the findings: "*Two soil samples were collected from beneath the 10,000-gallon UST (on the northern and southern ends) and one soil sample was collected from beneath the 1,500 gallon UST and each of the 1,000 gallon USTs. No visible soil contamination was observed during the tank removal project. The six soil samples analyzed had no detectable levels of total petroleum hydrocarbons as gasoline (TPH-G), total petroleum hydrocarbons as diesel (TPH-D) or methyl tertiary butyl ether (MTBE). Total petroleum hydrocarbons in the oil range (TPH-O) were reported in one soil sample (Tank C2-bottom) at a level of 240 milligrams per kilogram (mg/kg). No other concentrations of TPH were reported in the soil samples collected from the site. Levels of benzene, toluene, ethylbenzene, and total xylenes (BTEX) slightly above the detection limits were reported in five of the six soil samples collected. Total lead concentrations ranged from non-detectable up to 29 mg/kg.*" The detected concentration of TPH-O was well below the LA RWQCB Soil Screening Level (SSL) of 1,000 mg/kg. None of the soil samples exceeded the California Human Health Screening Levels (CHHSLs) for BTEX or lead. Based on the findings, closure was requested for the site. Based on the documents reviewed, the former USTs at this adjacent former gasoline station site are not expected to have adversely impacted soil or groundwater beneath the subject property.

- **A & P ARCO - 18 E High St:** The A & P ARCO site was formerly located adjacent to the west of the subject property where the existing Moorpark Chamber of Commerce building is located. This site is listed on the EDR Hist Auto database. According to the EDR Hist Auto database, in 1976 the site was occupied by A & P ARCO and in use as a gasoline service station. The site was not listed in the GeoTracker or EnviroStor databases. In addition, records for the site were not identified on the VCEHD website. The former Phase I ESA report, dated January 19, 1017 was provided by the City of Moorpark for the subject property. In the report, a document titled *Soils Exploration* by Testing Laboratory Inc. was referenced with information pertaining to the former gasoline service station (18 E High Street). The document states, "*The underground tanks have been removed and the locations are not within the proposed building area."* However, the document shows no indication of soil sampling for contaminants in the location of the former USTs. Based on the lack of assessment data for the former USTs, there is the potential for contaminated soil gas migration and vapor intrusion of contaminants originating from the former gasoline service station onto the subject property.

## Upgradient Release Sites

One property was identified as having the potential to impact the subject property, based on information provided in the EDR database report.

- **J.E Clark/J.E. Clark II Corp - 450 High St**: This property is located approximately 630 feet to the east of the subject property and is listed on the LUST and HIST CORTESE databases. The site was as an operational commercial fuel facility, dispensing both gasoline and diesel from three islands and controlled by a card-lock system. A Case Closure Summary provided by VCEHD dated April 5, 2006 states,

  *"Residual diesel impacted soil is present immediately below the former piping runs and dispensers, and the northern and western portion of the former UST excavation. Some of the impacted soil (13.42 tons) was disposed off-site. However, the remaining excavated soil was used to backfill the excavation. Soil borings indicate residual impacted soil is generally limited to shallow soils not exceeding 10 feet deep, with localized exceptions. Groundwater varies from 35 to 50 fbg. Groundwater wells generally showed only occasional hydrocarbon detections and recent sampling show no detectable hydrocarbon compounds. Generally, BTEX and MTBE are not significant compounds of concern at this site. Groundwater is not threatened and no nearby supply wells are threatened based on the absence of detectable hydrocarbons in groundwater since 2003. Residual TPHd in soil is well defined and limited vertically. A health risk based assessment indicated that residual TPHd in soil is not a human health threat for the exposure pathways modeled. The site remains an active card-lock fueling facility. Although elevated TPHd is present in soil because groundwater is not threatened and because there was no calculated excess toxic risk, remediation is not warranted nor recommended."*

  According to GeoTracker, the case is listed as, "Completed- Case Closed as of 1/9/2007". Based on the documents reviewed, the case closure status and the distance from the subject property, this upgradient release site is not expected to impact the soil, or groundwater beneath the subject property.

## Nearby Release Sites

- **Unocal #1696 - 18 W. High St**: This property is located approximately 230 feet to the west of the subject property and is listed on the LUST and UST databases. According to the VCEHD document titled, "County of Ventura Environmental Health Division Memorandum" dated April 6, 1994,

  **"***This site has a 280-gallon waste oil tank removed under permit from VCEHD, witnessed by Robby Robinson. A service station was abandoned here in 1968. Soil samples collected after over-excavation at the time of the removal indicated no detectable contamination remained in the tank pit. The maximum petroleum hydrocarbon level detected in the spoil pile was 46 mg/l TRPH in sample SS2. Only sample SS2 was analyzed for volatiles and it was nondetectable for these constituents. Soil was hauled to a treatment facility under non-hazardous manifest."*

  According to GeoTracker, the case is listed as, "Completed- Case Closed as of 5/2/1994". Based on the documents reviewed, the anticipated groundwater flow direction to the west-northwest (away from the subject property), the case closed status, and the soil only nature of the listing, this nearby release site is not expected to impact the subject property.

# Review of State of California Division of Oil and Gas Records

A review of the Department of Conservation, Division of Oil, Gas & Geothermal Resources Online Mapping System indicates that no oil wells are located on the subject property or adjacent properties, or within one-quarter mile of the subject property.

# Review of National Pipeline Mapping System Records

In addition, a review of the National Pipeline Mapping System (NPMS) online Public Map Viewer[1] indicates that no gas transmission pipelines or hazardous liquid pipelines are located on the subject property or adjacent properties.

# Known or Suspect Contaminated Release Sites with Potential Vapor Migration

The EDR report was reviewed to identify nearby known or suspect contaminated sites that have the potential for contaminated vapor originating from the nearby site to be migrating beneath the subject property. Based on the ASTM E 2600-15, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*, the following minimum search distances were initially used to determine if contaminated soil vapors from a nearby known or suspect contaminated site have the potential to be migrating beneath the subject property:

- 1/10 mile (528 feet) for petroleum hydrocarbons
- 1/3 mile (1,760 feet) for other contaminants of concern (COCs)

If upgradient known or suspect contaminated sites are located within the above referenced distances from the subject property, online resources are reviewed to determine the extent of the contaminated plume at those sites. The following describes search distances for contaminated plumes of petroleum hydrocarbons and other COCs.

## Petroleum Hydrocarbons

Based on our review of the EDR report, one adjacent property (former A & P ARCO-18 East High Street) has the potential to have petroleum hydrocarbon-impacted soil. Based on the proximity of this former gasoline station (adjacent to the west of the subject property), there is a potential for contaminated soil vapor to be migrating beneath the subject property.

## Other COCs

Based on our review of the EDR report, not including petroleum hydrocarbon plumes described above, there are no adjacent or upgradient known or suspect contaminated soil or groundwater plumes located within 100 feet of the subject property.

[1] https://www.npms.phmsa.dot.gov/PublicViewer/

# Historical Use Information on the Property and the Adjoining Properties

The historical records review completed for this Phase I ESA includes aerial photographs, topographic maps, and city directories detailed in the following sections. Copies of the historical resources reviewed are included in Appendix C. Table 3 provides a summary of the historical use information available for the subject property.

## Review of Historical Aerial Photographs

Aerial photographs from EDR's aerial photograph collection were obtained and reviewed. In addition, a current aerial from Google Earth was also reviewed.

## Review of Historical Topographic Maps

Historical topographic maps from EDR's map collection were obtained and reviewed.

## Review of City Directory Listings

EDR was contracted to provide copies of city directory listings for the subject property.

## Review of Fire Insurance Maps

EDR was contracted to provide copies of fire insurance maps for the subject property. As indicated in the attached EDR report, fire insurance maps were not available for the subject property or adjacent properties.

## Review of City of Moorpark Building Permit Records

Based on the sufficient amount of information obtained from the above sources, building permit records were not reviewed.

## Other Historical Sources

The 2017 Phase I ESA completed by EFI Global for the entire APN of which the subject property is a part indicated the following historical use of the property:

> "*the southwest portion of the subject property was developed with a two-story train depot building in 1910 associated with the south adjoining Southern Pacific Railroad. The second floor of the depot building was reportedly utilized as a living space for the railroad agents while freight and passenger rail operations took place on the bottom floor. The remaining portions of the subject property consisted of vacant, unused land at this time. This train depot structure remained onsite until 1964 when it was demolished due to disinterest in passenger rail. In 1949, a small cafe structure was constructed to the north of the train depot along East High Street (68 East High Street) and was occupied by the Redwood Cafe and Bar-B-Que Joint. This building was demolished in 2008. Sometime between 1947 and 1954 two grain mills/grain storage structures were constructed on the southern perimeter of the subject property along with four large silos associated with Egg City (a poultry production facility elsewhere in Moorpark). By 1956, these grain storage structures were replaced with the existing storage grain structures (192 East High Street) observed onsite today. The four large silos remained onsite until 2008 when they were removed. In 1954, the*

*existing commercial structure located near the northeast/northcentral portion of the property (220/222 East High Street) was constructed. Historical occupants have included a hardware store, electronics store, rental and sales shop, senior citizens meeting space, sheet metal shop, and thrift store. In 1958, two commercial/light industrial structures were constructed on the east side of the subject property (224/226 East High Street). These structures were originally built as a chicken hatching farm but later became used for retail, various commercial, and medical office purposes. In addition, the 226 East High Street building was utilized by Tony's Auto & Truck Repair in at least 1993. These buildings were demolished sometime between 1998 and 2003. In 1964, the existing restaurant building located near the northwest/ northcentral portion of the property (104 East High Street) was constructed. Former occupants have included Eppie's Frosti, The Donut Shop, La Playita, Maria's, and some retail occupants including a stereo shop and sporting goods shop . . . The last structure to be built on the subject property was the granary building (192 East High Street) which processed feed for Egg City (a poultry production facility located approximately three-quarters of a mile southwest of the subject property). The granary building was constructed to look like a train depot and was labeled "False Depot" to hide the four silos located behind the building*."

## Summary of Historical Uses

### Subject Property

The historical uses of the subject property are summarized above and below in Table 3 below.

**Table 3 Historical Use of the Subject Property**

| Year | Use | Source |
|---|---|---|
| **Subject Property** | | |
| 1903 | The subject property appears to be vacant, with one small square, indicating a building. | Topographic Map (TM) – Camulos Quadrangle |
| 1921 | Similar to 1903 TM. | TM- Piru Quadrangle |
| 1938 | The subject property appears to be vacant, with one building located in the southwest corner of the project site. | Aerial Photograph (AP) - EDR |
| 1941 | The subject property appears to be vacant. | TM |
| 1944 | Similar to 1941 TM. | TM |
| 1947 | Similar to 1938 AP. | AP |
| 1951 | The subject property is depicted with a warehouse/barn on the southern boundary and two buildings along the western boundary. | TM- Moorpark Quadrangle |
| 1954 | The subject property appears to have three buildings along the southern boundary of the project site. | AP |
| 1959 | Similar to 1954 AP with the addition of three buildings located in the eastern portion of the subject property, one of which appears to be 222 E High Street. | AP |
| 1964 | Eppies Frosti (104 E High Street). | City Directory (CD) |

| Year | Use | Source |
|---|---|---|
| 1968 | Similar to 1964 CD. | CD |
| 1969 | The southwest building no longer exists and building (104 E High Street) is located in the western portion of the subject property according to the AP. The TM depicts a total of six buildings on the subject property. | TM, AP |
| 1970 | Fairview Milling Inc. (192 E High Street). | CD |
| 1971 | Eppies Frosti (104 E High Street).<br>Fairview Milling Inc. (192 E High Street). | CD |
| 1974 | Similar to 1969 AP. | TM |
| 1975 | Ventura County Peace Officers Association (104 E High Street). | CD |
| 1978 | Two buildings in the eastern portion of the subject property no longer exist and a new building appears to the west of the two former buildings. | AP |
| 1980 | The Donut Shop (104 E High Street).<br>S& K Ranch Inc. Feed Mill (192 E High Street). | CD |
| 1985 | Two buildings (192 E High Street) appear north of one of the existing buildings in the center and southern boundary of the subject property. In addition, a new structure is located in the east and the building just west of the new structure no longer exists.<br>Pats CB & Stereo, Chuck & Stellas Sport Shop (104 E High Street). | AP, CD |
| 1986 | Pats CB & Stereo, La Playita (104 E High Street).<br>Foster Enterprises (192 E High Street). | CD |
| 1993 | Pats CB & Stereo, La Playita, Western Union Credit Card Money Transfers (104 E High Street).<br>Similar to 1986 CD for (192 E High Street). | CD |
| 1994 | Similar to 1985 AP. | AP |
| 1996 | La Playita (104 E High Street).<br>Paikins Color Port (222 E High Street).<br>Similar to 1986 CD for (192 E High Street). | CD |
| 2005 | The eastern structure no longer exists.<br>Marias Family Restaurant, Pats CB & Stereo (104 E High Street). | AP, CD |
| 2009 | Similar to 2005 AP. | AP |
| 2012 | Similar to 2009 AP. The subject property and surrounding areas of downtown Moorpark are shaded white which indicates development. | TM, AP |

| Year | Use | Source |
|---|---|---|
| 2010 | Similar to 2005 CD. | CD |
| 2014 | Similar to 2010 CD. | CD |
| 2016 | Similar to 2012 AP. | AP |
| 2017 | Similar to 20016 AP. | AP- Google Earth Pro |

## Northern Adjacent Properties

Addresses*: 61 E High Street, 71 E High Street, 105 E High Street, 137 E High Street, 139 E High Street, 165 E High Street, 169 E High Street, 197 E High Street, 213 E High Street, 233 E High Street, 255 E High Street*

Based on our review of the documents listed above, it appears that the northern adjacent properties were in use as retail businesses/commercial offices from at least 1941 through to present day.

City directories indicate the following:

- 61 E High Street was occupied by John H. Bohanon Laundromat in 1964, Moorpark Laundry in 1968, Ellis IRA Photographers in 2005 and Moorpark Family Resource Center in 2010.
- 71 E High Street was occupied by Charles Ralph from 1970 to 1975, Moorpark Chiropractic in 1980, 1985 Vince's Barber Shop from 1985 to 1986, Roberto's Barber Shop in 1993 and Jennifer's Hair & Nails from 2002 to 2014.
- 105 E High Street was occupied by Bobs Moorpark Market from 1964 to 1980, and Mayflower Market from 1985 to 2014.
- 137 E High Street was occupied by, Curly Top Beauty Salon in 1964 to 1971, H& P Tax Service Inc. in 1980, Grace Chapel in 1985, JTJ Construction & Equipment in 1986, G & A Video in 1993 and Lucass Tom Stateone insurance from 2005 to 2014.
- 139 E High Street was occupied by Dempsey Realty from 1964 to 1975, United Farm Agency in 1980 and Hartmans Radio & TV in 1986.
- 165 E High Street was occupied by business offices from 1985 to 1993.
- 169 E High Street was occupied by Ventura County Library Services Agency from 1968 to 1980 and Moorpark Printers from 1985 to 2014.
- 197 E High Street was occupied by Moorpark Committee for JR Colleges from 1970 to 1971 and Cactus Patch Restaurant from 1975 to 2014.
- 213 E High Street was occupied by Swinks Texaco in 1968, Tire Town from 1970 to 1971, Four Suns Bike Shop from 1975 to 1985, and The Gas Station from 1993 to 2002.
- 233 E High Street was occupied by businesses from 1985 to 2002.
- 255 E High Street was occupied by Castros Market from 1964 to 1971, Indice Sportswear in 1975, Little Boutique and Moorpark Video Shop from 1985 to 1986 and Continental Garden Inc. from 2005 to 2014.

### Eastern Adjacent Property

Based on our review of the documents listed above, it appears that the eastern adjacent properties were vacant from 1903 to 2012 and in 2016 was in use as a parking lot. City directories were not provided by EDR for the eastern adjacent property.

### Southern Adjacent Property

Based on our review of the documents listed above, it appears that the southern adjacent properties were in use as a railroad right-of-way from at least 1903 through to present day. City directories were not provided by EDR for the southern adjacent property.

### Western Adjacent Property (18 E High Street)

Based on our review of the documents listed above, it appears that the western adjacent property was in use as a warehouse/barn from 1903 through 1959, a commercial business in 1969, vacant in 1978, and a commercial business from 1985 to 2016.

City directories indicate the following:

- 18 E High Street was occupied by Tytler Jas in 1975, Citizens Savings & Loan Association in 1980 and First Nationwide Savings & Loan Association in 1985 through 1986.

## Gaps in Historical Sources

Several gaps of greater than five years were identified in the historical records reviewed, from 1903 to 1921, from 1921 to 1938, from 1986 to 1993, and from 1996 to 2005. These gaps are considered insignificant because the subject property use appears to be similar prior to and following the gaps.

# Interviews

Rincon Consultants performed interviews regarding the subject property and surrounding areas. The purpose of the interviews was to discuss current and historical conditions and to obtain information indicating the presence of recognized environmental conditions in connection with the subject property.

## Interview with Owner

An interview questionnaire was provided to the property owner, the City of Moorpark prior to the site reconnaissance. A copy of the questionnaire completed by Jessica Sandifer, Community Services Manager with the City of Moorpark is included in Appendix A. The following information is based on our review of the completed questionnaire and our telephone interview with the property owner.

The property owner indicated the following:

- The City of Moorpark obtained ownership of the subject property in 1989 when the Redevelopment Agency purchased the property and was transferred to the City of Moorpark.
- The former owner of the subject property was Ventura County Transportation Commission.

Jessica Sandifer also presented the following information regarding hazardous materials at the subject property.

- Previous grain silos may have used hydraulic equipment for grain operations.
- Potential for pesticide or herbicide use due to agricultural operations.

Jessica Sandifer indicated she is unaware of the presence of industrial drums, below-ground storage tanks, fill dirt, pits, ponds, lagoons, sumps, clarifiers, solvent degreasers, stained soil, vent pipes, fill pipes, or access ways, stained surfaces, transformers, capacitors, or hydraulic equipment, and records indicating the presence of PCBs.

Jessica Sandifer indicated that she is not aware of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property. In addition, she is not aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

## Interviews with Occupants

Because the onsite buildings are currently vacant, no occupants were interviewed as part of this research effort.

# Interviews with Local Government Officials

Currently the City of Moorpark owns the subject property. An interview questionnaire completed by The City of Moorpark is summarized above in the Interview with Owner section of this report.

In addition, during the site reconnaissance, Jessica Sandifer, Community Services Manager with the City of Moorpark was interviewed. The following information is based on information obtained during the site reconnaissance on June 5, 2018.

- The northernmost granary building contains a truck scale that once contained overhead piping that filled the trucks with grain. (192 E High St.)
- The former building that existed in the dirt parking lot in the east was owned by Jemco Plumbing Inc. (226 E High St.).

Jessica Sandifer, on behalf of the City of Moorpark provided the following previous Environmental Site Assessment documents for the subject property:

- *Phase I Environmental Site Assessment, A.G.I. Geotechnical, Inc., November 30, 2007.*
- *Limited Phase II Investigation Report, AGI Geotechnical Inc., December 21, 2007.*
- *Phase I Environmental Site Assessment Report, EFI Global, January 19, 2017.*
- *Pre- Demolition Asbestos & Lead Survey, City of Moorpark, February 8, 2017.*
- *Pre-Demolition Asbestos & Lead Paint Survey, City of Moorpark, February 7, 2017.*

These documents are summarized in the User Provided Information section above. Jessica Sandifer also provided the granary building plans depicting the existing building and the former and existing grain silos/ storage tanks. A copy of the plans is included in Appendix A.

Jessica Sandifer was not aware of any hazardous materials releases or other environmental liabilities associated with the property or surrounding properties.

# Interviews with Others

Rincon did not attempt to interview neighboring property owners or others as part of this Phase I ESA.

# Site Reconnaissance

Rincon Consultants performed a reconnaissance of the subject property on June 6, 2018. The purpose of the reconnaissance was to observe existing subject property conditions and to obtain information indicating the presence of recognized environmental conditions in connection with the property.

## Methodology and Limiting Conditions

The site reconnaissance was conducted by:

1. Observing the subject property from public thoroughfares,
2. Observing the adjacent properties from public thoroughfares,
3. Observing the exterior of the onsite structures,
4. Observing the interior of the structures,
5. Backtracking to correlate exterior features with interior features, as necessary and possible, and
6. Observing the subject property from driveways, sidewalks, and unpaved areas.

## Current Use of the Property and Adjacent Properties

The subject property consists of five vacant buildings which include a former restaurant, a former thrift store and several structures associated with the former onsite grain storage/milling facility. Adjacent businesses/properties include various commercial and retail properties to the north, the City of Moorpark Chamber of Commerce (18 E High St.) to the west, a dirt lot used for parking to the east and the railroad right-of-way to the south.

## Past Use of the Property and Adjacent Properties

Based on our site reconnaissance, the most western building (104 E High St.) on the subject property was previously Maria's Restaurant. A two-story tall narrow yellow building (192 E High St.) with a sign that reads, "Moorpark 192 High St. Elev. 500 Ft." was formerly a grain mill depot with a floor scale for trucks to drive through the building, fill up with grain, and haul away the grain. The two southern most buildings (192 E High St.) on the subject property formerly contained storage for grain. Holding tanks and screw driven fill tanks were noted in the western most southern building during the site reconnaissance. The eastern most building (220 E High St.) on the subject property was previously "One More Time" thrift store.

## Current or Past Uses in the Surrounding Areas

The subject property is surrounded by commercial, retail, and transportation land uses as detailed in the Site Description section of this report. Past uses of the surrounding area are not readily apparent based on the site reconnaissance. However, an adjacent property to the north (213 E High St.) appears to have the architecture of an old gasoline station.

# Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

Geologic, hydrogeologic, hydrologic, and topographic information are as previously stated in the Physical Settings Section of this report.

# General Description of Structures

Onsite structures are as described previously in the Site Description section of this report.

# Interior and Exterior Observations

## Hazardous Substances and Petroleum Products in Connection with Identified Uses

No petroleum products were identified at the subject property.

Small quantities of various hazardous substances were observed during the site reconnaissance as follows:

- The storage area at the former Maria's Restaurant contains small quantities of oil based protective enamel, contact cement, polyurethane, and paint & primer.

Rincon did not observe indications of releases from these containers.

## Storage Tanks

During the site reconnaissance, we observed above-ground storage tanks formerly containing grain and located in the former grain storage buildings on the subject property.

During the site reconnaissance, no below-ground storage tanks or evidence of underground storage tanks (USTs) were observed on the subject property. In addition, the City of Moorpark representatives indicated they are unaware of any USTs on the subject property.

## Odors

During the site reconnaissance, Rincon did not identify any strong, pungent, or noxious odors.

## Drums

During the site reconnaissance, we observed one unmarked 55-gallon drum with unknown contents located adjacent to the former "One More Time" thrift shop (220 E High St.) on the subject property. No other drums were reported by the site representative or observed during the site reconnaissance. Rincon did not observe indications of releases from the drum on the subject property.

## Hazardous Substances and Petroleum Products Containers Not in Connection with Identified Uses

Hazardous substances or petroleum products not in connection with identified uses were not observed at the subject property.

## Unidentified Substance Containers

No unidentified substance containers or unidentified containers that might contain hazardous substances were observed during the site reconnaissance.

## Indications of Polychlorinated Biphenyls (PCBs)

During the site reconnaissance, Rincon observed a transformer box located adjacent to the north along the sidewalk of E High St. There was no indication of a release in the vicinity of the transformer.

## Other Conditions of Concern

During the site reconnaissance Rincon did not note any of the following:

- Clarifiers and sumps
- Degreasers/parts washers
- Pits, ponds, and lagoons
- Stressed vegetation
- Stained soil
- Waste water
- Wells
- Septic systems/effluent disposal system

**Heating/Cooling**. During the site reconnaissance, air conditioning units were noted on the roof of "One More Time" thrift store and Maria's Restaurant. In addition, an air conditioning/ heating unit was located within a locked storage area along the east wall of Maria's Restaurant. All units appear to be electric.

**Corrosion**. During the site reconnaissance, corrosion to the buildings were apparent due to the age of the structures.

**Stained Pavement**. During the site reconnaissance, a 3-foot area of stained pavement was noted inside the former grain storage building along the base of a wooden office structure.

**Solid Waste Debris.** Solid waste was observed within the granary/milling buildings and adjacent to the One More Time thrift store.

# Evaluation

## Findings

Known or suspect recognized environmental conditions associated with the subject property include the following:

- Existing railroad tracks adjacent to the south of the subject property.
- The presence of a former gasoline service station located adjacent to the north of the subject property.
- The presence of a former gasoline service station located adjacent to the west of the subject property.

## Opinions

A. **Existing railroad tracks adjacent to south of the subject property.** A railroad right-of-way has been present adjacent to the south of the subject property since at least 1903. Railroad ties were historically treated with creosote, and the track beds were historically treated with herbicides for weed management. Therefore, hydrocarbons, metals, herbicides, and semi volatile organic compounds (creosote, naphthalene) from the railroad activities are potentially present in the soils surrounding the railroad tracks. The presence of the adjacent railroad is a potential REC.

B. **The presence of a former gasoline service station located adjacent to the north of the subject property**. Based on the regulatory agency documents reviewed as part of this Phase I ESA, this property located adjacent to the north was occupied by Clyde Richfield Service in 1961 and in use as a gasoline station. The City directories indicate, 213 E High Street was occupied by Swinks Texaco in 1968, Tire Town from 1970 to 1971, Four Suns Bike Shop from 1975 to 1985, and a Gasoline Station from 1993 to 2002. According to documents reviewed on the VCEHD website, five USTs were removed from the site in 2010. Soil samples were collected from beneath the USTs following their removal. TPH-g and TPHd were not detected. The detected concentration of TPH-O was well below the LA RWQCB SSL. None of the soil samples exceeded the CHHSLs for BTEX or lead. Based on the findings, closure was requested for the site. Based on the documents reviewed, the former USTs at this adjacent former gasoline station site are not expected to have adversely impacted soil or groundwater beneath the subject property. The presence of the former gasoline station to the north of the subject property is considered *de minimis* with respect to the subject property.

C. **The presence of a former gasoline service station located adjacent to the west of the subject property.** The A & P ARCO site was formerly located adjacent to the west of the subject property where the existing Moorpark Chamber of Commerce building is located. According to the EDR Hist Auto database, in 1976 the site was occupied by A & P ARCO and in use as a gasoline service station. The site was not listed in the GeoTracker or EnviroStor databases. In addition, records for the site were not identified on the VCEHD website. In the 2017 Phase I ESA report, a document titled Soils Exploration by Testing Laboratory Inc. was referenced with information pertaining to the former gasoline service station (18 E High Street). The document states, "*The underground tanks have been removed and the locations are not within the proposed building area*." However, the document shows no indication of soil sampling for

contaminants in the location of the former USTs. Based on the documents reviewed and the lack of assessment data for the former USTs, there is the potential for contaminated soil gas migration and vapor intrusion of contaminants originating from the former gasoline service station onto the subject property. The presence of the adjacent former gasoline station is a potential REC.

# Conclusions

Rincon has performed a Phase I ESA in general conformance with the scope and limitations of ASTM E 1527-13 for the High Street Station Mixed Use Development in Moorpark, California. Any exceptions to, or deletions from, this practice are described in the Deviations section of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property. However, the following potential RECs associated with adjacent properties have been identified:

**Potential Recognized Environmental Condition**

1. Existing railroad tracks adjacent to south of the subject property.
2. The presence of a former gasoline service station located adjacent to the west of the subject property.

# Recommendations

To evaluate the adjacent railroad tracks, we recommend a shallow soil sampling assessment on the southern portion of the subject property adjacent to the railroad tracks to determine if hydrocarbons, metals, herbicides, and semi volatile organic compounds from the railroad activities are present in the shallow soil near the railroad tracks. In addition, based on the historical agricultural use of the area, we also recommend that soil samples be analyzed for pesticides, as these chemicals may have been transported via railcars/railroad tracks.

To evaluate the former adjacent gasoline station to the west, we recommend that a soil vapor assessment be conducted on the subject property adjacent to the former gasoline station, to determine if there is VOC-impacted soil vapor migrating beneath the subject property from the adjacent property.

In addition, although not considered a REC pursuant to the ASTM E1527-13 standard, asbestos containing materials have been identified in onsite structures and would require abatement or special handling as part of proposed demolition activities.

# Deviations

Deviations from ASTM E 1527-13 practice were not encountered during the completion of this Phase I ESA.

# References

The following published reference materials were used in preparation of this Phase I ESA:

**City Directory Listings**
Listings provided by Environmental Data Resources (EDR).

**Environmental Database**
EDR report dated May 22, 2018.

**Geology**
USGS, "Geologic Map of the Moorpark Quadrangle, Ventura County, California" by Thomas W. Dibblee, Jr. 1992.

**Groundwater**
RWQCB online database GeoTracker: http://geotracker.waterboards.ca.gov/. Accessed May 23, 2018.

**Historical Aerial Photographs**
Photos provided by EDR and Google Earth.

**Historical Topographic Maps**
Maps provided by EDR.

**Oil and Gas Records**
State of California, Division of Oil, Gas and Geothermal Resources website: http://www.consrv.ca.gov/DOG/index.htm. Accessed May 23, 2018.

**Pipelines**
National Pipeline Mapping System (NMPS) Public Map Viewer, https://www.npms.phmsa.dot.gov/PublicViewer/. Accessed May 23, 2018.

**Topography**
USGS topographic map (Moorpark Quadrangle, 2012).

**Other**
Department of Toxic Substances Control online EnviroStor database: http://www.envirostor.dtsc.ca.gov/public/. Accessed May 23, 2018.

# Signatures of Environmental Professionals

The qualified environmental professionals that are responsible for preparing the report include Walt Hamann, Sarah Larese and Michelle Carter. Their qualifications are summarized in the following section.

"We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312. We have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

Signature

Walt Hamann, PG, CEG, CHG
Name

June 12, 2018
Date

Vice President
Title

Signature

Sarah A. Larese
Name

June 12, 2018
Date

Senior Environmental Scientist
Title

# Qualifications of Environmental Consultants

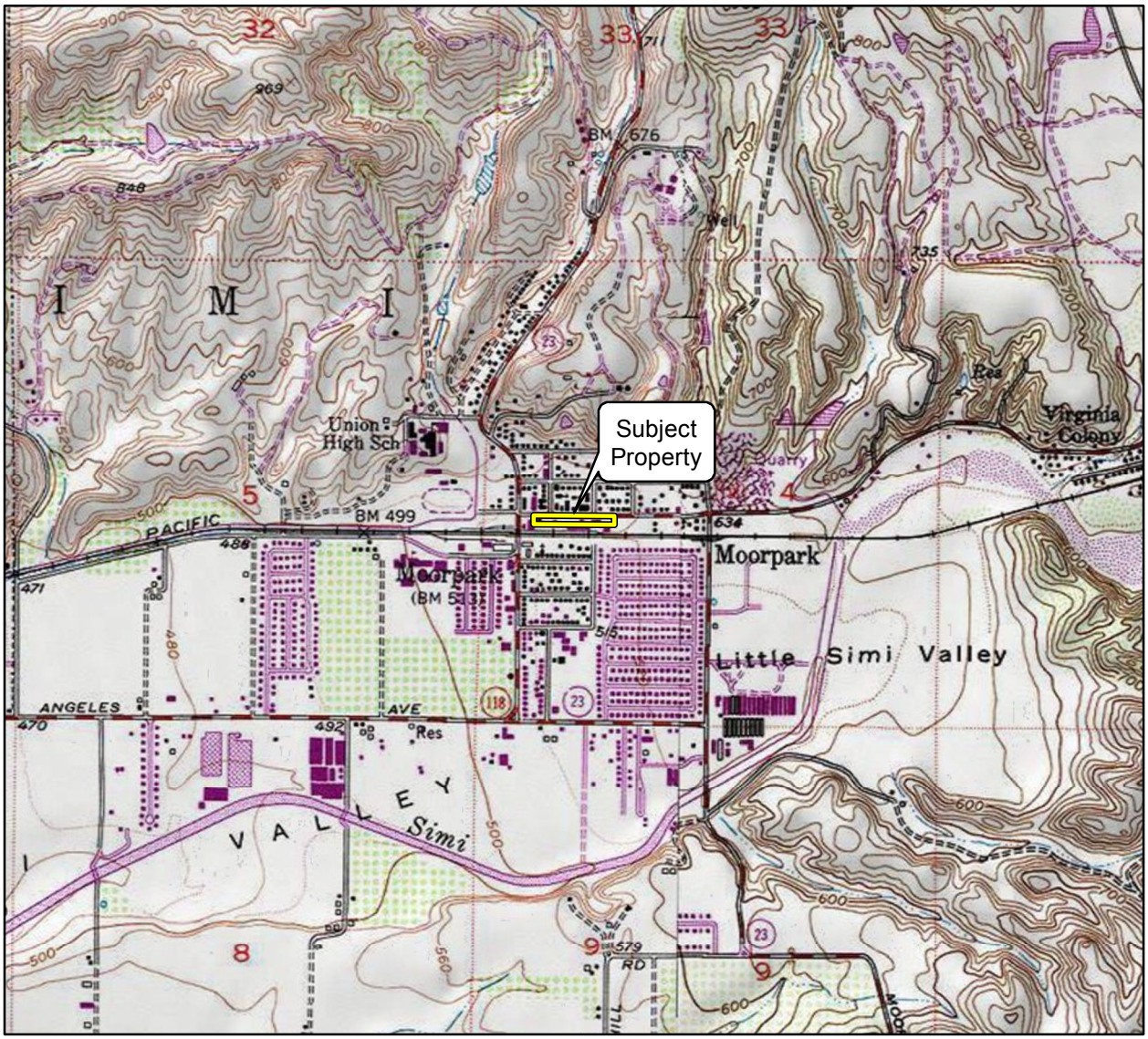
The environmental consultants responsible for conducting this Phase I ESA and preparing the report include Walt Hamann, Sarah Larese and Michelle Carter. Their qualifications are summarized below.

| Environmental Consultant Qualifications | X2.1.1 (2) (i) - Professional Engineer or Professional Geologist License or Registration, and 3 years of full-time relevant experience | X2.1.1 (2) (ii) - Licensed or certified by the Federal Government, State, Tribe, or U.S. Territory to perform environmental inquiries | X2.1.1 (2) (iii) – Baccalaureate or Higher Degree from and accredited institution of higher education in a discipline of engineering or science and the equivalent of 5 years of full-time relevant experience | X2.1.1 (2) (iii) – Equivalent of 10 years of full-time relevant experience |
|---|---|---|---|---|
| Walt Hamann | PG, CHG, CEG | | MS Geology | 30 years |
| Sarah Larese | | | BA Environmental Studies | 16 years |
| Michelle Carter | | | BS Earth Science | 1 year |

**Walt Hamann**, PG, CEG, CHG, is a Principal and Senior Geologist with Rincon Consultants. He holds a Bachelor of Arts degree in geology from the University of California, Santa Barbara and a Master of Science degree in geology from the University of California, Los Angeles. He has over 30 years of experience conducting assessment and remediation projects and has prepared or overseen the preparation of hundreds of Phase I and Phase II Environmental Site Assessments throughout California. Mr. Hamann is a Professional Geologist (#4742), Certified Engineering Geologist (#1635), and Certified Hydrogeologist (#208) with the State of California.

**Sarah A. Larese** is a Senior Environmental Scientist with Rincon Consultants. She holds a Bachelor of Science degree in environmental studies from the University of California, Santa Barbara, California. Ms. Larese has experience in development, implementation and project management of environmental assessment and remediation projects, especially relating to underground storage tanks. Ms. Larese's responsibilities at Rincon include implementation of Phase I and II Environmental Site Assessments as well as conducting site remediation field activities and preparation of environmental reports. She has 16 years of experience conducting research, assessment and remediation projects.

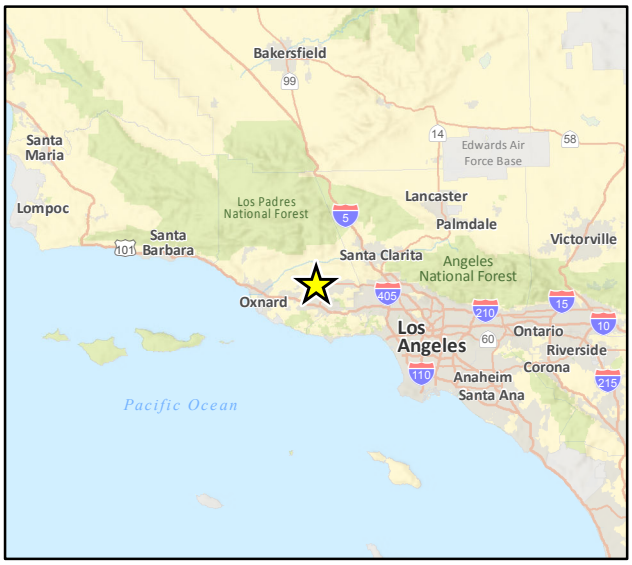
**Michelle Carter** is an Associate Environmental Scientist with Rincon Consultants. She holds a Bachelor of Science degree in Earth Science with an emphasis in Geology from the University of California, Santa Barbara. Ms. Carter's responsibilities at Rincon include implementation of Phase I Environmental Site Assessment reports for a variety of commercial, rural, and industrial properties. She also has experience conducting Phase II ESA projects including groundwater monitoring and sampling, soil vapor extraction installation/monitoring and storm water pollution prevention planning.




*Imagery provided by National Geographic Society, Esri and its licensors © 2018. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.*

0 1,000 2,000
Scale in Feet

N




# Vicinity Map

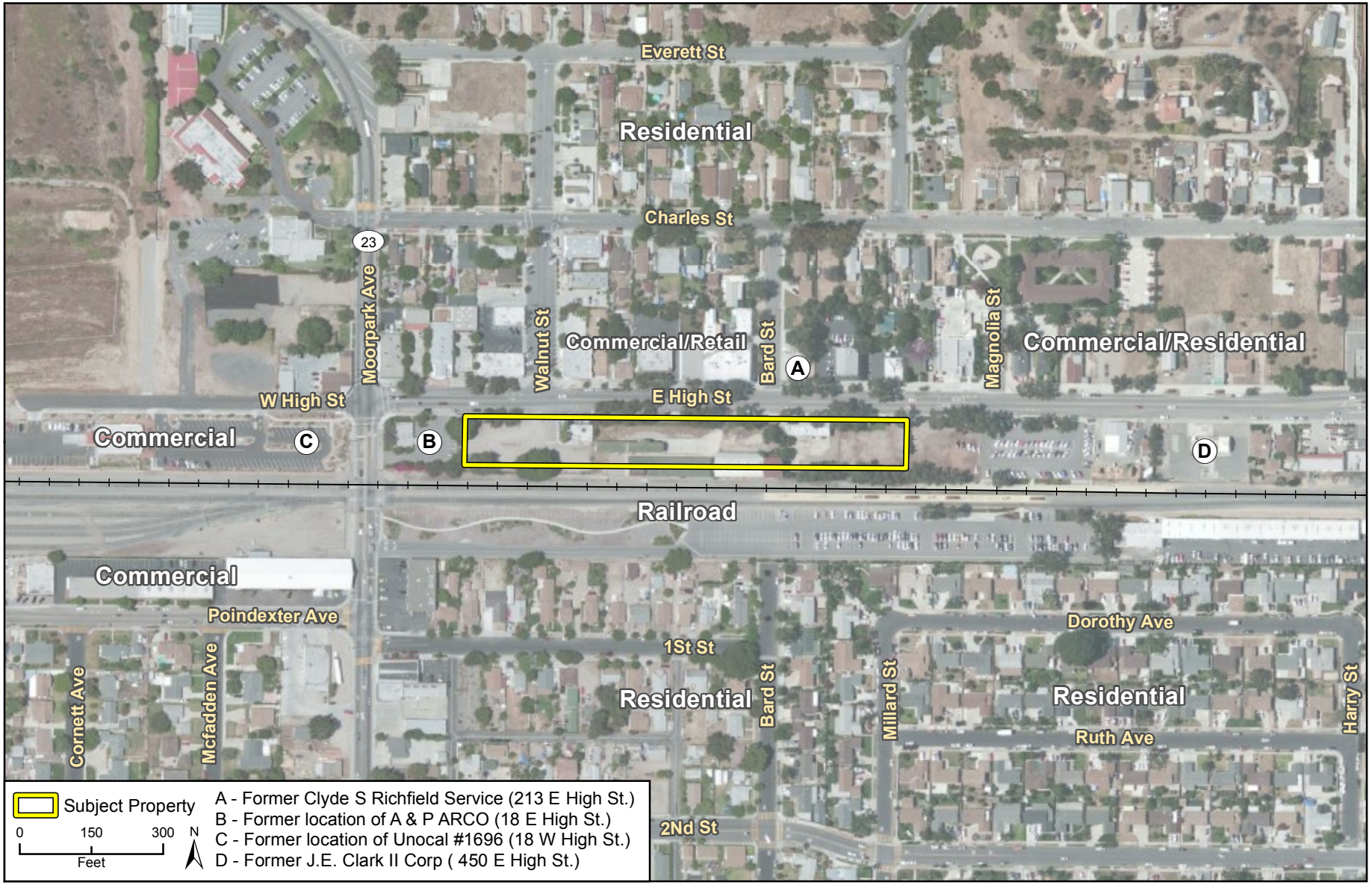
Figure 1




*Imagery provided by Esri and its licensors © 2018.*

Site Map

Figure 2




*Imagery provided by Esri and its licensors © 2018.*

## Adjacent Land Use Map

Figure 3



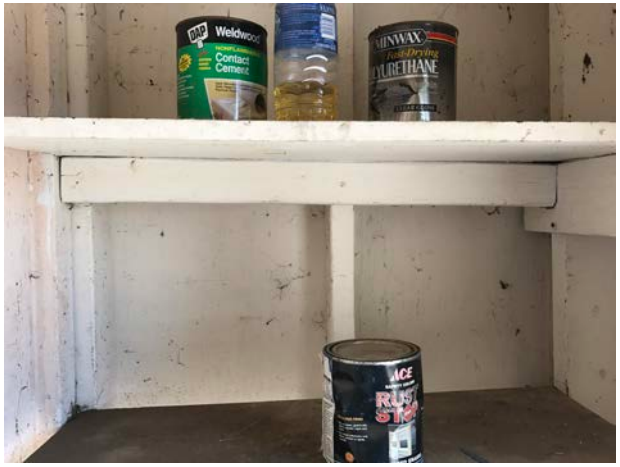
**Photograph 1.** View of west unpaved parking lot located on the subject property, facing east. Former location of building (68 E High St.)




**Photograph 2.** View of vacant Maria's Family Restaurant (104 E High St.) located in the north-west portion of the subject property, facing south.



**Photograph 3.** View of storage closet along the eastern wall of Maria's Family Restaurant containing buckets of paint and an air/heating unit.




**Photograph 4.** View of Rust Stop, polyurethane, and contact cement located in a storage cabinet along the south wall of Maria's Family Restaurant.



**Photograph 5.** View of the back of Maria's Family Restaurant with air/heating units located on the roof.



**Photograph 6.** View of two-story grain mill truck tunnel (192 E High St.) located on the central portion of the subject property, facing east.



**Photograph 7.** View of truck scale located in the interior of the two-story grain mill truck tunnel.



**Photograph 8.** View of grain mill storage building (192 E High St.) located southeast of the truck tunnel, facing southeast.



**Photograph 9.** View of hole in the ground in foundation of the former silos, located west of the grain storage building.



**Photograph 10.** View of screw driven grain fill tanks and grain storage tanks located in the interior of the Grain storage tank building (192 E High St.)



**Photograph 11.** View of staining on a cement floor along the edge of a wooden office structure located inside the Grain Storage building (192 H High St.)



**Photograph 12.** View of grain storage sheet metal building (192 E High St.) facing southeast.



**Photograph 13.** View of the interior of the grain storage sheet metal building with a wooden office structure, facing west.




**Photograph 14.** View of One More Time thrift shop (220 E High St.) the eastern most building on the subject property, facing south.



**Photograph 15.** View of the exterior back wall of One More Time thrift shop with air/heating units located along the roof and a paved yard.



**Photograph 16.** View of an unmarked 55-gallon drum located in the southwestern corner of One More Time thrift shop on the subject property.



**Photograph 17.** View of interior of One More Time thrift shop.



**Photograph 18.** View of east unpaved parking lot located on the subject property, facing west. Former location of buildings (222, 224, 226 E High St.)



**Photograph 19.** View of adjacent Railroad tracks, located to the south of the subject property.



**Photograph 20.** View of adjacent unpaved parking lot, located to the east of the subject property.



**Photograph 21.** View of adjacent sidewalk along E High St. located north of the subject property.



**Photograph 22.** View of adjacent former Clyde S Richfield gasoline service station (213 E High St.) located northeast of the subject property.



**Photograph 23.** View of adjacent commercial/retail buildings located to the north of the subject property.



**Photograph 24.** View of adjacent former A & P ARCO gas station location (18 E High St.) located to the west of the subject property.

# Appendix A

Interview Documentation

**User Questionnaire**

**Rincon Project** _____

**Site Name and Full Address:** _____

To qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

***We respectfully request that you fill out this form and e-mail it to*** Sarah Larese ***at*** slarese@rinconconsultants.com ***within one week from the date of this transmittal.***

| | |
|---|---|
| ***1.*** Why is the Phase I ESA required or being performed? | Proposed on-site mixed-use development |
| ***2.*** What type of property transaction is planned? (i.e. sale, purchase, exchange) | purchase and sale |
| ***3.*** What is the entire site address? | No formal address |
| ***4.*** What is the Assessor's Parcel Number(s)? | 512-0-090-115 |
| ***5.*** Are any considerations beyond the requirements of Practice E1527 to be considered? (i.e. lien search, asbestos & lead based paint, radon) | No. |
| ***6.*** Identify all parties who will rely on the Phase I report. | Daly Group, Inc. and City of Moorpark |
| ***7.*** Identify the Site Manager/Contact and how the contact can be reached. | Jasch Janowicz -Daly Group<br>jjanowicz@dalygroupinc.com<br><br>Jessica Sandifer - City of Moorpark<br>JSandifer@MoorparkCA.gov |

**Rincon Project** _____

**Site Name and Full Address:** _____

| | |
|---|---|
| ***8.*** Identify the Site Owner and how the owner can be reached. | City of Moorpark - Jessica Sandifer<br>JSandifer@MoorparkCA.gov |
| ***9.*** Do you have copies of any available prior environmental site assessment reports, documents, correspondence, etc., concerning any other knowledge or experience with the property that may be pertinent to the environmental professional (i.e. title report, previous Ph I and II ESAs, Environmental Impact Studies)? | Yes.. To be provided by City of Moorpark |

***1.*** **Did a search of *recorded land title records* (or judicial records, where appropriate) identify any environmental liens filed or recorded against the *property?***

Please checkmark the most appropriate response:

☐ I *have not* reviewed the records and ***do not know*** if there are any filed or recorded environmental liens.

☑ I *have* reviewed the records, and ***No, there aren't any*** filed or recorded environmental liens.

☐ I *have* reviewed the records, and ***Yes, there are*** environmental liens. Explain:

_____

***2.*** **Did a search of recorded land title records (or judicial records, where appropriate) identify any activity and land use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?**

Please checkmark the most appropriate response:

☐ I *have not* reviewed the records and ***do not know*** if there are any filed/recorded AULs or any AULs in place at the site.

☑ I *have* reviewed the records, and ***No, there aren't any*** filed/recorded AULs or any AULs in place at the site.

☐ I *have* reviewed the records, and ***Yes, there are*** AULs filed, recorded, and/or in place at the site. Explain:

_____

**Rincon Project** _____

**Site Name and Full Address:** _____

***3.*** **Does the Title Report provide any information pertaining to environmental cleanup liens or activity and use limitations (AULs) for the subject property?**

Please checkmark the most appropriate response:

☐ I *have not* reviewed the Title Report and ***do not know*** if it provides environmental cleanup liens or AULs information.

☑ I *have* reviewed the Title Report, and ***No, it does not*** provide environmental cleanup liens or AULs information.

☐ I *have* reviewed the Title Report, and ***Yes, it does provide*** environmental cleanup liens or AULs information. Explain:

_____

***4.*** **Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?**

Please checkmark the most appropriate response:

☐ ***No***, I *do not* have any specialized knowledge and/or experience related to the property or nearby properties.

☐ ***Yes***, I *do* have specialized knowledge and/or experience related to the property or nearby properties. Explain:

_____

***5.*** **As the user of this ESA, based on your knowledge and experience related to the property, are you aware of any information pertaining to a reduction in value for the subject property relative to any known environmental issues?**

Please checkmark the most appropriate response:

☑ ***No***, I *do not* have any information about a reduction in property value relative to environmental issues.

☐ ***Yes***, I *do* have information about a reduction in property value relative to environmental issues. Explain:

_____

***6.*** **Does the purchase price being paid for this property reasonably reflect the fair market value of the property?**

Please checkmark the most appropriate response:

☑ ***Yes***, I *do* believe the purchase price being paid for this property reasonably reflects the fair market value of the property. Skip to question #7.

**Rincon Project** _____

**Site Name and Full Address:** _____

☐ ***No***, I *do not* believe the purchase price being paid for this property reasonably reflects the fair market value of the property. Proceed to question #6a.

a. **If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? (40 CFR 312.29)**

Please checkmark the most appropriate response:

☐ ***No***, I *have not* considered the idea that known or believed contamination at the site has caused the lower purchase price.

☐ ***Yes***, I *have* considered the idea that known or believed contamination at the site has caused the lower purchase price. Explain.

_____

***7.*** **Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,**

a. Do you know the past uses of the property?

☐ I *do not* know.

☑ I *do* know. Explain:

Previously prepared lead and asbestos surveys and previous Phase 1

b. Do you know of specific chemicals are present or once were present at the property?

☑ I *do not* know.

☐ I *do* know. Explain:

_____

c. Do you know of any spills or other chemical releases that have taken place at the property?

☑ I *do not* know.

☐ I *do* know. Explain:

_____

d. Do you know of any environmental cleanups have taken place at the property?

☑ I *do not* know.

☐ I *do* know. Explain:

_____

**Rincon Project** _____

**Site Name and Full Address:** _____

***8.*** **Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?**

Please checkmark the most appropriate response:

☑ ***No***, I *do not know and/or do not have any experience with any obvious indicators that point to the presence or likely presence of contamination at the property.*

☐ ***Yes***, I *do know of and/or do have experience with obvious indicators that point to the presence or likely presence of contamination at the property*. Explain:

_____

***9.*** **Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the site?**

☑ ***No***, I *am not aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the site.*

☐ ***Yes***, I *am aware of pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the site*. Explain:

_____

***10.*** **Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site?**

☑ ***No***, I *am not aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site.*

☐ ***Yes***, I *am aware of pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site.* Explain:

_____

***11.*** **Are you aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?**

☑ ***No***, I *am not aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.*

☐ ***Yes***, I *am aware of a notice, or notices, from a government entity (or multiple government entities) regarding a possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.* Explain:

_____

**User Questionnaire**

**Rincon Project** 18-05844

**Site Name and Full Address:** Moorpark Railroad Depot, High Street, Moorpark, California

**This questionnaire was completed by (please print):**

| | |
|---|---|
| Name | Jasch Janowicz |
| Title | Entitlement and Acquisitions Manager |
| Firm | Daly Group, Inc. |
| Street Address | 31255 Cedar Valley Drive Suite 323 |
| City, State, Zip Code | Westlake Village, CA 91362 |
| Phone Number | 805-309-6100 |
| Fax Number | N/A |
| What is the preparer's relationship to the property (i.e., seller, buyer, occupant, property manager, employee, agent, consultant)? | buyer |

**The preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct, and to the best of the preparer's knowledge, no material facts have been suppressed or misstated.**

**Signature** Jasch Janowicz Digitally signed by Jasch Janowicz Date: 2018.05.31 10:08:48 -07'00' **Date** May 31, 2018

*Please email this form to* Sarah Larese *at* slarese@rinconconsultants.com
*This form may also be mailed or faxed to the following address:*

Rincon Consultants, Inc.
***Attention:*** Sarah Larese
180 N. Ashwood Avenue
Ventura, California 93003
Fax: (805) 644-4455

**Property Owner Interview Questionnaire**

**Rincon Project _____**
**Site APN and Address:**

This questionnaire should be completed by the current property owner or a designated representative of the current property owner. We respectfully request that you fill out and return this form (via fax 805-644-4455 or email _____) to us within one week from the date of this transmittal.

| | |
|---|---|
| **1)** | **Was the subject property or any adjoining property ever used as:**<br>☑ a gasoline or other fueling station<br>☐ a motor vehicle repair facility<br>☐ a commercial printing facility<br>☐ a dry cleaners<br>☐ a photo developing laboratory<br>☐ a metal plating facility<br>☐ a farm<br>❑ a junkyard or landfill<br>☐ a waste treatment, storage, disposal, processing or recycling facility<br>☐ a machine shop<br>☐ a manufacturing facility<br>☐ an oil production facility (including oil wells)<br>☐ any other industrial use<br>(*please check all that apply and describe*)<br>previous Phase I indicated that an adjoining property was a fueling station |

| | | |
|---|---|---|
| **2)** | **Please describe the current land uses of the subject property and those surrounding your property. Please indicate all businesses/companies located on property.** | |
| **2a** | **Current Use of Subject Property** (*please check all that apply*)<br>☐ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☑ Other- Please Describe | (*please include a brief description of current operation*)<br>There is a storage use. |
| **2b** | **Current Use of Northern Adjoining Properties** (*please check all that apply*)<br>☑ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☐ Other- Please Describe | (*please include a brief description of current operation*)<br>various commercial retail uses |
| **2c** | **Current Use of Southern Adjoining Properties** (*please check all that apply*)<br>☐ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☑ Other- Please Describe | (*please include a brief description of current operation*)<br>railroad tracks and associated parking lot |
| **2d** | **Current Use of Western Adjoining Properties** (*please check all that apply*)<br>☑ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☐ Other- Please Describe | (*please include a brief description of current operation*)<br>chamber of commerce office space |

**Rincon Project** _____
**Site APN and Address:**

| | | |
|---|---|---|
| **2e** | **Current Use of Eastern Adjoining Properties** (*please check all that apply*)<br>☐ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☑ Other- Please Describe | (*please include a brief description of current operation*)<br>railroad operations parking lot |

| | | |
|---|---|---|
| **3)** | **Please describe the previous land uses of your property and those surrounding your property. Include property ownership and dates of operation if known.** | |
| **3a** | **Previous Use of Subject Property** (*please check all that apply*)<br>☑ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☑ Industrial (manufacturing, warehousing, processing)<br>☐ Other- Please Describe | (*please include a brief description of previous operations, former property owners, and dates of operation*)<br>chicken feed operation/storage until about 1992, Restaurant use until 2016 |
| **3b** | **Previous Use of Northern Adjoining Properties** (*please check all that apply*)<br>☐ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☑ Other- Please Describe | (*please include a brief description of previous operations*)<br>same, railroad use |
| **3c** | **Previous Use of Southern Adjoining Properties** (*please check all that apply*)<br>☑ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☐ Other- Please Describe | (*please include a brief description of previous operations*)<br>same, various commercial retail uses |
| **3d** | **Previous Use of Western Adjoining Properties** (*please check all that apply*)<br>☑ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☐ Other- Please Describe | (*please include a brief description of previous operations*)<br>prior to chamber of commerce use, it was the city's building and safety office, and a bank prior to that |
| **3e** | **Previous Use of Eastern Adjoining Properties** (*please check all that apply*)<br>☐ Commercial (retail, offices, etc.)<br>☐ Residential (single family or apartments)<br>☐ Industrial (manufacturing, warehousing, processing)<br>☑ Other- Please Describe | (*please include a brief description of previous operations*)<br>same, parking lot for rail operations |

| | | |
|---|---|---|
| **4)** | **Who is the current owner of the property?** | City of Moorpark |

| | | |
|---|---|---|
| **5)** | **When did current ownership begin?** | 1989 (when Redevelopment Agency purchased it. Later transferred to the City.) |

**Rincon Project** _____
**Site APN and Address:**

| | | |
|---|---|---|
| **6)** | **What is the age of the on-site facility?** | unknown |

| | | |
|---|---|---|
| **7)** | **Who is the previous owner of the property?** | ventura county transportation commission |

| | | |
|---|---|---|
| **8)** | **Please indicate the property's current** | |
| | electrical service provider - none, no power on site. Previously SCE | |
| | water service provider - Ventura County Waterworks District | |
| | natural gas service provider - Southern California Gas | |
| | sewer service provider - Ventura County Waterworks District | |
| | solid waste hauler - Waste Management | |

| | | |
|---|---|---|
| **9)** | **To the best of your knowledge, has your facility previously or does your facility currently store or use any of the following in individual containers larger than 5 gallons in volume or 50 gallons in the aggregate?** (*if Yes or Unknown, include how many, type, and size*) | |
| | ☐ Damaged or discarded automotive or industrial batteries | No |
| | ☐ Paints | No |
| | ☐ Oils or solvents | No |
| | ☐ Motor vehicle fuel | No |
| | ☐ Pesticides or herbicides | unknown |
| | ☐ Other chemicals or hazardous substances | unknown |

| | | | |
|---|---|---|---|
| **10)** | **Please indicate any wastes generated at the facility.** | | |
| | **Hazardous waste:** | **Quantity:** | **Disposal Method:** |
| | none | | |
| | | | |
| | | | |
| | | | |

**Rincon Project** _____
**Site APN and Address:**

| | | |
|---|---|---|
| **11)** | **Are there currently or to the best of your knowledge have there been previously, any industrial drums (typically 55 gallon) or sacks of chemicals located on the property or at the facility?** | |
| | ☐ Yes<br>☐ No<br>☑ Unknown | *If Yes or Unknown, please describe*<br>Don't know what has been done previous to City ownership, but none since. |

| | | |
|---|---|---|
| **12)** | **Are there currently or to the best of your knowledge have there been previously, any evidence of fill dirt having been brought onto the property that originated from a contaminated site or that is of an unknown origin?** | |
| | ☐ Yes<br>☐ No<br>☑ Unknown | *If Yes or Unknown, please describe*<br>That history is unknown by the current owner. |

| | | |
|---|---|---|
| **13)** | **Are there currently or to the best of your knowledge have there been previously, any pits, ponds or lagoons located on the property in connection with waste treatment or waste disposal?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **14)** | **Are there currently or to the best of your knowledge have there been previously, any sumps, clarifiers, or solvent degreasers on the property?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **15)** | **Are there currently or to the best of your knowledge have there been previously, any stained soil on the property?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **16)** | **Are there currently or to the best of your knowledge have there been previously, any storage tanks (above or below ground) located on the property?** | |
| | ☑ Yes<br>☐ No<br>☐ Unknown | *If Yes or Unknown, please describe*<br>Grain silos |

**Rincon Project** _____
**Site APN and Address:**

| | | |
|---|---|---|
| **17)** | **Are there currently or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways (etc.) indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **18)** | **If the property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government agency?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **19)** | **Are there currently or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water, or are emitting foul odors?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **20)** | **To the best of your knowledge has your facility previously or does your facility currently, discharge wastewater on or adjacent to the property other than storm water into a sanitary sewer system?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **21)** | **Have any of the following ever been dumped above grade, buried and/or burned on the property?** (*please check all that apply and describe if possible*) | |
| | ☐ Hazardous substances | |
| | ☐ Petroleum products | |
| | ☐ Unidentified waste materials | |
| | ☐ Tires | |
| | ☐ Automotive or industrial batteries | |
| | ☐ Other waste materials (please describe) | |

**Rincon Project** _____
**Site APNand Address:**

| | | |
|---|---|---|
| **22)** | **Are there currently or to the best of your knowledge have there been previously, a transformer, capacitor or any hydraulic equipment on the property?** | |
| | ☑ Yes<br>☐ No<br>☐ Unknown | *If Yes or Unknown, please describe*<br>Some of the grain operations may have used hydraulics |

| | | |
|---|---|---|
| **23)** | **Are there currently or to the best of your knowledge have there been previously any records indicating the presence of PCBs?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **24)** | **Are there currently or to the best of your knowledge have there been previously any records indicating the presence of pesticides or herbicides?** | |
| | ☐ Yes<br>☐ No<br>☑ Unknown | *If Yes or Unknown, please describe*<br>potential for pesticide of herbicide use due to agricultural operations |

| | | |
|---|---|---|
| **25)** | **Do you have any knowledge of environmental liens that may have been recorded against the property or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **26)** | **Do you have any knowledge of activity and use limitations (AULs) such as engineering controls, deed restrictions, land use restrictions, or institutional controls that may have been recorded against the property?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **27)** | **Have you been informed of the past or current existence of hazardous substances, petroleum products, or environmental violations with respect to the property or any facility located on the property?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

**Rincon Project** _____
**Site APN and Address:**

| | | |
|---|---|---|
| **28)** | **Do you have any knowledge of any environmental site assessments of the property or facility?** | |
| | ☑ Yes<br>☐ No<br>☐ Unknown | *If Yes or Unknown, please describe*<br>Phase I completed in 2016<br>Previous Phase I and Phase II in 2006(?) |

| | | |
|---|---|---|
| **29)** | **Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release of any hazardous substances or petroleum products involving the property by any owner or occupant of the property?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| | | |
|---|---|---|
| **30)** | **Are there any site-specific geotechnical or geologic reports available for the subject property?** | |
| | ☑ Yes<br>☐ No<br>☐ Unknown | *If Yes or Unknown, please describe*<br>provided to Daly Group previously |

| | | |
|---|---|---|
| **31)** | **Is there a Title Report available for the subject property?** | |
| | ☐ Yes<br>☑ No<br>☐ Unknown | *If Yes or Unknown, please describe* |

| **This questionnaire was completed by (*please print*)** | |
|---|---|
| **Name** | Jessica Sandifer |
| **Title** | Community Services Manager |
| **Firm** | City of Moorpark |
| **Street Address** | 799 Moorpark Avenue |
| **City, State, Zip Code** | Moorpark, CA 93021 |
| **Phone Number** | 805-517-6225 |
| **Fax Number** | 805-532-2550 |
| **What is the Preparer's relationship to the property (i.e., owner, occupant, property manager, employee, agent, etc.)?** | property manager |

**Rincon Project Site APN and Address:** 18-05844: Moorpark Railroad Depot, High Street, Moorpark, California

**Copies of the completed questionnaire should be faxed, emailed (preferably) or mailed to:**

Rincon Consultants, Inc.
180 N. Ashwood Avenue
Ventura, CA 93003
Attention: Environmental Site Assessment Division
Fax: (805) 644-4455
Email: slarese@rinconconsultants.com

**Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's knowledge no material facts have been suppressed or misstated.**

**Signature** Jessica Sandifer Digitally signed by Jessica Sandifer DN: cn=Jessica Sandifer, o, ou, email=jsandifer@moorparkca.gov, c=US Date: 2018.05.31 09:15:58 -07'00' **Date** 053118

# Appendix B

Regulatory Records Documentation

**Moorpark RR Depot**
E High Street
Moorpark, CA 93021

Inquiry Number: 05306248.2r
May 22, 2018

# The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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**GEOCHECK ADDENDUM**

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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

E HIGH STREET
MOORPARK, CA 93021

### COORDINATES

| | |
|---|---|
| Latitude (North): | 34.2851600 - 34° 17' 6.57'' |
| Longitude (West): | 118.8801180 - 118° 52' 48.42'' |
| Universal Tranverse Mercator: | Zone 11 |
| UTM X (Meters): | 326942.1 |
| UTM Y (Meters): | 3795179.2 |
| Elevation: | 517 ft. above sea level |

## USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 5630753 MOORPARK, CA |
| Version Date: | 2012 |
| Northeast Map: | 5630771 SIMI VALLEY WEST, CA |
| Version Date: | 2012 |

## AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Portions of Photo from: | 20140531 |
| Source: | USDA |

## MAPPED SITES SUMMARY

Target Property Address:
E HIGH STREET
MOORPARK, CA 93021

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| A1 | MOORPARK GARAGE | 661 WALNUT ST | EDR Hist Auto | Lower | 68, 0.013, WNW |
| A2 | CITY OF MOORPARK | 661 WALNUT ST | UST | Lower | 68, 0.013, WNW |
| 3 | CLYDE S RICHFIELD SE | 213 HIGH ST | EDR Hist Auto | Higher | 106, 0.020, ENE |
| A4 | A & P ARCO | 18 E HIGH ST | EDR Hist Auto | Lower | 118, 0.022, West |
| B5 | TOWRY S SHIRLEY CHEV | 499 MOORPARK AVE | EDR Hist Auto | Lower | 207, 0.039, West |
| 6 | RICHFIELD SERVICE ST | 301 HIGH ST | EDR Hist Auto | Higher | 244, 0.046, East |
| B7 | UNOCAL #1696 | 18 HIGH ST | LUST, UST | Lower | 254, 0.048, West |
| B8 | PATTON S UNION STATI | 589 MOORPARK AVE | EDR Hist Auto | Higher | 291, 0.055, WNW |
| B9 | AA MOORPARK TRANSMIS | 21 W HIGH ST | EDR Hist Auto | Lower | 296, 0.056, West |
| 10 | DICK S GARAGE | 690 WALNUT ST | EDR Hist Auto | Higher | 368, 0.070, NNW |
| B11 | MOORPARK CLEANERS | 675 MOORPARK AVE | EDR Hist Cleaner | Higher | 398, 0.075, WNW |
| 12 | PRIMO CORP | 31 POINDEXTER ST | RCRA-SQG, FINDS, ECHO | Lower | 434, 0.082, WSW |
| C13 | CITY OF MOORPARK | CHARLES ST (X WALNUT | UST | Higher | 466, 0.088, NW |
| D14 | J.E. CLARK | 450 HIGH ST | LUST, HIST CORTESE | Higher | 628, 0.119, East |
| D15 | J. E. CLARK II CORP | 450 HIGH ST | LUST | Higher | 628, 0.119, East |
| D16 | J. E. CLARK | 450 HIGH ST | LUST | Higher | 628, 0.119, East |
| D17 | JE CLARK FACILITY | 412 E HIGH ST | UST | Higher | 649, 0.123, East |
| D18 | CITY OF MOORPARK | 412 E HIGH ST | RCRA NonGen / NLR, FINDS, ECHO | Higher | 649, 0.123, East |
| D19 | J. E. CLARK | 412 HIGH | SWEEPS UST, VENTURA CO. BWT, HIST CORTESE | Higher | 649, 0.123, East |
| D20 | J. E. CLARK CORPORAT | 412 HIGH STREET | UST | Higher | 649, 0.123, East |
| D21 | J.E. CLARK II CORP P | 412 HIGH ST | CA FID UST | Higher | 649, 0.123, East |
| C22 | FIRE STATION #42 | 782 MOORPARK AVE. | UST | Higher | 685, 0.130, NW |
| C23 | MOORPARK FIRE STATIO | 782 MOORPARK AVENUE | HIST UST | Higher | 685, 0.130, NW |
| D24 | PLANT 2 | 415 HIGH ST | HIST UST | Higher | 708, 0.134, East |
| 25 | RANCHO CLEANERS | 419 MOORPARK AVE | RCRA NonGen / NLR, FINDS, ECHO, HAZNET | Lower | 713, 0.135, SW |
| 26 | PETES AUTOBODY | 555 SPRING RD | RCRA-SQG, FINDS, ECHO, HAZNET | Higher | 1017, 0.193, East |
| E27 | MOORPARK TEXACO AND | 347 MOORPARK AVE | HIST UST | Lower | 1070, 0.203, SSW |
| E28 | TEXACO STATION | 347 MOORPARK AVE | LUST | Lower | 1070, 0.203, SSW |
| E29 | TEXACO | 347 MOORPARK AVE. | UST | Lower | 1070, 0.203, SSW |
| E30 | TEXACO STATION | 347 MOORPARK | LUST, VENTURA CO. BWT, HIST CORTESE | Lower | 1070, 0.203, SSW |
| F31 | CONOCOPHILLIPS STN 2 | 13800 PRINCETON AVEN | LUST | Higher | 1183, 0.224, East |
| F32 | MOORPARK SERVICE INC | 13800 E PRINCETON AV | UST | Higher | 1183, 0.224, East |
| 33 | CALTRANS- MOORPARK M | 626 FITCH AVE. | SWF/LF | Higher | 1710, 0.324, ESE |
| G34 | AT&T CALIFORNIA - KD | 400 MINOR ST | RCRA-SQG, LUST, SWEEPS UST, HIST UST, CA FID UST,... | Higher | 1795, 0.340, ESE |
| G35 | PACIFIC BELL TELEPHO | 400 MINOR ST | LUST | Higher | 1795, 0.340, ESE |
| H36 | RIDDLE EQUIPMENT REN | 13840 LOS ANGELES AV | LUST, UST | Higher | 1906, 0.361, East |
| H37 | RIDDLE EQUIPMENT REN | 13840 LOS ANGELES | HIST CORTESE | Higher | 1906, 0.361, East |
| H38 | RIDDLE EQUIPMENT REN | 13840 LOS ANGELES AV | LUST | Higher | 1906, 0.361, East |
| H39 | RIDDLE EQUIPMENT REN | 13840 LOS ANGELES AV | LUST | Higher | 1906, 0.361, East |

## MAPPED SITES SUMMARY

Target Property Address:
E HIGH STREET
MOORPARK, CA 93021

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| 40 | REPLANET LLC | 101 W LOS ANGELES AV | SWRCY, VENTURA CO. BWT | Lower | 2018, 0.382, SSW |
| 41 | MOORPARK UNIF. SCHOO | 30 FLORY AVE | LUST, UST, SWEEPS UST, HIST UST, CA FID UST,... | Lower | 2115, 0.401, South |
| 42 | SUMMIT GAS STATION - | 50 LOS ANGELES AVE. | LUST, VENTURA CO. BWT | Lower | 2393, 0.453, SSW |
| 43 | SHELL SS - NEW LA AV | 301 NEW LOS ANGELES | LUST, VENTURA CO. BWT | Lower | 2510, 0.475, SW |
| I44 | CHEVRON #9-0688 | 502 LOS ANGELES AVE | LUST | Higher | 2541, 0.481, SE |
| I45 | CHEVRON SS #0688 | 502 LOS ANGELES | VENTURA CO. BWT, HIST CORTESE | Higher | 2541, 0.481, SE |
| I46 | TOSCO - 76 SS #4945 | 506 LOS ANGELES AVE | LUST | Higher | 2575, 0.488, SE |
| 47 | VIKING ELECTRONICS I | 5455 ENDEAVOUR CT | ENVIROSTOR, WDS | Lower | 4005, 0.759, West |
| 48 | WALNUT CANYON TRACT | WALNUT CANYON RD-N O | ENVIROSTOR | Higher | 4754, 0.900, North |

# EXECUTIVE SUMMARY

## TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

## STANDARD ENVIRONMENTAL RECORDS

### *Federal NPL site list*

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

### *Federal Delisted NPL site list*

Delisted NPL ---------- National Priority List Deletions

### *Federal CERCLIS list*

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

### *Federal CERCLIS NFRAP site list*

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

### *Federal RCRA CORRACTS facilities list*

CORRACTS ---------- Corrective Action Report

### *Federal RCRA non-CORRACTS TSD facilities list*

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

### *Federal RCRA generators list*

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

### *Federal institutional controls / engineering controls registries*

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

# EXECUTIVE SUMMARY

***Federal ERNS list***

ERNS ---------- Emergency Response Notification System

***State- and tribal - equivalent NPL***

RESPONSE ---------- State Response Sites

***State and tribal leaking storage tank lists***

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ---------- Statewide SLIC Cases

***State and tribal registered storage tank lists***

FEMA UST ---------- Underground Storage Tank Listing
AST ---------- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---------- Underground Storage Tanks on Indian Land

***State and tribal voluntary cleanup sites***

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Cleanup Program Properties

***State and tribal Brownfields sites***

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS ---------- A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

WMUDS/SWAT ---------- Waste Management Unit Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
CDL ---------- Clandestine Drug Labs
Toxic Pits ---------- Toxic Pits Cleanup Act Sites
US CDL ---------- National Clandestine Laboratory Register

***Local Land Records***

LIENS ---------- Environmental Liens Listing

| | |
|---|---|
| LIENS 2 | CERCLA Lien Information |
| DEED | Deed Restriction Listing |

***Records of Emergency Release Reports***

| | |
|---|---|
| HMIRS | Hazardous Materials Information Reporting System |
| CHMIRS | California Hazardous Material Incident Report System |
| LDS | Land Disposal Sites Listing |
| MCS | Military Cleanup Sites Listing |
| SPILLS 90 | SPILLS 90 data from FirstSearch |

***Other Ascertainable Records***

| | |
|---|---|
| FUDS | Formerly Used Defense Sites |
| DOD | Department of Defense Sites |
| SCRD DRYCLEANERS | State Coalition for Remediation of Drycleaners Listing |
| US FIN ASSUR | Financial Assurance Information |
| EPA WATCH LIST | EPA WATCH LIST |
| 2020 COR ACTION | 2020 Corrective Action Program List |
| TSCA | Toxic Substances Control Act |
| TRIS | Toxic Chemical Release Inventory System |
| SSTS | Section 7 Tracking Systems |
| ROD | Records Of Decision |
| RMP | Risk Management Plans |
| RAATS | RCRA Administrative Action Tracking System |
| PRP | Potentially Responsible Parties |
| PADS | PCB Activity Database System |
| ICIS | Integrated Compliance Information System |
| FTTS | FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) |
| MLTS | Material Licensing Tracking System |
| COAL ASH DOE | Steam-Electric Plant Operation Data |
| COAL ASH EPA | Coal Combustion Residues Surface Impoundments List |
| PCB TRANSFORMER | PCB Transformer Registration Database |
| RADINFO | Radiation Information Database |
| HIST FTTS | FIFRA/TSCA Tracking System Administrative Case Listing |
| DOT OPS | Incident and Accident Data |
| CONSENT | Superfund (CERCLA) Consent Decrees |
| INDIAN RESERV | Indian Reservations |
| FUSRAP | Formerly Utilized Sites Remedial Action Program |
| UMTRA | Uranium Mill Tailings Sites |
| LEAD SMELTERS | Lead Smelter Sites |
| US AIRS | Aerometric Information Retrieval System Facility Subsystem |
| US MINES | Mines Master Index File |
| ABANDONED MINES | Abandoned Mines |
| FINDS | Facility Index System/Facility Registry System |
| DOCKET HWC | Hazardous Waste Compliance Docket Listing |
| ECHO | Enforcement & Compliance History Information |
| UXO | Unexploded Ordnance Sites |
| FUELS PROGRAM | EPA Fuels Program Registered Listing |
| CA BOND EXP. PLAN | Bond Expenditure Plan |
| VENTURA CO. BWT | Business Plan, Hazardous Waste Producers, and Operating Underground Tanks |
| Cortese | "Cortese" Hazardous Waste & Substances Sites List |
| CUPA Listings | CUPA Resources List |
| DRYCLEANERS | Cleaner Facilities |

# EXECUTIVE SUMMARY

| | |
|---|---|
| EMI | Emissions Inventory Data |
| ENF | Enforcement Action Listing |
| Financial Assurance | Financial Assurance Information Listing |
| HAZNET | Facility and Manifest Data |
| ICE | ICE |
| HWP | EnviroStor Permitted Facilities Listing |
| HWT | Registered Hazardous Waste Transporter Database |
| MED WASTE VENTURA | Medical Waste Program List |
| MINES | Mines Site Location Listing |
| MWMP | Medical Waste Management Program Listing |
| NPDES | NPDES Permits Listing |
| PEST LIC | Pesticide Regulation Licenses Listing |
| PROC | Certified Processors Database |
| Notify 65 | Proposition 65 Records |
| UIC | UIC Listing |
| WASTEWATER PITS | Oil Wastewater Pits Listing |
| WDS | Waste Discharge System |
| WIP | Well Investigation Program Case List |
| OTHER OIL GAS | OTHER OIL & GAS (GEOTRACKER) |
| NON-CASE INFO | NON-CASE INFO (GEOTRACKER) |
| MILITARY PRIV SITES | MILITARY PRIV SITES (GEOTRACKER) |
| CIWQS | California Integrated Water Quality System |
| UIC GEO | UIC GEO (GEOTRACKER) |
| WELL STIM PROJ | Well Stimulation Project (GEOTRACKER) |
| SAMPLING POINT | SAMPLING POINT (GEOTRACKER) |
| PROJECT | PROJECT (GEOTRACKER) |
| PROD WATER PONDS | PROD WATER PONDS (GEOTRACKER) |

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

| | |
|---|---|
| EDR MGP | EDR Proprietary Manufactured Gas Plants |

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

| | |
|---|---|
| RGA LF | Recovered Government Archive Solid Waste Facilities List |
| RGA LUST | Recovered Government Archive Leaking Underground Storage Tank |

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

# EXECUTIVE SUMMARY

**STANDARD ENVIRONMENTAL RECORDS**

***Federal RCRA generators list***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/11/2017 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***PETES AUTOBODY*** | ***555 SPRING RD*** | ***E 1/8 - 1/4 (0.193 mi.)*** | ***26*** | ***30*** |
| **Lower Elevation** | **Address** | **Direction / Distance** | **Map ID** | **Page** |
| ***PRIMO CORP*** | ***31 POINDEXTER ST*** | ***WSW 0 - 1/8 (0.082 mi.)*** | ***12*** | ***12*** |

***State- and tribal - equivalent CERCLIS***

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/30/2018 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| WALNUT CANYON TRACT<br>Facility Id: 56490100<br>Status: No Further Action | WALNUT CANYON RD-N O | N 1/2 - 1 (0.900 mi.) | 48 | 73 |
| **Lower Elevation** | **Address** | **Direction / Distance** | **Map ID** | **Page** |
| ***VIKING ELECTRONICS I***<br>Facility Id: 71003350<br>Status: Refer: Other Agency | ***5455 ENDEAVOUR CT*** | ***W 1/2 - 1 (0.759 mi.)*** | ***47*** | ***71*** |

# EXECUTIVE SUMMARY

***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| CALTRANS- MOORPARK M | 626 FITCH AVE. | ESE 1/4 - 1/2 (0.324 mi.) | 33 | 38 |
| Database: SWF/LF (SWIS), Date of Government Version: 02/12/2018<br>Facility ID: 56-AA-0163<br>Operational Status: Active<br>Regulation Status: Notification | | | | |

***State and tribal leaking storage tank lists***

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 17 LUST sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***J.E. CLARK*** | ***450 HIGH ST*** | ***E 0 - 1/8 (0.119 mi.)*** | ***D14*** | ***14*** |
| Database: LUST, Date of Government Version: 03/12/2018<br>Status: Completed - Case Closed<br>Global Id: T0611100842<br>Global Id: T0611101184 | | | | |
| J. E. CLARK II CORP | 450 HIGH ST | E 0 - 1/8 (0.119 mi.) | D15 | 18 |
| Database: LUST REG 4, Date of Government Version: 09/07/2004<br>Facility Id: C-98026<br>Status: Preliminary site assessment workplan submitted<br>Global ID: T0611101184 | | | | |
| J. E. CLARK | 450 HIGH ST | E 0 - 1/8 (0.119 mi.) | D16 | 19 |
| Database: LUST REG 4, Date of Government Version: 09/07/2004<br>Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008<br>Facility Id: C-93014<br>Status: Case Closed<br>Facility Id: 98026<br>Facility Id: 93014<br>Status: Case Closed<br>Global ID: T0611100842 | | | | |
| CONOCOPHILLIPS STN 2 | 13800 PRINCETON AVEN | E 1/8 - 1/4 (0.224 mi.) | F31 | 37 |
| Database: LUST, Date of Government Version: 03/12/2018<br>Status: Completed - Case Closed<br>Global Id: T10000003241 | | | | |
| ***AT&T CALIFORNIA - KD*** | ***400 MINOR ST*** | ***ESE 1/4 - 1/2 (0.340 mi.)*** | ***G34*** | ***39*** |
| Database: LUST, Date of Government Version: 03/12/2018 | | | | |

Status: Completed - Case Closed
Global Id: T0611100890

PACIFIC BELL TELEPHO | 400 MINOR ST | ESE 1/4 - 1/2 (0.340 mi.) | G35 | 45
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008
Facility Id: C-94034
Status: Case Closed
Facility Id: 94034
Status: Case Closed
Global ID: T0611100890

***RIDDLE EQUIPMENT REN | 13840 LOS ANGELES AV | E 1/4 - 1/2 (0.361 mi.) | H36 | 47***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Facility Id: C95179
Status: Case Closed
Global ID: T0611101065

RIDDLE EQUIPMENT REN | 13840 LOS ANGELES AV | E 1/4 - 1/2 (0.361 mi.) | H38 | 48
Database: LUST, Date of Government Version: 03/12/2018
Status: Completed - Case Closed
Global Id: T0611101065

RIDDLE EQUIPMENT REN | 13840 LOS ANGELES AV | E 1/4 - 1/2 (0.361 mi.) | H39 | 50
Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008
Facility Id: 95179
Status: Case Closed

CHEVRON #9-0688 | 502 LOS ANGELES AVE | SE 1/4 - 1/2 (0.481 mi.) | I44 | 66
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008
Database: LUST, Date of Government Version: 03/12/2018
Status: Completed - Case Closed
Facility Id: C88067
Status: Case Closed
Facility Id: 88067
Status: Case Closed
Global Id: T0611100314
Global ID: T0611100314

TOSCO - 76 SS #4945 | 506 LOS ANGELES AVE | SE 1/4 - 1/2 (0.488 mi.) | I46 | 69
Database: LUST, Date of Government Version: 03/12/2018
Status: Completed - Case Closed
Global Id: T0611101179
Global Id: T0611100511

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|

***UNOCAL #1696 | 18 HIGH ST | W 0 - 1/8 (0.048 mi.) | B7 | 9***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008
Facility Id: C-93041
Status: Case Closed
Facility Id: 93041
Status: Case Closed
Global ID: T0611100863

TEXACO STATION | 347 MOORPARK AVE | SSW 1/8 - 1/4 (0.203 mi.) | E28 | 34
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008

Facility Id: C-88066
Status: Case Closed
Facility Id: 88066
Status: Case Closed
Global ID: T0611100313

***TEXACO STATION*** ***347 MOORPARK*** ***SSW 1/8 - 1/4 (0.203 mi.)*** ***E30*** ***36***
Database: LUST, Date of Government Version: 03/12/2018
Status: Completed - Case Closed
Global Id: T0611100313

***MOORPARK UNIF. SCHOO*** ***30 FLORY AVE*** ***S 1/4 - 1/2 (0.401 mi.)*** ***41*** ***51***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008
Database: LUST, Date of Government Version: 03/12/2018
Status: Completed - Case Closed
Facility Id: C-97012
Status: Case Closed
Facility Id: 97012
Status: Case Closed
Global Id: T0611101132
Global ID: T0611101132

***SUMMIT GAS STATION -*** ***50 LOS ANGELES AVE.*** ***SSW 1/4 - 1/2 (0.453 mi.)*** ***42*** ***55***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008
Database: LUST, Date of Government Version: 03/12/2018
Status: Completed - Case Closed
Facility Id: C-01011
Status: Preliminary site assessment underway
Facility Id: 01011
Status: Remedial action (cleanup) Underway
Global Id: T0611101370
Global ID: T0611101370

***SHELL SS - NEW LA AV*** ***301 NEW LOS ANGELES*** ***SW 1/4 - 1/2 (0.475 mi.)*** ***43*** ***62***
Database: VENTURA CO. LUST, Date of Government Version: 05/29/2008
Database: LUST, Date of Government Version: 03/12/2018
Status: Completed - Case Closed
Facility Id: 04030
Status: Post remedial action monitoring
Global Id: T0611123476

***State and tribal registered storage tank lists***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 8 UST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| CITY OF MOORPARK | CHARLES ST (X WALNUT | NW 0 - 1/8 (0.088 mi.) | C13 | 13 |
| Database: VENTURA CO. UST, Date of Government Version: 02/28/2018 | | | | |

Facility Id: D 1004
Facility Status: inactive

| | | | | |
|---|---|---|---|---|
| JE CLARK FACILITY<br>Database: UST, Date of Government Version: 03/12/2018 | 412 E HIGH ST | E 0 - 1/8 (0.123 mi.) | D17 | 20 |
| J. E. CLARK CORPORAT<br>Database: UST, Date of Government Version: 03/12/2018<br>Facility Id: 5144 | 412 HIGH STREET | E 0 - 1/8 (0.123 mi.) | D20 | 24 |
| FIRE STATION #42<br>Database: VENTURA CO. UST, Date of Government Version: 02/28/2018<br>Facility Id: D 1068<br>Facility Status: inactive | 782 MOORPARK AVE. | NW 1/8 - 1/4 (0.130 mi.) | C22 | 25 |
| MOORPARK SERVICE INC<br>Database: UST, Date of Government Version: 03/12/2018<br>Facility Id: 503 | 13800 E PRINCETON AV | E 1/8 - 1/4 (0.224 mi.) | F32 | 38 |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| CITY OF MOORPARK<br>Database: VENTURA CO. UST, Date of Government Version: 02/28/2018<br>Facility Id: D 1203<br>Facility Status: inactive | 661 WALNUT ST | WNW 0 - 1/8 (0.013 mi.) | A2 | 8 |
| ***UNOCAL #1696***<br>Database: VENTURA CO. UST, Date of Government Version: 02/28/2018<br>Facility Id: D 1086<br>Facility Status: inactive | ***18 HIGH ST*** | ***W 0 - 1/8 (0.048 mi.)*** | ***B7*** | ***9*** |
| TEXACO<br>Database: VENTURA CO. UST, Date of Government Version: 02/28/2018<br>Facility Id: D 380<br>Facility Status: inactive | 347 MOORPARK AVE. | SSW 1/8 - 1/4 (0.203 mi.) | E29 | 35 |

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 03/12/2018 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***REPLANET LLC***<br>Cert Id: RC155784.001 | ***101 W LOS ANGELES AV*** | ***SSW 1/4 - 1/2 (0.382 mi.)*** | ***40*** | ***50*** |

***Local Lists of Registered Storage Tanks***

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there is 1 SWEEPS UST site within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***J. E. CLARK***<br>Status: A<br>Tank Status: A<br>Comp Number: 758 | ***412 HIGH*** | ***E 0 - 1/8 (0.123 mi.)*** | ***D19*** | ***22*** |

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 3 HIST UST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| MOORPARK FIRE STATIO<br>Facility Id: 00000021257 | 782 MOORPARK AVENUE | NW 1/8 - 1/4 (0.130 mi.) | C23 | 25 |
| PLANT 2<br>Facility Id: 00000005653 | 415 HIGH ST | E 1/8 - 1/4 (0.134 mi.) | D24 | 26 |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| MOORPARK TEXACO AND<br>Facility Id: 00000018623 | 347 MOORPARK AVE | SSW 1/8 - 1/4 (0.203 mi.) | E27 | 33 |

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there is 1 CA FID UST site within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| J.E. CLARK II CORP P<br>Facility Id: 56004862<br>Status: A | 412 HIGH ST | E 0 - 1/8 (0.123 mi.) | D21 | 24 |

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/11/2017 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***CITY OF MOORPARK*** | ***412 E HIGH ST*** | ***E 0 - 1/8 (0.123 mi.)*** | ***D18*** | ***20*** |
| **Lower Elevation** | **Address** | **Direction / Distance** | **Map ID** | **Page** |
| ***RANCHO CLEANERS*** | ***419 MOORPARK AVE*** | ***SW 1/8 - 1/4 (0.135 mi.)*** | ***25*** | ***27*** |

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 7 HIST CORTESE sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***J.E. CLARK***<br>Reg Id: C-98026 | ***450 HIGH ST*** | ***E 0 - 1/8 (0.119 mi.)*** | ***D14*** | ***14*** |
| ***J. E. CLARK***<br>Reg Id: C-93014 | ***412 HIGH*** | ***E 0 - 1/8 (0.123 mi.)*** | ***D19*** | ***22*** |
| ***AT&T CALIFORNIA - KD***<br>Reg Id: C-94034 | ***400 MINOR ST*** | ***ESE 1/4 - 1/2 (0.340 mi.)*** | ***G34*** | ***39*** |
| RIDDLE EQUIPMENT REN<br>Reg Id: C-95179 | 13840 LOS ANGELES | E 1/4 - 1/2 (0.361 mi.) | H37 | 48 |
| ***CHEVRON SS #0688***<br>Reg Id: C-88067 | ***502 LOS ANGELES*** | ***SE 1/4 - 1/2 (0.481 mi.)*** | ***I45*** | ***68*** |
| **Lower Elevation** | **Address** | **Direction / Distance** | **Map ID** | **Page** |
| ***TEXACO STATION***<br>Reg Id: C-88066 | ***347 MOORPARK*** | ***SSW 1/8 - 1/4 (0.203 mi.)*** | ***E30*** | ***36*** |
| ***MOORPARK UNIF. SCHOO***<br>Reg Id: C-97012 | ***30 FLORY AVE*** | ***S 1/4 - 1/2 (0.401 mi.)*** | ***41*** | ***51*** |

# EXECUTIVE SUMMARY

## EDR HIGH RISK HISTORICAL RECORDS

### *EDR Exclusive Records*

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 8 EDR Hist Auto sites within approximately 0.125 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| CLYDE S RICHFIELD SE | 213 HIGH ST | ENE 0 - 1/8 (0.020 mi.) | 3 | 8 |
| RICHFIELD SERVICE ST | 301 HIGH ST | E 0 - 1/8 (0.046 mi.) | 6 | 9 |
| PATTON S UNION STATI | 589 MOORPARK AVE | WNW 0 - 1/8 (0.055 mi.) | B8 | 10 |
| DICK S GARAGE | 690 WALNUT ST | NNW 0 - 1/8 (0.070 mi.) | 10 | 11 |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| MOORPARK GARAGE | 661 WALNUT ST | WNW 0 - 1/8 (0.013 mi.) | A1 | 8 |
| A & P ARCO | 18 E HIGH ST | W 0 - 1/8 (0.022 mi.) | A4 | 8 |
| TOWRY S SHIRLEY CHEV | 499 MOORPARK AVE | W 0 - 1/8 (0.039 mi.) | B5 | 8 |
| AA MOORPARK TRANSMIS | 21 W HIGH ST | W 0 - 1/8 (0.056 mi.) | B9 | 10 |

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within approximately 0.125 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| MOORPARK CLEANERS | 675 MOORPARK AVE | WNW 0 - 1/8 (0.075 mi.) | B11 | 11 |

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

| Site Name | Database(s) |
|---|---|
| UNION OIL CO SIMI OIL FLD | SEMS-ARCHIVE |

# OVERVIEW MAP - 05306248.2R




Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Upgradient Area

Areas of Concern

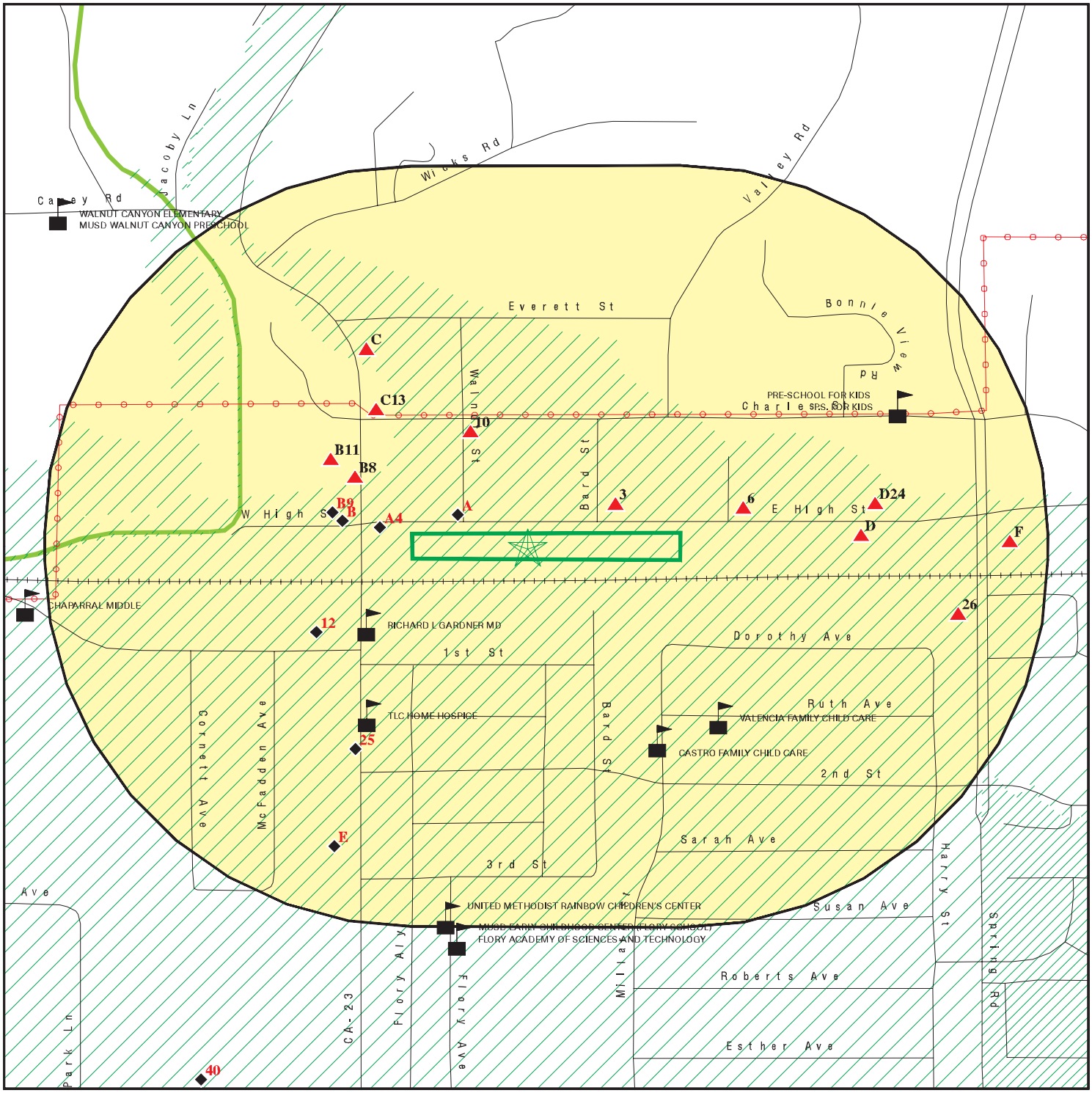
N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Moorpark RR Depot | CLIENT: | Rincon |
| ADDRESS: | E High Street<br>Moorpark CA 93021 | CONTACT: | Sarah Larese |
| | | INQUIRY #: | 05306248.2r |
| LAT/LONG: | 34.28516 / 118.880118 | DATE: | May 22, 2018 4:17 pm |

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# DETAIL MAP - 05306248.2R




- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: Moorpark RR Depot | CLIENT: Rincon |
| ADDRESS: E High Street<br>Moorpark CA 93021 | CONTACT: Sarah Larese<br>INQUIRY #: 05306248.2r |
| LAT/LONG: 34.28516 / 118.880118 | DATE: May 22, 2018 4:21 pm |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Federal NPL site list*** | | | | | | | | |
| NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Federal Delisted NPL site list*** | | | | | | | | |
| Delisted NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal CERCLIS list*** | | | | | | | | |
| FEDERAL FACILITY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SEMS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal CERCLIS NFRAP site list*** | | | | | | | | |
| SEMS-ARCHIVE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal RCRA CORRACTS facilities list*** | | | | | | | | |
| CORRACTS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal RCRA non-CORRACTS TSD facilities list*** | | | | | | | | |
| RCRA-TSDF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal RCRA generators list*** | | | | | | | | |
| RCRA-LQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| RCRA-SQG | 0.250 | | 1 | 1 | NR | NR | NR | 2 |
| RCRA-CESQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| LUCIS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROL | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***State- and tribal - equivalent NPL*** | | | | | | | | |
| RESPONSE | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***State- and tribal - equivalent CERCLIS*** | | | | | | | | |
| ENVIROSTOR | 1.000 | | 0 | 0 | 0 | 2 | NR | 2 |
| ***State and tribal landfill and/or solid waste disposal site lists*** | | | | | | | | |
| SWF/LF | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| ***State and tribal leaking storage tank lists*** | | | | | | | | |
| LUST | 0.500 | | 4 | 3 | 10 | NR | NR | 17 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| INDIAN LUST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| CPS-SLIC | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal registered storage tank lists*** | | | | | | | | |
| FEMA UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| UST | 0.250 | | 5 | 3 | NR | NR | NR | 8 |
| AST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| INDIAN UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***State and tribal voluntary cleanup sites*** | | | | | | | | |
| INDIAN VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal Brownfields sites*** | | | | | | | | |
| BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| WMUDS/SWAT | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SWRCY | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| HAULERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| INDIAN ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| IHS OPEN DUMPS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US HIST CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HIST Cal-Sites | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCH | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| Toxic Pits | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| US CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Local Lists of Registered Storage Tanks*** | | | | | | | | |
| SWEEPS UST | 0.250 | | 1 | 0 | NR | NR | NR | 1 |
| HIST UST | 0.250 | | 0 | 3 | NR | NR | NR | 3 |
| CA FID UST | 0.250 | | 1 | 0 | NR | NR | NR | 1 |
| ***Local Land Records*** | | | | | | | | |
| LIENS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| LIENS 2 | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| DEED | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| CHMIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| LDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MCS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| SPILLS 90 | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA NonGen / NLR | 0.250 | | 1 | 1 | NR | NR | NR | 2 |
| FUDS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| DOD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US FIN ASSUR | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| EPA WATCH LIST | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| 2020 COR ACTION | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| TSCA | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| TRIS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| SSTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ROD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| RMP | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RAATS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PRP | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PADS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ICIS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| FTTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MLTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| COAL ASH DOE | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| COAL ASH EPA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| PCB TRANSFORMER | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RADINFO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HIST FTTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| DOT OPS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| CONSENT | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN RESERV | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| FUSRAP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LEAD SMELTERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| US AIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| US MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ABANDONED MINES | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| FINDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| DOCKET HWC | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ECHO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| UXO | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| FUELS PROGRAM | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CA BOND EXP. PLAN | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| VENTURA CO. BWT | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| Cortese | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| CUPA Listings | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| DRYCLEANERS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| EMI | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ENF | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| Financial Assurance | 0.001 | | 0 | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| HAZNET | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ICE | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HIST CORTESE | 0.500 | | 2 | 1 | 4 | NR | NR | 7 |
| HWP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| HWT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| MED WASTE VENTURA | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MINES | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MWMP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NPDES | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PEST LIC | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PROC | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| Notify 65 | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| UIC | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| WASTEWATER PITS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| WDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| WIP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| OTHER OIL GAS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NON-CASE INFO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MILITARY PRIV SITES | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| CIWQS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| UIC GEO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| WELL STIM PROJ | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| SAMPLING POINT | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PROJECT | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PROD WATER PONDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| **EDR HIGH RISK HISTORICAL RECORDS** | | | | | | | | |
| ***EDR Exclusive Records*** | | | | | | | | |
| EDR MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| EDR Hist Auto | 0.125 | | 8 | NR | NR | NR | NR | 8 |
| EDR Hist Cleaner | 0.125 | | 1 | NR | NR | NR | NR | 1 |
| **EDR RECOVERED GOVERNMENT ARCHIVES** | | | | | | | | |
| ***Exclusive Recovered Govt. Archives*** | | | | | | | | |
| RGA LF | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RGA LUST | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| - Totals -- | | 0 | 24 | 12 | 16 | 2 | 0 | 54 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

**A1** **MOORPARK GARAGE** **EDR Hist Auto** **1009022872**
**WNW** **661 WALNUT ST** **N/A**
**< 1/8** **MOORPARK, CA**
**0.013 mi.**
**68 ft.** **Site 1 of 3 in cluster A**

**Relative:** EDR Hist Auto
**Lower**

**Actual:** Year: Name: Type:
**516 ft.** 1957 MOORPARK GARAGE AUTOMOBILE REPAIRING
1961 ACME AUTO REPAIR AUTOMOBILE REPAIRING

---

**A2** **CITY OF MOORPARK** **UST** **U003042638**
**WNW** **661 WALNUT ST** **N/A**
**< 1/8** **MOORPARK, CA**
**0.013 mi.**
**68 ft.** **Site 2 of 3 in cluster A**

**Relative:** VENTURA CO. UST:
**Lower** Facility ID: D 1203
Facility Status: inactive

**Actual:**
**516 ft.**

---

**3** **CLYDE S RICHFIELD SERVICE** **EDR Hist Auto** **1009025836**
**ENE** **213 HIGH ST** **N/A**
**< 1/8** **MOORPARK, CA**
**0.020 mi.**
**106 ft.**

**Relative:** EDR Hist Auto
**Higher**

**Actual:** Year: Name: Type:
**519 ft.** 1961 CLYDE S RICHFIELD SERVICE GASOLINE STATIONS
2014 MOORPARK AUTO GLASS General Automotive Repair Shops

---

**A4** **A & P ARCO** **EDR Hist Auto** **1020331398**
**West** **18 E HIGH ST** **N/A**
**< 1/8** **MOORPARK, CA 93021**
**0.022 mi.**
**118 ft.** **Site 3 of 3 in cluster A**

**Relative:** EDR Hist Auto
**Lower**

**Actual:** Year: Name: Type:
**515 ft.** 1976 A & P ARCO Gasoline Service Stations

---

**B5** **TOWRY S SHIRLEY CHEVRON SERVICE** **EDR Hist Auto** **1009026729**
**West** **499 MOORPARK AVE** **N/A**
**< 1/8** **MOORPARK, CA**
**0.039 mi.**
**207 ft.** **Site 1 of 5 in cluster B**

**Relative:** EDR Hist Auto
**Lower**

**Actual:** Year: Name: Type:
**515 ft.** 1957 TOWRY S SHIRLEY CHEVRON SERVICE GASOLINE STATIONS

**TOWRY S SHIRLEY CHEVRON SERVICE (Continued)** **1009026729**

| | | |
|---|---|---|
| 1961 | TOWRY S SHIRLEY CHEVRON SERVICE | GASOLINE STATIONS |
| 1970 | COLLINS BROS CHEVRON SERVICE | Gasoline Service Stations |
| 1971 | COLLINS BROS CHEVRON SERVICE | Gasoline Service Stations |

---

**6** **RICHFIELD SERVICE STATION** **EDR Hist Auto** **1009024461**
**East** **301 HIGH ST** **N/A**
**< 1/8** **MOORPARK, CA**
**0.046 mi.**
**244 ft.**

**Relative:** EDR Hist Auto
**Higher**

**Actual:** **523 ft.**

| Year: | Name: | Type: |
|---|---|---|
| 1930 | WILLIAMS E H | GASOLINE AND OIL SERVICE STATIONS |

---

**B7** **UNOCAL #1696** **LUST** **U002169192**
**West** **18 HIGH ST** **UST** **N/A**
**< 1/8** **MOORPARK, CA**
**0.048 mi.**
**254 ft.** **Site 2 of 5 in cluster B**

**Relative:** LUST REG 4:
**Lower**

**Actual:** **515 ft.**

| | | |
|---|---|---|
| Region: | 4 | |
| Regional Board: | 04 | |
| County: | Ventura | |
| Facility Id: | C-93041 | |
| Status: | Case Closed | |
| Substance: | Waste Oil | |
| Substance Quantity: | Not reported | |
| Local Case No: | 93041 | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Not reported |
| Global ID: | T0611100863 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 56000L | |
| Cross Street: | Not reported | |
| Enforcement Type: | EF | |
| Date Leak Discovered: | 11/11/1993 | |
| Date Leak First Reported: | | 11/11/1993 |
| Date Leak Record Entered: | Not reported | |
| Date Confirmation Began: | 11/11/1993 | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | Not reported |
| Date the Case was Closed: | | 5/2/1994 |
| How Leak Discovered: | Not reported | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | Not reported | |
| Leak Source: | Not reported | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 5317.886808980555971973806 1044 |
| Source of Cleanup Funding: | | F |
| Preliminary Site Assessment Workplan Submitted: | | 11/18/1993 |
| Preliminary Site Assessment Began: | | Not reported |

**UNOCAL #1696 (Continued)** **U002169192**

| | |
|---|---|
| Pollution Characterization Began: | Not reported |
| Remediation Plan Submitted: | Not reported |
| Remedial Action Underway: | Not reported |
| Post Remedial Action Monitoring Began: | Not reported |
| Enforcement Action Date: | 11/18/1993 |
| Historical Max MTBE Date: | Not reported |
| Hist Max MTBE Conc in Groundwater: | Not reported |
| Hist Max MTBE Conc in Soil: | Not reported |
| Significant Interim Remedial Action Taken: | Not reported |
| GW Qualifier: | Not reported |
| Soil Qualifier: | Not reported |
| Organization: | Not reported |
| Owner Contact: | Not reported |
| Responsible Party: | UNOCAL CERT |
| RP Address: | Not reported |
| Program: | LUST |
| Lat/Long: | 34.2854424 / -1 |
| Local Agency Staff: | EHD |
| Beneficial Use: | Not reported |
| Priority: | Not reported |
| Cleanup Fund Id: | Not reported |
| Suspended: | Not reported |
| Assigned Name: | Not reported |
| Summary: | Not reported |

VENTURA CO. LUST:

| | |
|---|---|
| Region: | VENTURA |
| Facility ID: | 93041 |
| Status: | Case Closed |

VENTURA CO. UST:

| | |
|---|---|
| Facility ID: | D 1086 |
| Facility Status: | inactive |

---

**B8** **PATTON S UNION STATION** **EDR Hist Auto** **1009027864**
**WNW** **589 MOORPARK AVE** **N/A**
**< 1/8** **MOORPARK, CA**
**0.055 mi.**
**291 ft.** **Site 3 of 5 in cluster B**

**Relative:** EDR Hist Auto
**Higher**

**Actual:** **517 ft.**

| Year: | Name: | Type: |
|---|---|---|
| 1961 | PATTON S UNION STATION | GASOLINE STATIONS |

---

**B9** **AA MOORPARK TRANSMISSION** **EDR Hist Auto** **1022099546**
**West** **21 W HIGH ST** **N/A**
**< 1/8** **MOORPARK, CA 93021**
**0.056 mi.**
**296 ft.** **Site 4 of 5 in cluster B**

**Relative:** EDR Hist Auto
**Lower**

**Actual:** **515 ft.**

| Year: | Name: | Type: |
|---|---|---|
| 1971 | WOOD FRANK P | General Automotive Repair Shops |

**AA MOORPARK TRANSMISSION (Continued)** **1022099546**

| | | |
|---|---|---|
| 1989 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1991 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1992 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1993 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1994 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1995 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1996 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1997 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1998 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 1999 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 2000 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 2000 | CHRYSLER CONNECTION | General Automotive Repair Shops |
| 2001 | AA MOORPARK TRANSMISSION | Automotive Transmission Repair Shops |
| 2001 | CHRYSLER CONNECTION | General Automotive Repair Shops |
| 2002 | CHRYSLER CONNECTION | General Automotive Repair Shops |

---

**10** **DICK S GARAGE** **EDR Hist Auto** **1009026879**
**NNW** **690 WALNUT ST** **N/A**
**< 1/8** **MOORPARK, CA**
**0.070 mi.**
**368 ft.**

**Relative:** EDR Hist Auto
**Higher**

**Actual:**
**519 ft.**

| Year: | Name: | Type: |
|---|---|---|
| 1961 | DICK S GARAGE | AUTOMOBILE REPAIRING |
| 1994 | BERARD MICHAEL GARAGE | General Automotive Repair Shops |
| 1995 | BERARD MICHAEL GARAGE | General Automotive Repair Shops |

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**B11** **MOORPARK CLEANERS** **EDR Hist Cleaner** **1009145343**
**WNW** **675 MOORPARK AVE** **N/A**
**< 1/8** **MOORPARK, CA**
**0.075 mi.**
**398 ft.** **Site 5 of 5 in cluster B**

**Relative:** EDR Hist Cleaner
**Higher**

**Actual:**
**518 ft.**

| Year: | Name: | Type: |
|---|---|---|
| 1957 | MOORPARK CLEANERS | CLEANERS AND DYERS |
| 1961 | MOORPARK CLEANERS | CLEANERS AND DYERS |
| 1969 | TRICKEY JAMES A | Drycleaning Plants, Except Rugs |
| 1970 | TRICKEY JAMES A | Drycleaning Plants, Except Rugs |
| 1971 | TRICKEY JAMES A | Drycleaning Plants, Except Rugs |
| 1972 | TRICKEY JAMES A | Drycleaning Plants, Except Rugs |

**12**
**WSW**
**< 1/8**
**0.082 mi.**
**434 ft.**

**PRIMO CORP**
**31 POINDEXTER ST**
**MOORPARK, CA 93021**

**RCRA-SQG**
**FINDS**
**ECHO**

**1000300967**
**CAD080071434**

**Relative:**
**Lower**

**Actual:**
**511 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 09/01/1996 |
| Facility name: | PRIMO CORP |
| Facility address: | 31 POINDEXTER ST<br>MOORPARK, CA 93021 |
| EPA ID: | CAD080071434 |
| Mailing address: | POINDEXTER ST<br>MOORPARK, CA 93021 |
| Contact: | Not reported |
| Contact address: | Not reported<br>Not reported |
| Contact country: | US |
| Contact telephone: | Not reported |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | LORENZ CURTIS |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | NOT REQUIRED |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

Handler Activities Summary:

| | |
|---|---|
| U.S. importer of hazardous waste: | No |
| Mixed waste (haz. and radioactive): | No |

**PRIMO CORP (Continued)** **1000300967**

| | |
|---|---|
| Recycler of hazardous waste: | No |
| Transporter of hazardous waste: | No |
| Treater, storer or disposer of HW: | No |
| Underground injection activity: | No |
| On-site burner exemption: | No |
| Furnace exemption: | No |
| Used oil fuel burner: | No |
| Used oil processor: | No |
| User oil refiner: | No |
| Used oil fuel marketer to burner: | No |
| Used oil Specification marketer: | No |
| Used oil transfer facility: | No |
| Used oil transporter: | No |

Violation Status: No violations found

FINDS:

Registry ID: 110002660004

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1000300967 |
| Registry ID: | 110002660004 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110002660004 |

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**C13** **CITY OF MOORPARK** **UST** **U003187589**
**NW** **CHARLES ST (X WALNUT S** **N/A**
**< 1/8** **MOORPARK, CA**
**0.088 mi.**
**466 ft.** **Site 1 of 3 in cluster C**

**Relative:**
**Higher**

**Actual:**
**522 ft.**

VENTURA CO. UST:

| | |
|---|---|
| Facility ID: | D 1004 |
| Facility Status: | inactive |

**D14** **J.E. CLARK** **LUST** **S103971832**
**East** **450 HIGH ST** **HIST CORTESE** **N/A**
**< 1/8** **MOORPARK, CA 93021**
**0.119 mi.**
**628 ft.** **Site 1 of 9 in cluster D**

**Relative:**
**Higher**

**Actual:**
**532 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | VENTURA COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611100842 |
| Global Id: | T0611100842 |
| Latitude: | 34.285161 |
| Longitude: | -118.876227 |
| Status: | Completed - Case Closed |
| Status Date: | 04/03/1995 |
| Case Worker: | Not reported |
| RB Case Number: | C-93014 |
| Local Agency: | Not reported |
| File Location: | Not reported |
| Local Case Number: | 93014 |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Diesel |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0611100842 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | DANIEL PIROTTON |
| Organization Name: | LOS ANGELES RWQCB (REGION 4) |
| Address: | Not reported |
| City: | R4 UNKNOWN |
| Email: | dpirotton@waterboards.ca.gov |
| Phone Number: | 2135766714 |

LUST:

| | |
|---|---|
| Global Id: | T0611100842 |
| Action Type: | Other |
| Date: | 04/18/1993 |
| Action: | Leak Reported |

| | |
|---|---|
| Global Id: | T0611100842 |
| Action Type: | Other |
| Date: | 04/18/1993 |
| Action: | Leak Discovery |

LUST:

| | |
|---|---|
| Global Id: | T0611100842 |
| Status: | Open - Case Begin Date |
| Status Date: | 04/18/1993 |

| | |
|---|---|
| Global Id: | T0611100842 |
| Status: | Open - Site Assessment |
| Status Date: | 04/18/1993 |

| | |
|---|---|
| Global Id: | T0611100842 |
| Status: | Open - Site Assessment |
| Status Date: | 07/31/1994 |

Global Id: T0611100842

**J.E. CLARK (Continued)** **S103971832**

Status: Open - Remediation
Status Date: 08/03/1994

Global Id: T0611100842
Status: Open - Remediation
Status Date: 11/16/1994

Global Id: T0611100842
Status: Open - Verification Monitoring
Status Date: 03/21/1995

Global Id: T0611100842
Status: Completed - Case Closed
Status Date: 04/03/1995

Lead Agency: VENTURA COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611101184
Global Id: T0611101184
Latitude: 34.2852254
Longitude: -118.875702
Status: Completed - Case Closed
Status Date: 01/09/2007
Case Worker: DBW
RB Case Number: C98026
Local Agency: VENTURA COUNTY
File Location: All Files are on GeoTracker or in the Local Agency Database
Local Case Number: 98026
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0611101184
Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Global Id: T0611101184
Contact Type: Local Agency Caseworker
Contact Name: DIANE B. WAHL
Organization Name: VENTURA COUNTY
Address: 800 S. VICTORIA AVE.
City: VENTURA
Email: diane.wahl@ventura.org
Phone Number: 8056545040

LUST:
Global Id: T0611101184
Action Type: Other
Date: 08/17/1998
Action: Leak Reported

**J.E. CLARK (Continued)** **S103971832**

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 05/15/2005
Action: * No Action - #3

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 06/07/2005
Action: * Historical Enforcement - #4

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 04/11/2006
Action: Technical Correspondence / Assistance / Other - #6

Global Id: T0611101184
Action Type: RESPONSE
Date: 04/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0611101184
Action Type: RESPONSE
Date: 03/14/2003
Action: Other Workplan

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 10/04/2005
Action: * Historical Enforcement - #5

Global Id: T0611101184
Action Type: Other
Date: 08/17/1998
Action: Leak Discovery

Global Id: T0611101184
Action Type: RESPONSE
Date: 12/07/2006
Action: Unknown

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 10/30/2006
Action: Technical Correspondence / Assistance / Other - #9

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 08/03/2006
Action: Technical Correspondence / Assistance / Other - #8

Global Id: T0611101184
Action Type: RESPONSE
Date: 10/31/2003
Action: Monitoring Report - Quarterly

Global Id: T0611101184
Action Type: RESPONSE

**J.E. CLARK (Continued)** **S103971832**

Date: 10/24/2003
Action: Other Workplan

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 02/11/2003
Action: * Historical Enforcement - #1

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 05/30/2006
Action: LOP Case Closure Summary to RB - #7

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 11/14/2006
Action: Technical Correspondence / Assistance / Other - #10

Global Id: T0611101184
Action Type: ENFORCEMENT
Date: 09/30/2003
Action: Notice of Violation - #2

LUST:
Global Id: T0611101184
Status: Open - Case Begin Date
Status Date: 08/17/1998

Global Id: T0611101184
Status: Open - Site Assessment
Status Date: 08/17/1998

Global Id: T0611101184
Status: Open - Site Assessment
Status Date: 11/15/2000

Global Id: T0611101184
Status: Open - Site Assessment
Status Date: 06/15/2002

Global Id: T0611101184
Status: Open - Verification Monitoring
Status Date: 06/15/2003

Global Id: T0611101184
Status: Completed - Case Closed
Status Date: 01/09/2007

HIST CORTESE:
Region: CORTESE
Facility County Code: 56
Reg By: LTNKA
Reg Id: C-98026

**D15** **J. E. CLARK II CORP** **LUST** **S106163753**
**East** **450 HIGH ST** **N/A**
**< 1/8** **MOORPARK, CA 93021**
**0.119 mi.**
**628 ft.** **Site 2 of 9 in cluster D**

**Relative:** **Higher**

**Actual:** **532 ft.**

LUST REG 4:

| | | |
|---|---|---|
| Region: | 4 | |
| Regional Board: | 04 | |
| County: | Ventura | |
| Facility Id: | C-98026 | |
| Status: | Preliminary site assessment workplan submitted | |
| Substance: | Diesel | |
| Substance Quantity: | Not reported | |
| Local Case No: | 98026 | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Not reported |
| Global ID: | T0611101184 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 56000L | |
| Cross Street: | Not reported | |
| Enforcement Type: | NOV | |
| Date Leak Discovered: | 8/17/1998 | |
| Date Leak First Reported: | | 8/17/1998 |
| Date Leak Record Entered: | Not reported | |
| Date Confirmation Began: | Not reported | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | Not reported |
| Date the Case was Closed: | | Not reported |
| How Leak Discovered: | Not reported | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | Not reported | |
| Leak Source: | Not reported | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 5854.756730659538721803626863 4 |
| Source of Cleanup Funding: | | F |
| Preliminary Site Assessment Workplan Submitted: | | 8/17/1998 |
| Preliminary Site Assessment Began: | | Not reported |
| Pollution Characterization Began: | | Not reported |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | 7/5/2002 |
| Hist Max MTBE Conc in Groundwater: | | 9.4 |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | = | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | J. E. CLARK II CORP | |
| RP Address: | Not reported | |
| Program: | LUST | |
| Lat/Long: | 34.2852254 / -1 | |
| Local Agency Staff: | KEA | |

**J. E. CLARK II CORP (Continued)** **S106163753**

| | |
|---|---|
| Beneficial Use: | Not reported |
| Priority: | Not reported |
| Cleanup Fund Id: | Not reported |
| Suspended: | Not reported |
| Assigned Name: | Not reported |
| Summary: | Not reported |

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**D16** **J. E. CLARK** **LUST** **S103317827**
**East** **450 HIGH ST** **N/A**
**< 1/8** **MOORPARK, CA 93021**
**0.119 mi.**
**628 ft.** **Site 3 of 9 in cluster D**

**Relative:** **Higher**

**Actual:** **532 ft.**

LUST REG 4:

| | | |
|---|---|---|
| Region: | 4 | |
| Regional Board: | 04 | |
| County: | Ventura | |
| Facility Id: | C-93014 | |
| Status: | Case Closed | |
| Substance: | Diesel | |
| Substance Quantity: | Not reported | |
| Local Case No: | 93014 | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | EDET |
| Global ID: | T0611100842 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 56000L | |
| Cross Street: | Not reported | |
| Enforcement Type: | Informal Enforcement Actions,including Notices of Violations and Staff Enforcement Letters | |
| Date Leak Discovered: | 4/18/1993 | |
| Date Leak First Reported: | | 4/18/1993 |
| Date Leak Record Entered: | Not reported | |
| Date Confirmation Began: | 4/18/1993 | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | Not reported |
| Date the Case was Closed: | | 4/3/1995 |
| How Leak Discovered: | Not reported | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | Not reported | |
| Leak Source: | Not reported | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 5724.27163859643968922437014 32 |
| Source of Cleanup Funding: | | F |
| Preliminary Site Assessment Workplan Submitted: | | 4/18/1993 |
| Preliminary Site Assessment Began: | | 7/31/1994 |
| Pollution Characterization Began: | | 7/31/1994 |
| Remediation Plan Submitted: | | 8/3/1994 |
| Remedial Action Underway: | | 11/16/1994 |
| Post Remedial Action Monitoring Began: | | 3/21/1995 |
| Enforcement Action Date: | | 1/1/1965 |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |

**J. E. CLARK (Continued)** **S103317827**

| | |
|---|---|
| Soil Qualifier: | Not reported |
| Organization: | Not reported |
| Owner Contact: | Not reported |
| Responsible Party: | JAMES CLARK |
| RP Address: | Not reported |
| Program: | LUST |
| Lat/Long: | 34.2854244 / -1 |
| Local Agency Staff: | EHD |
| Beneficial Use: | Not reported |
| Priority: | Not reported |
| Cleanup Fund Id: | Not reported |
| Suspended: | Not reported |
| Assigned Name: | Not reported |
| Summary: | Not reported |

VENTURA CO. LUST:

| | |
|---|---|
| Region: | VENTURA |
| Facility ID: | 98026 |
| Status: | Case Closed |

| | |
|---|---|
| Region: | VENTURA |
| Facility ID: | 93014 |
| Status: | Case Closed |

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**D17** **JE CLARK FACILITY** **UST** **U004265000**
**East** **412 E HIGH ST** **N/A**
**< 1/8** **MOORPARK, CA 93021**
**0.123 mi.**
**649 ft.** **Site 4 of 9 in cluster D**

**Relative:** **Higher**

**Actual:** **532 ft.**

UST:

| | |
|---|---|
| Facility ID: | Not reported |
| Permitting Agency: | Ventura County Environmental Health |
| Latitude: | 34.28536 |
| Longitude: | -118.87668 |

---

**D18** **CITY OF MOORPARK** **RCRA NonGen / NLR** **1017785576**
**East** **412 E HIGH ST** **FINDS** **CAC002732105**
**< 1/8** **MOORPARK, CA 93021** **ECHO**
**0.123 mi.**
**649 ft.** **Site 5 of 9 in cluster D**

**Relative:** **Higher**

**Actual:** **532 ft.**

RCRA NonGen / NLR:

| | |
|---|---|
| Date form received by agency: | 03/01/2014 |
| Facility name: | CITY OF MOORPARK |
| Facility address: | 412 E HIGH ST<br>MOORPARK, CA 93021 |
| EPA ID: | CAC002732105 |
| Mailing address: | MOORPARK<br>MOORPARK, CA 93021 |
| Contact: | JEREMY LAURENTOWSKI |
| Contact address: | MOORPARK<br>MOORPARK, CA 93021 |
| Contact country: | Not reported |
| Contact telephone: | 805-517-6385 |
| Contact email: | JLAURENTOWSKI@MOORPARKCA.GOV |

**CITY OF MOORPARK (Continued)** **1017785576**

EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: CITY OF MOORPARK
Owner/operator address: MOORPARK
MOORPARK, CA 93021
Owner/operator country: Not reported
Owner/operator telephone: 805-217-6200
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: 11/19/2010
Owner/Op end date: Not reported

Owner/operator name: CITY OF MOORPARK
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: 11/19/2010
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

Violation Status: No violations found

FINDS:

Registry ID: 110063995930

**CITY OF MOORPARK (Continued)** **1017785576**

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1017785576
Registry ID: 110063995930
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110063995930

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**D19** **J. E. CLARK** **SWEEPS UST** **S102859875**
**East** **412 HIGH** **VENTURA CO. BWT** **N/A**
**< 1/8** **MOORPARK, CA** **HIST CORTESE**
**0.123 mi.**
**649 ft.** **Site 6 of 9 in cluster D**

**Relative: Higher**
**Actual: 532 ft.**

SWEEPS UST:
Status: Active
Comp Number: 758
Number: 9
Board Of Equalization: 44-030702
Referral Date: 09-30-92
Action Date: 09-30-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 56-000-000758-000001
Tank Status: A
Capacity: 8000
Active Date: Not reported
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: 5

Status: Active
Comp Number: 758
Number: 9
Board Of Equalization: 44-030702
Referral Date: 09-30-92
Action Date: 09-30-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 56-000-000758-000002
Tank Status: A
Capacity: 8000
Active Date: Not reported
Tank Use: UNKNOWN
STG: P

**J. E. CLARK (Continued)** **S102859875**

Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 758
Number: 9
Board Of Equalization: 44-030702
Referral Date: 09-30-92
Action Date: 09-30-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 56-000-000758-000003
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 758
Number: 9
Board Of Equalization: 44-030702
Referral Date: 09-30-92
Action Date: 09-30-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 56-000-000758-000004
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 758
Number: 9
Board Of Equalization: 44-030702
Referral Date: 09-30-92
Action Date: 09-30-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 56-000-000758-000005
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: Not reported

VENTURA CO. BWT:
Facility ID: HM 3699
Program: Not reported

**J. E. CLARK (Continued)** **S102859875**

Facility ID: HM 3893
Program: Not reported

Facility ID: HM 2830
Program: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 56
Reg By: LTNKA
Reg Id: C-93014

---

**D20** **J. E. CLARK CORPORATION** **UST** **U004118088**
**East** **412 HIGH STREET** **N/A**
**< 1/8** **MOORPARK, CA 93021**
**0.123 mi.**
**649 ft.** **Site 7 of 9 in cluster D**

**Relative: Higher**
**Actual: 532 ft.**

UST:
Facility ID: 5144
Permitting Agency: VENTURA COUNTY
Latitude: 34.1459840343758
Longitude: -119.114839915344

---

**D21** **J.E. CLARK II CORP PLANT 2** **CA FID UST** **S101596392**
**East** **412 HIGH ST** **N/A**
**< 1/8** **MOORPARK, CA**
**0.123 mi.**
**649 ft.** **Site 8 of 9 in cluster D**

**Relative: Higher**
**Actual: 532 ft.**

CA FID UST:
Facility ID: 56004862
Regulated By: UTNKA
Regulated ID: 5653
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 412 HIGH ST
Mailing Address 2: Not reported
Mailing City,St,Zip: MOORPARK
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

**C22** **FIRE STATION #42** **UST** **U002244101**
**NW** **782 MOORPARK AVE.** **N/A**
**1/8-1/4** **MOORPARK, CA**
**0.130 mi.**
**685 ft.** **Site 2 of 3 in cluster C**

**Relative:** **Higher**
**Actual:** **528 ft.**

VENTURA CO. UST:
Facility ID: D 1068
Facility Status: inactive

---

**C23** **MOORPARK FIRE STATION** **HIST UST** **U001567276**
**NW** **782 MOORPARK AVENUE** **N/A**
**1/8-1/4** **MOORPARK, CA 91320**
**0.130 mi.**
**685 ft.** **Site 3 of 3 in cluster C**

**Relative:** **Higher**
**Actual:** **528 ft.**

HIST UST:

| | |
|---|---|
| File Number: | 0002D0D1 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002D0D1.pdf |
| Region: | STATE |
| Facility ID: | 00000021257 |
| Facility Type: | Other |
| Other Type: | FIRE STATION |
| Contact Name: | OFFICER IN CHARGE |
| Telephone: | 8054843601 |
| Owner Name: | VENTURA COUNTY FIRE PROTECTION |
| Owner Address: | 275 EAST PLEASANT VALLEY ROAD |
| Owner City,St,Zip: | CAMARILLO, CA 93010 |
| Total Tanks: | 0002 |
| | |
| Tank Num: | 001 |
| Container Num: | 2. |
| Year Installed: | 1982 |
| Tank Capacity: | 00001000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | Not reported |
| Leak Detection: | None |
| | |
| Tank Num: | 002 |
| Container Num: | 30 |
| Year Installed: | Not reported |
| Tank Capacity: | 00001000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | UNLEADED |
| Container Construction Thickness: | Not reported |
| Leak Detection: | None |

Click here for Geo Tracker PDF:

**D24** **PLANT 2** **HIST UST** **U001579596**
**East** **415 HIGH ST** **N/A**
**1/8-1/4** **MOORPARK, CA 93021**
**0.134 mi.**
**708 ft.** **Site 9 of 9 in cluster D**

**Relative:**
**Higher**

**Actual:**
**530 ft.**

HIST UST:

| | |
|---|---|
| File Number: | 0002C8E6 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002C8E6.pdf |
| Region: | STATE |
| Facility ID: | 00000005653 |
| Facility Type: | Other |
| Other Type: | FUEL JOBBER |
| Contact Name: | EDDI GIBSON |
| Telephone: | 8055291486 |
| Owner Name: | J. E. CLARK II CORP. |
| Owner Address: | 18115 E. TELEGRAPH RD. |
| Owner City,St,Zip: | SANTA PAULA, CA 93060 |
| Total Tanks: | 0007 |
| | |
| Tank Num: | 001 |
| Container Num: | 7 |
| Year Installed: | 1950 |
| Tank Capacity: | 00006000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | 3/8 |
| Leak Detection: | Visual, Stock Inventor |
| | |
| Tank Num: | 002 |
| Container Num: | 6 |
| Year Installed: | 1950 |
| Tank Capacity: | 00001500 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | 3/8 |
| Leak Detection: | Visual, Stock Inventor |
| | |
| Tank Num: | 003 |
| Container Num: | 5 |
| Year Installed: | 1955 |
| Tank Capacity: | 00008000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | UNLEADED |
| Container Construction Thickness: | 3/8 |
| Leak Detection: | Visual, Stock Inventor |
| | |
| Tank Num: | 004 |
| Container Num: | 4 |
| Year Installed: | 1955 |
| Tank Capacity: | 00008000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | UNLEADED |
| Container Construction Thickness: | 3/8 |
| Leak Detection: | Visual, Stock Inventor |
| | |
| Tank Num: | 005 |
| Container Num: | 3 |
| Year Installed: | 1975 |

**PLANT 2 (Continued)** **U001579596**

| | |
|---|---|
| Tank Capacity: | 00010000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | REGULAR |
| Container Construction Thickness: | 1/4 |
| Leak Detection: | Visual, Stock Inventor |

| | |
|---|---|
| Tank Num: | 006 |
| Container Num: | 2 |
| Year Installed: | 1975 |
| Tank Capacity: | 00010000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | REGULAR |
| Container Construction Thickness: | 1/4 |
| Leak Detection: | Visual, Stock Inventor |

| | |
|---|---|
| Tank Num: | 007 |
| Container Num: | 1 |
| Year Installed: | 1975 |
| Tank Capacity: | 00010000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | 1/4 |
| Leak Detection: | Visual, Stock Inventor |

Click here for Geo Tracker PDF:

---

**25**
**SW**
**1/8-1/4**
**0.135 mi.**
**713 ft.**

**RANCHO CLEANERS**
**419 MOORPARK AVE**
**MOORPARK, CA 93021**

**RCRA NonGen / NLR** **1000171039**
**FINDS** **CAD981968241**
**ECHO**
**HAZNET**

**Relative:**
**Lower**

**Actual:**
**511 ft.**

RCRA NonGen / NLR:

| | |
|---|---|
| Date form received by agency: | 03/19/1987 |
| Facility name: | RANCHO CLEANERS |
| Facility address: | 419 MOORPARK AVE<br>MOORPARK, CA 93021 |
| EPA ID: | CAD981968241 |
| Mailing address: | MOORPARK AVE<br>MOORPARK, CA 93021 |
| Contact: | ENVIRONMENTAL MANAGER |
| Contact address: | 419 MOORPARK AVE<br>MOORPARK, CA 93021 |
| Contact country: | US |
| Contact telephone: | 805-529-1768 |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Non-Generator |
| Description: | Handler: Non-Generators do not presently generate hazardous waste |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | WONSOON IM |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |

**RANCHO CLEANERS (Continued)** **1000171039**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002759140

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000171039

**RANCHO CLEANERS (Continued)** **1000171039**

Registry ID: 110002759140
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002759140

HAZNET:

| | |
|---|---|
| envid: | 1000171039 |
| Year: | 2005 |
| GEPAID: | CAD981968241 |
| Contact: | UNDELIVERABLE SURVEY 2-1-95 HJ |
| Telephone: | -- |
| Mailing Name: | Not reported |
| Mailing Address: | 419 MOORPARK AVE |
| Mailing City,St,Zip: | MOORPARK, CA 930210000 |
| Gen County: | Not reported |
| TSD EPA ID: | NVR000076158 |
| TSD County: | Not reported |
| Waste Category: | Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.) |
| Disposal Method: | Not reported |
| Tons: | Not reported |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Ventura |

| | |
|---|---|
| envid: | 1000171039 |
| Year: | 2005 |
| GEPAID: | CAD981968241 |
| Contact: | UNDELIVERABLE SURVEY 2-1-95 HJ |
| Telephone: | -- |
| Mailing Name: | Not reported |
| Mailing Address: | 419 MOORPARK AVE |
| Mailing City,St,Zip: | MOORPARK, CA 930210000 |
| Gen County: | Not reported |
| TSD EPA ID: | NVR000076158 |
| TSD County: | Not reported |
| Waste Category: | Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc) |
| Disposal Method: | Not reported |
| Tons: | 0.1 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Ventura |

| | |
|---|---|
| envid: | 1000171039 |
| Year: | 2005 |
| GEPAID: | CAD981968241 |
| Contact: | UNDELIVERABLE SURVEY 2-1-95 HJ |
| Telephone: | -- |
| Mailing Name: | Not reported |
| Mailing Address: | 419 MOORPARK AVE |
| Mailing City,St,Zip: | MOORPARK, CA 930210000 |
| Gen County: | Not reported |
| TSD EPA ID: | NVR000076158 |
| TSD County: | Not reported |
| Waste Category: | Aqueous solution with total organic residues less than 10 percent |
| Disposal Method: | Not reported |
| Tons: | Not reported |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |

**RANCHO CLEANERS (Continued)** **1000171039**

Facility County: Ventura

envid: 1000171039
Year: 2004
GEPAID: CAD981968241
Contact: UNDELIVERABLE SURVEY 2-1-95 HJ
Telephone: --
Mailing Name: Not reported
Mailing Address: 419 MOORPARK AVE
Mailing City,St,Zip: MOORPARK, CA 930210000
Gen County: Not reported
TSD EPA ID: NVR000076158
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Not reported
Tons: Not reported
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Ventura

envid: 1000171039
Year: 2004
GEPAID: CAD981968241
Contact: UNDELIVERABLE SURVEY 2-1-95 HJ
Telephone: --
Mailing Name: Not reported
Mailing Address: 419 MOORPARK AVE
Mailing City,St,Zip: MOORPARK, CA 930210000
Gen County: Not reported
TSD EPA ID: NVR000076158
TSD County: Not reported
Waste Category: Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: Not reported
Tons: 0.11
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Ventura

Click this hyperlink while viewing on your computer to access
24 additional CA_HAZNET: record(s) in the EDR Site Report.

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**26** **PETES AUTOBODY** **RCRA-SQG** **1000857475**
**East** **555 SPRING RD** **FINDS** **CAD983669128**
**1/8-1/4** **MOORPARK, CA 93021** **ECHO**
**0.193 mi.** **HAZNET**
**1017 ft.**

**Relative:** **Higher**

**Actual:** **535 ft.**

RCRA-SQG:
Date form received by agency: 06/03/1993
Facility name: PETES AUTOBODY
Facility address: 555 SPRING RD
UNIT C4
MOORPARK, CA 93021
EPA ID: CAD983669128
Mailing address: SPRING RD
UNIT C4
MOORPARK, CA 93021

**PETES AUTOBODY (Continued)** **1000857475**

Contact: PETE DELICATA
Contact address: 555 SPRING RD UNIT C4
MOORPARK, CA 93021
Contact country: US
Contact telephone: 805-529-0733
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: JESTA PEDERSEN
Owner/operator address: 2659 TOWNSGATE RD STE 210
WESTLAKE VILLAGE, CA 91361
Owner/operator country: Not reported
Owner/operator telephone: 805-379-3222
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002899793

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

**PETES AUTOBODY (Continued)** **1000857475**

corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1000857475 |
| Registry ID: | 110002899793 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110002899793 |

HAZNET:

| | |
|---|---|
| envid: | 1000857475 |
| Year: | 2016 |
| GEPAID: | CAL000409873 |
| Contact: | VINCENT DEFALCO |
| Telephone: | 8055322068 |
| Mailing Name: | Not reported |
| Mailing Address: | 555 SPRING RD UNIT B |
| Mailing City,St,Zip: | MOORPARK, CA 930212009 |
| Gen County: | Ventura |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Los Angeles |
| Waste Category: | Waste oil and mixed oil |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.608 |
| Cat Decode: | Waste oil and mixed oil |
| Method Decode: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Facility County: | Ventura |

| | |
|---|---|
| envid: | 1000857475 |
| Year: | 2015 |
| GEPAID: | CAL000283050 |
| Contact: | MICHAEL BAUGHN |
| Telephone: | 8055239011 |
| Mailing Name: | Not reported |
| Mailing Address: | 555 SPRING RD UNIT C-5 |
| Mailing City,St,Zip: | MOORPARK, CA 930210000 |
| Gen County: | Ventura |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Los Angeles |
| Waste Category: | Unspecified aqueous solution |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.063 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Ventura |

| | |
|---|---|
| envid: | 1000857475 |
| Year: | 2015 |
| GEPAID: | CAL000409873 |
| Contact: | VINCENT DEFALCO |
| Telephone: | 8055322068 |

**PETES AUTOBODY (Continued)** **1000857475**

| | |
|---|---|
| Mailing Name: | Not reported |
| Mailing Address: | 555 SPRING RD UNIT B |
| Mailing City,St,Zip: | MOORPARK, CA 930212009 |
| Gen County: | Ventura |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Los Angeles |
| Waste Category: | Waste oil and mixed oil |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.494 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Ventura |
| | |
| envid: | 1000857475 |
| Year: | 1993 |
| GEPAID: | CAD983669128 |
| Contact: | JESTA PEDERSEN |
| Telephone: | 8055290733 |
| Mailing Name: | Not reported |
| Mailing Address: | 555 SPRING RD |
| Mailing City,St,Zip: | MOORPARK, CA 930212058 |
| Gen County: | Not reported |
| TSD EPA ID: | CAT000613893 |
| TSD County: | Not reported |
| Waste Category: | Oxygenated solvents (acetone, butanol, ethyl acetate, etc.) |
| Disposal Method: | Transfer Station |
| Tons: | 0.0135 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Ventura |

---

**E27** **MOORPARK TEXACO AND TIRE** **HIST UST** **U001579592**
**SSW** **347 MOORPARK AVE** **N/A**
**1/8-1/4** **MOORPARK, CA 93021**
**0.203 mi.**
**1070 ft.** **Site 1 of 4 in cluster E**

**Relative:** HIST UST:
**Lower**

| | |
|---|---|
| File Number: | 0002CB54 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002CB54.pdf |
| Region: | STATE |
| Facility ID: | 00000018623 |
| Facility Type: | Gas Station |
| Other Type: | Not reported |
| Contact Name: | BOB VANAUSDELL |
| Telephone: | 8055291276 |
| Owner Name: | MOORPARK TEXACO |
| Owner Address: | 347 MOORPARK AVE. |
| Owner City,St,Zip: | MOORPARK, CA 93021 |
| Total Tanks: | 0004 |
| | |
| Tank Num: | 001 |
| Container Num: | 1 |
| Year Installed: | Not reported |
| Tank Capacity: | 00008000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | REGULAR |

**Actual:**
**510 ft.**

**MOORPARK TEXACO AND TIRE (Continued)** **U001579592**

Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00000500
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: None

Click here for Geo Tracker PDF:

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**E28** **TEXACO STATION** **LUST** **S102438808**
**SSW** **347 MOORPARK AVE** **N/A**
**1/8-1/4** **MOORPARK, CA 93021**
**0.203 mi.**
**1070 ft.** **Site 2 of 4 in cluster E**

**Relative:** **Lower**
**Actual:** **510 ft.**

LUST REG 4:
Region: 4
Regional Board: 04
County: Ventura
Facility Id: C-88066
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: 88066
Case Type: Groundwater
Abatement Method Used at the Site: ETED
Global ID: T0611100313
W Global ID: Not reported
Staff: UNK
Local Agency: 56000L
Cross Street: Not reported
Enforcement Type: EF
Date Leak Discovered: 6/2/1988
Date Leak First Reported: 6/2/1988
Date Leak Record Entered: Not reported

**TEXACO STATION (Continued)** **S102438808**

Date Confirmation Began: 7/1/1988
Date Leak Stopped: Not reported
Date Case Last Changed on Database: Not reported
Date the Case was Closed: 3/8/1996
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 6451.4414296236740957154828895
Source of Cleanup Funding: F
Preliminary Site Assessment Workplan Submitted: 6/20/1988
Preliminary Site Assessment Began: 8/31/1990
Pollution Characterization Began: 8/31/1990
Remediation Plan Submitted: 10/19/1990
Remedial Action Underway: 6/9/1992
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: 6/2/1988
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: TEXACO STATION
RP Address: Not reported
Program: LUST
Lat/Long: 34.2823196 / -1
Local Agency Staff: EHD
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

VENTURA CO. LUST:
Region: VENTURA
Facility ID: 88066
Status: Case Closed

---

**E29**
**SSW**
**1/8-1/4**
**0.203 mi.**
**1070 ft.**

**TEXACO** **UST** **U004065353**
**347 MOORPARK AVE.** **N/A**
**MOORPARK, CA**

**Site 3 of 4 in cluster E**

**Relative:**
**Lower**

**Actual:**
**510 ft.**

VENTURA CO. UST:
Facility ID: D 380
Facility Status: inactive

**E30** **TEXACO STATION** **LUST** **S104994457**
**SSW** **347 MOORPARK** **VENTURA CO. BWT** **N/A**
**1/8-1/4** **MOORPARK, CA 93021** **HIST CORTESE**
**0.203 mi.**
**1070 ft.** **Site 4 of 4 in cluster E**

**Relative:**
**Lower**

**Actual:**
**510 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | VENTURA COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611100313 |
| Global Id: | T0611100313 |
| Latitude: | 34.282202 |
| Longitude: | -118.88242 |
| Status: | Completed - Case Closed |
| Status Date: | 03/08/1996 |
| Case Worker: | Not reported |
| RB Case Number: | C-88066 |
| Local Agency: | Not reported |
| File Location: | Not reported |
| Local Case Number: | 88066 |
| Potential Media Affect: | Other Groundwater (uses other than drinking water) |
| Potential Contaminants of Concern: | Gasoline |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0611100313 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | DANIEL PIROTTON |
| Organization Name: | LOS ANGELES RWQCB (REGION 4) |
| Address: | Not reported |
| City: | R4 UNKNOWN |
| Email: | dpirotton@waterboards.ca.gov |
| Phone Number: | 2135766714 |

LUST:

| | |
|---|---|
| Global Id: | T0611100313 |
| Action Type: | ENFORCEMENT |
| Date: | 06/02/1988 |
| Action: | * Historical Enforcement |

| | |
|---|---|
| Global Id: | T0611100313 |
| Action Type: | Other |
| Date: | 06/02/1988 |
| Action: | Leak Discovery |

| | |
|---|---|
| Global Id: | T0611100313 |
| Action Type: | Other |
| Date: | 06/02/1988 |
| Action: | Leak Reported |

LUST:

| | |
|---|---|
| Global Id: | T0611100313 |
| Status: | Open - Case Begin Date |
| Status Date: | 06/02/1988 |

| | |
|---|---|
| Global Id: | T0611100313 |
| Status: | Open - Site Assessment |
| Status Date: | 06/20/1988 |

**TEXACO STATION (Continued)** **S104994457**

Global Id: T0611100313
Status: Open - Site Assessment
Status Date: 07/01/1988

Global Id: T0611100313
Status: Open - Site Assessment
Status Date: 08/31/1990

Global Id: T0611100313
Status: Open - Remediation
Status Date: 10/19/1990

Global Id: T0611100313
Status: Open - Remediation
Status Date: 06/09/1992

Global Id: T0611100313
Status: Completed - Case Closed
Status Date: 03/08/1996

VENTURA CO. BWT:
Facility ID: BP 546
Program: Not reported

Facility ID: HM 914
Program: Not reported

Facility ID: HM 915
Program: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 56
Reg By: LTNKA
Reg Id: C-88066

---

**F31** **CONOCOPHILLIPS STN 254945** **LUST** **S111083121**
**East** **13800 PRINCETON AVENUE** **N/A**
**1/8-1/4** **MOORPARK, CA 93020**
**0.224 mi.**
**1183 ft.** **Site 1 of 2 in cluster F**

**Relative:** LUST:
**Higher**
**Actual:** Lead Agency: VENTURA COUNTY
**538 ft.** Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000003241
Global Id: T10000003241
Latitude: 34.2853705
Longitude: -118.8743297
Status: Completed - Case Closed
Status Date: 01/01/2008
Case Worker: Not reported
RB Case Number: Not reported
Local Agency: Not reported
File Location: Not reported
Local Case Number: SR0000000

**CONOCOPHILLIPS STN 254945 (Continued)** **S111083121**

Potential Media Affect: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

LUST:
Global Id: T10000003241
Action Type: RESPONSE
Date: 10/25/2007
Action: Other Report / Document

LUST:
Global Id: T10000003241
Status: Open - Case Begin Date
Status Date: 10/25/2007

Global Id: T10000003241
Status: Completed - Case Closed
Status Date: 01/01/2008

---

**F32**
**East**
**1/8-1/4**
**0.224 mi.**
**1183 ft.**

**MOORPARK SERVICE INC** **UST** **U004118041**
**13800 E PRINCETON AVE** **N/A**
**MOORPARK, CA 93021**

**Site 2 of 2 in cluster F**

**Relative:**
**Higher**

**Actual:**
**538 ft.**

UST:
Facility ID: 503
Permitting Agency: VENTURA COUNTY
Latitude: 34.2865524
Longitude: -118.8729835

Facility ID: Not reported
Permitting Agency: Ventura County Environmental Health
Latitude: 34.28523
Longitude: -118.87414

---

**33**
**ESE**
**1/4-1/2**
**0.324 mi.**
**1710 ft.**

**CALTRANS- MOORPARK MAINTENANCE STATION** **SWF/LF** **S104583899**
**626 FITCH AVE.** **N/A**
**MOORPARK, CA**

**Relative:**
**Higher**

**Actual:**
**535 ft.**

SWF/LF (SWIS):
Region: STATE
Facility ID: 56-AA-0163
Lat/Long: 34.28424 / -118.87284
Owner Name: State Of California
Owner Telephone: 2138970951
Owner Address: Not reported
Owner Address2: 110 S. Main St.
Owner City,St,Zip: Los Angeles, CA 90012
Operational Status: Active
Operator: Caltrans- Moorpark Maintenance Station
Operator Phone: 8055291409
Operator Address: Randy Kerr

**CALTRANS- MOORPARK MAINTENANCE STATION (Continued)** **S104583899**

| | |
|---|---|
| Operator Address2: | 626 Fitch Ave. |
| Operator City,St,Zip: | Moorpark, CA 93021 |
| Permit Date: | 03/07/2011 |
| Permit Status: | Notification |
| Permitted Acreage: | $3.20 |
| Activity: | Limited Volume Transfer Operation |
| Regulation Status: | Notification |
| Landuse Name: | Residential |
| GIS Source: | Map |
| Category: | Transfer/Processing |
| Unit Number: | 01 |
| Inspection Frequency: | Annual |
| Accepted Waste: | Inert,Metals,Mixed municipal |
| Closure Date: | Not reported |
| Closure Type: | Not reported |
| Disposal Acreage: | Not reported |
| SWIS Num: | 56-AA-0163 |
| Waste Discharge Requirement Num: | Not reported |
| Program Type: | Not reported |
| Permitted Throughput with Units: | 60 |
| Actual Throughput with Units: | Cu Yards/day |
| Permitted Capacity with Units: | 15000 |
| Remaining Capacity: | Not reported |
| Remaining Capacity with Units: | Cu Yards/year |
| Lat/Long: | 34.28424 / -118.87284 |

---

**G34** **AT&T CALIFORNIA - KD263** **RCRA-SQG** **1000250622**
**ESE** **400 MINOR ST** **LUST** **CAD980818660**
**1/4-1/2** **MOORPARK, CA 93021** **SWEEPS UST**
**0.340 mi.** **HIST UST**
**1795 ft.** **Site 1 of 2 in cluster G** **CA FID UST**
**FINDS**
**Relative:** **ECHO**
**Higher** **VENTURA CO. BWT**
**Actual:** **HAZNET**
**531 ft.** **HIST CORTESE**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 09/01/1996 |
| Facility name: | PACIFIC BELL |
| Facility address: | 400 MINOR<br>MOORPARK, CA 93021 |
| EPA ID: | CAD980818660 |
| Mailing address: | 170 N FAIR OAKS AVE RM 103<br>PASADENA, CA 91103 |
| Contact: | Not reported |
| Contact address: | Not reported<br>Not reported |
| Contact country: | US |
| Contact telephone: | Not reported |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

**AT&T CALIFORNIA - KD263 (Continued)** **1000250622**

Owner/Operator Summary:
Owner/operator name: PACIFIC TELE & TELE CO
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/22/1983
Site name: PACIFIC BELL
Classification: Large Quantity Generator

Violation Status: No violations found

LUST:
Lead Agency: VENTURA COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611100890
Global Id: T0611100890

**AT&T CALIFORNIA - KD263 (Continued)** **1000250622**

| | |
|---|---|
| Latitude: | 34.2832565 |
| Longitude: | -118.8732439 |
| Status: | Completed - Case Closed |
| Status Date: | 10/17/1996 |
| Case Worker: | Not reported |
| RB Case Number: | C-94034 |
| Local Agency: | Not reported |
| File Location: | Not reported |
| Local Case Number: | 94034 |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Diesel |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0611100890 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | DANIEL PIROTTON |
| Organization Name: | LOS ANGELES RWQCB (REGION 4) |
| Address: | Not reported |
| City: | R4 UNKNOWN |
| Email: | dpirotton@waterboards.ca.gov |
| Phone Number: | 2135766714 |

LUST:

| | |
|---|---|
| Global Id: | T0611100890 |
| Action Type: | ENFORCEMENT |
| Date: | 07/17/1994 |
| Action: | * Historical Enforcement |
| | |
| Global Id: | T0611100890 |
| Action Type: | Other |
| Date: | 07/06/1994 |
| Action: | Leak Reported |
| | |
| Global Id: | T0611100890 |
| Action Type: | Other |
| Date: | 07/06/1994 |
| Action: | Leak Discovery |

LUST:

| | |
|---|---|
| Global Id: | T0611100890 |
| Status: | Open - Case Begin Date |
| Status Date: | 07/06/1994 |
| | |
| Global Id: | T0611100890 |
| Status: | Open - Site Assessment |
| Status Date: | 07/06/1994 |
| | |
| Global Id: | T0611100890 |
| Status: | Open - Remediation |
| Status Date: | 08/08/1994 |
| | |
| Global Id: | T0611100890 |
| Status: | Open - Remediation |
| Status Date: | 10/15/1996 |
| | |
| Global Id: | T0611100890 |

**AT&T CALIFORNIA - KD263 (Continued)** **1000250622**

Status: Open - Site Assessment
Status Date: 10/15/1996

Global Id: T0611100890
Status: Completed - Case Closed
Status Date: 10/17/1996

SWEEPS UST:
Status: Active
Comp Number: 1503
Number: 9
Board Of Equalization: 44-030830
Referral Date: 09-30-92
Action Date: 09-30-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 56-000-001503-000001
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: 1

HIST UST:
File Number: 0002CC30
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002CC30.pdf
Region: STATE
Facility ID: 00000057605
Facility Type: Other
Other Type: SIC 4800
Contact Name: E.J. KOEHLER
Telephone: 4155426758
Owner Name: PACIFIC BELL
Owner Address: 370 THIRD STREET
Owner City,St,Zip: SAN FRANCISCO, CA 94107
Total Tanks: 0001

Tank Num: 001
Container Num: 1
Year Installed: 1971
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: None

Click here for Geo Tracker PDF:

CA FID UST:
Facility ID: 56001910
Regulated By: UTNKA
Regulated ID: CAD980818
Cortese Code: Not reported

**AT&T CALIFORNIA - KD263 (Continued)** **1000250622**

SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 400 MINOR ST
Mailing Address 2: Not reported
Mailing City,St,Zip: MOORPARK 93021
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

FINDS:

Registry ID: 110055885813

Environmental Interest/Information System
STATE MASTER

Registry ID: 110002672616

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000250622
Registry ID: 110002672616
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002672616

VENTURA CO. BWT:
Facility ID: HM 3743
Program: Not reported

Facility ID: FA0005032
Program: BUSINESS PLAN/CUPA UNDERGROUND TANKS

HAZNET:

**AT&T CALIFORNIA - KD263 (Continued)** **1000250622**

envid: 1000250622
Year: 2016
GEPAID: CAD980818660
Contact: SEAN MCFARLANE
Telephone: 9252776725
Mailing Name: Not reported
Mailing Address: 1 AT&T WAY ROOM 1A111C
Mailing City,St,Zip: BEDMINSTER, NJ 079212693
Gen County: Ventura
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.0966
Cat Decode: Aqueous solution with total organic residues less than 10 percent
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Ventura

envid: 1000250622
Year: 2015
GEPAID: CAD980818660
Contact: SEAN MCFARLANE
Telephone: 9252776725
Mailing Name: Not reported
Mailing Address: P.O. BOX 5095, 4W200I
Mailing City,St,Zip: SAN RAMON, CA 945830000
Gen County: Ventura
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.063
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Ventura

envid: 1000250622
Year: 2014
GEPAID: CAD980818660
Contact: SEAN MCFARLANE
Telephone: 9258230280
Mailing Name: Not reported
Mailing Address: 2525 WATNEY
Mailing City,St,Zip: FAIRFIELD, CA 945330000
Gen County: Ventura
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.2
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Ventura

**AT&T CALIFORNIA - KD263 (Continued)** **1000250622**

envid: 1000250622
Year: 2014
GEPAID: CAD980818660
Contact: SEAN MCFARLANE
Telephone: 9258230280
Mailing Name: Not reported
Mailing Address: 2525 WATNEY
Mailing City,St,Zip: FAIRFIELD, CA 945330000
Gen County: Ventura
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Waste Category: Aqueous solution with total organic residues 10 percent or more
Disposal Method: Solvents Recovery
Tons: 0.3
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Ventura

envid: 1000250622
Year: 2010
GEPAID: CAD980818660
Contact: JAMES CRANMER
Telephone: 3033917206
Mailing Name: Not reported
Mailing Address: 1 AT&T WAY RM 2C140
Mailing City,St,Zip: BEDMINSTER, NJ 079210000
Gen County: Not reported
TSD EPA ID: UTD991301748
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization)
Tons: 0.025
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Ventura

Click this hyperlink while viewing on your computer to access
15 additional CA_HAZNET: record(s) in the EDR Site Report.

HIST CORTESE:
Region: CORTESE
Facility County Code: 56
Reg By: LTNKA
Reg Id: C-94034

---

**G35** **PACIFIC BELL TELEPHONE** **LUST** **U002168898**
**ESE** **400 MINOR ST** **N/A**
**1/4-1/2** **MOORPARK, CA 93021**
**0.340 mi.**
**1795 ft.** **Site 2 of 2 in cluster G**

**Relative:**
**Higher**

**Actual:**
**531 ft.**

LUST REG 4:
Region: 4
Regional Board: 04
County: Ventura
Facility Id: C-94034

**PACIFIC BELL TELEPHONE (Continued)** **U002168898**

| | | |
|---|---|---|
| Status: | Case Closed | |
| Substance: | Diesel | |
| Substance Quantity: | Not reported | |
| Local Case No: | 94034 | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Excavate and Dispose |
| Global ID: | T0611100890 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 56000L | |
| Cross Street: | Not reported | |
| Enforcement Type: | EF | |
| Date Leak Discovered: | 7/6/1994 | |
| Date Leak First Reported: | | 7/6/1994 |
| Date Leak Record Entered: | Not reported | |
| Date Confirmation Began: | 7/6/1994 | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | Not reported |
| Date the Case was Closed: | | 10/17/1996 |
| How Leak Discovered: | Not reported | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | Not reported | |
| Leak Source: | Not reported | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 6817.006690111083707765827840 9 |
| Source of Cleanup Funding: | | F |
| Preliminary Site Assessment Workplan Submitted: | | 7/6/1994 |
| Preliminary Site Assessment Began: | | 10/15/1996 |
| Pollution Characterization Began: | | 7/6/1994 |
| Remediation Plan Submitted: | | 10/15/1996 |
| Remedial Action Underway: | | 8/8/1994 |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | 7/17/1994 |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | PACIFIC BELL TELEPHONE | |
| RP Address: | Not reported | |
| Program: | LUST | |
| Lat/Long: | 34.2832565 / -1 | |
| Local Agency Staff: | EHD | |
| Beneficial Use: | Not reported | |
| Priority: | Not reported | |
| Cleanup Fund Id: | Not reported | |
| Suspended: | Not reported | |
| Assigned Name: | Not reported | |
| Summary: | Not reported | |

VENTURA CO. LUST:
Region: VENTURA

**PACIFIC BELL TELEPHONE (Continued)** **U002168898**

Facility ID: 94034
Status: Case Closed

---

**H36** **RIDDLE EQUIPMENT RENTALS** **LUST U002290902**
**East** **13840 LOS ANGELES AVE** **UST N/A**
**1/4-1/2** **MOORPARK, CA**
**0.361 mi.**
**1906 ft.** **Site 1 of 4 in cluster H**

**Relative:** **Higher**

**Actual:** **542 ft.**

LUST REG 4:

| | | |
|---|---|---|
| Region: | 4 | |
| Regional Board: | 04 | |
| County: | Ventura | |
| Facility Id: | C95179 | |
| Status: | Case Closed | |
| Substance: | Diesel | |
| Substance Quantity: | Not reported | |
| Local Case No: | 95179 | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Not reported |
| Global ID: | T0611101065 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 56000L | |
| Cross Street: | Not reported | |
| Enforcement Type: | CLOS | |
| Date Leak Discovered: | 10/25/1995 | |
| Date Leak First Reported: | | 10/25/1995 |
| Date Leak Record Entered: | Not reported | |
| Date Confirmation Began: | 8/12/1995 | |
| Date Leak Stopped: | 1/1/1965 | |
| Date Case Last Changed on Database: | | Not reported |
| Date the Case was Closed: | | 3/1/2000 |
| How Leak Discovered: | Not reported | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | Not reported | |
| Leak Source: | Tank | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 6057.764146727679620032651636 5 |
| Source of Cleanup Funding: | | Tank |
| Preliminary Site Assessment Workplan Submitted: | | 8/12/1995 |
| Preliminary Site Assessment Began: | | Not reported |
| Pollution Characterization Began: | | Not reported |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | RIDDLE EQUIP RENTALS INC | |

**RIDDLE EQUIPMENT RENTALS (Continued)** **U002290902**

RP Address: 17304 GRACE COURT, GRASS VALLEY, CA 95949-7252
Program: LUST
Lat/Long: 34.2854134 / -1
Local Agency Staff: EKO
Beneficial Use: AGR, GWR, MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

VENTURA CO. UST:
Facility ID: D 1191
Facility Status: inactive

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**H37** **RIDDLE EQUIPMENT RENTALS** **HIST CORTESE** **S104164811**
**East** **13840 LOS ANGELES** **N/A**
**1/4-1/2** **MOORPARK, CA 93021**
**0.361 mi.**
**1906 ft.** **Site 2 of 4 in cluster H**

**Relative:** **Higher**
**Actual:** **542 ft.**

HIST CORTESE:
Region: CORTESE
Facility County Code: 56
Reg By: LTNKA
Reg Id: C-95179

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**H38** **RIDDLE EQUIPMENT RENTALS** **LUST** **S103952913**
**East** **13840 LOS ANGELES AVE** **N/A**
**1/4-1/2** **MOORPARK, CA 93021**
**0.361 mi.**
**1906 ft.** **Site 3 of 4 in cluster H**

**Relative:** **Higher**
**Actual:** **542 ft.**

LUST:
Lead Agency: VENTURA COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611101065
Global Id: T0611101065
Latitude: 34.2922169
Longitude: -118.8362021
Status: Completed - Case Closed
Status Date: 03/01/2000
Case Worker: EKO
RB Case Number: C95179
Local Agency: VENTURA COUNTY
File Location: All Files are on GeoTracker or in the Local Agency Database
Local Case Number: 95179
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0611101065
Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)

**RIDDLE EQUIPMENT RENTALS (Continued)** **S103952913**

Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Global Id: T0611101065
Contact Type: Local Agency Caseworker
Contact Name: ERIN K. O'CONNELL
Organization Name: VENTURA COUNTY
Address: 800 S. VICTORIA AVE
City: VENTURA
Email: erin.oconnell@ventura.org
Phone Number: Not reported

LUST:
Global Id: T0611101065
Action Type: Other
Date: 10/25/1995
Action: Leak Reported

Global Id: T0611101065
Action Type: Other
Date: 10/25/1995
Action: Leak Discovery

Global Id: T0611101065
Action Type: ENFORCEMENT
Date: 03/01/0200
Action: Closure/No Further Action Letter

LUST:
Global Id: T0611101065
Status: Open - Case Begin Date
Status Date: 08/10/1995

Global Id: T0611101065
Status: Open - Reopen Case
Status Date: 08/10/1995

Global Id: T0611101065
Status: Open - Reopen Case
Status Date: 08/11/1995

Global Id: T0611101065
Status: Open - Site Assessment
Status Date: 08/12/1995

Global Id: T0611101065
Status: Completed - Case Closed
Status Date: 03/01/2000

**H39** **RIDDLE EQUIPMENT RENTALS** **LUST** **S106098372**
**East** **13840 LOS ANGELES AVE** **N/A**
**1/4-1/2** **MOORPARK, CA**
**0.361 mi.**
**1906 ft.** **Site 4 of 4 in cluster H**

**Relative:** VENTURA CO. LUST:
**Higher** Region: VENTURA
**Actual:** Facility ID: 95179
**542 ft.** Status: Case Closed

---

**40** **REPLANET LLC** **SWRCY** **S107138148**
**SSW** **101 W LOS ANGELES AVE** **VENTURA CO. BWT** **N/A**
**1/4-1/2** **MOORPARK, CA 93021**
**0.382 mi.**
**2018 ft.**

**Relative:** SWRCY:
**Lower**
**Actual:** Reg Id: 155784
**504 ft.** Cert Id: RC155784.001
Mailing Address: 800 N Haven Ave Suite 120
Mailing City: Ontario
Mailing State: CA
Mailing Zip Code: 91764
Website: http://www.replanet.com
Email: Not reported
Phone Number: (951) 520-1700
Grand Father: N
Rural: N
Operation Begin Date: 05/01/2012
Aluminium: Y
Glass: Y
Plastic: Y
Bimetal: Y
Agency: N/A
Monday Hours Of Operation: CLOSED
Tuesday Hours Of Operation: 10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Wednesday Hours Of Operation: 10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Thursday Hours Of Operation: 10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Friday Hours Of Operation: 10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Saturday Hours Of Operation: 10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Sunday Hours Of Operation: CLOSED
Organization ID: 151891
Organization Name: rePlanet LLC

VENTURA CO. BWT:
Facility ID: FA0022564
Program: BUSINESS PLAN/HAZARDOUS WASTE GENERATOR

**41**
**South**
**1/4-1/2**
**0.401 mi.**
**2115 ft.**

**Relative:**
**Lower**

**Actual:**
**513 ft.**

**MOORPARK UNIF. SCHOOL DIST.**
**30 FLORY AVE**
**MOORPARK, CA**

**LUST**
**UST**
**SWEEPS UST**
**HIST UST**
**CA FID UST**
**VENTURA CO. BWT**
**HIST CORTESE**

**1000368487**
**N/A**

LUST:

| | |
|---|---|
| Lead Agency: | VENTURA COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611101132 |
| Global Id: | T0611101132 |
| Latitude: | 34.279263 |
| Longitude: | -118.880981 |
| Status: | Completed - Case Closed |
| Status Date: | 04/02/1997 |
| Case Worker: | Not reported |
| RB Case Number: | C-97012 |
| Local Agency: | Not reported |
| File Location: | Not reported |
| Local Case Number: | 97012 |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Diesel |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0611101132 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | DANIEL PIROTTON |
| Organization Name: | LOS ANGELES RWQCB (REGION 4) |
| Address: | Not reported |
| City: | R4 UNKNOWN |
| Email: | dpirotton@waterboards.ca.gov |
| Phone Number: | 2135766714 |

LUST:

| | |
|---|---|
| Global Id: | T0611101132 |
| Action Type: | Other |
| Date: | 01/12/1997 |
| Action: | Leak Reported |

| | |
|---|---|
| Global Id: | T0611101132 |
| Action Type: | Other |
| Date: | 01/12/1997 |
| Action: | Leak Discovery |

LUST:

| | |
|---|---|
| Global Id: | T0611101132 |
| Status: | Open - Case Begin Date |
| Status Date: | 01/06/1996 |

| | |
|---|---|
| Global Id: | T0611101132 |
| Status: | Open - Site Assessment |
| Status Date: | 01/06/1996 |

| | |
|---|---|
| Global Id: | T0611101132 |
| Status: | Open - Remediation |
| Status Date: | 03/17/1996 |

**MOORPARK UNIF. SCHOOL DIST. (Continued)** **1000368487**

Global Id: T0611101132
Status: Open - Site Assessment
Status Date: 12/16/1996

Global Id: T0611101132
Status: Open - Site Assessment
Status Date: 01/12/1997

Global Id: T0611101132
Status: Completed - Case Closed
Status Date: 04/02/1997

LUST REG 4:

| | | |
|---|---|---|
| Region: | 4 | |
| Regional Board: | 04 | |
| County: | Ventura | |
| Facility Id: | C-97012 | |
| Status: | Case Closed | |
| Substance: | Diesel | |
| Substance Quantity: | Not reported | |
| Local Case No: | 97012 | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Excavate and Dispose |
| Global ID: | T0611101132 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 56000L | |
| Cross Street: | Not reported | |
| Enforcement Type: | Not reported | |
| Date Leak Discovered: | 1/12/1997 | |
| Date Leak First Reported: | | 1/12/1997 |
| Date Leak Record Entered: | Not reported | |
| Date Confirmation Began: | 1/12/1997 | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | Not reported |
| Date the Case was Closed: | | 4/2/1997 |
| How Leak Discovered: | Not reported | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | Not reported | |
| Leak Source: | Not reported | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 7613.1515842730846554779268592 |
| Source of Cleanup Funding: | | F |
| Preliminary Site Assessment Workplan Submitted: | | 12/16/1996 |
| Preliminary Site Assessment Began: | | 1/6/1996 |
| Pollution Characterization Began: | | 12/16/1996 |
| Remediation Plan Submitted: | | 3/17/1996 |
| Remedial Action Underway: | | 3/17/1996 |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |

**MOORPARK UNIF. SCHOOL DIST. (Continued)** **1000368487**

GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: MOORPARK UNIFIED SCHOOL DISTRI
RP Address: Not reported
Program: LUST
Lat/Long: 34.2792117 / -1
Local Agency Staff: KCK
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

VENTURA CO. LUST:
Region: VENTURA
Facility ID: 97012
Status: Case Closed

VENTURA CO. UST:
Facility ID: D 1266
Facility Status: inactive

SWEEPS UST:
Status: Active
Comp Number: 644
Number: 9
Board Of Equalization: 44-030671
Referral Date: 09-30-92
Action Date: 09-30-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 56-000-000644-000001
Tank Status: A
Capacity: 2000
Active Date: Not reported
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: 2

Status: Active
Comp Number: 644
Number: 9
Board Of Equalization: 44-030671
Referral Date: 09-30-92
Action Date: 09-30-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 56-000-000644-000002
Tank Status: A
Capacity: 1000
Active Date: Not reported
Tank Use: UNKNOWN

**MOORPARK UNIF. SCHOOL DIST. (Continued)** **1000368487**

STG: P
Content: Not reported
Number Of Tanks: Not reported

HIST UST:
File Number: 0002CB57
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002CB57.pdf
Region: STATE
Facility ID: 00000044551
Facility Type: Other
Other Type: PUBLIC SCHOOL
Contact Name: Not reported
Telephone: 8055291149
Owner Name: MOORPARK UNIFIED SCHOOL DISTRI
Owner Address: 30 FLORY AVE.
Owner City,St,Zip: MOORPARK, CA 93021
Total Tanks: 0002

Tank Num: 001
Container Num: 02
Year Installed: Not reported
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 01
Year Installed: Not reported
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

CA FID UST:
Facility ID: 56002593
Regulated By: UTNKA
Regulated ID: 44551
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 30 FLORY AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: MOORPARK 93021
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

**MOORPARK UNIF. SCHOOL DIST. (Continued)** **1000368487**

VENTURA CO. BWT:
Facility ID: HM 436
Program: Not reported

Facility ID: BP 1867
Program: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 56
Reg By: LTNKA
Reg Id: C-97012

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**42**
**SSW**
**1/4-1/2**
**0.453 mi.**
**2393 ft.**

**SUMMIT GAS STATION - LA AVE** **LUST U003778477**
**50 LOS ANGELES AVE.** **VENTURA CO. BWT N/A**
**MOORPARK, CA 93021**

**Relative:**
**Lower**

**Actual:**
**508 ft.**

LUST:
Lead Agency: VENTURA COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611101370
Global Id: T0611101370
Latitude: 34.278667005
Longitude: -118.882413205
Status: Completed - Case Closed
Status Date: 06/01/2010
Case Worker: DBW
RB Case Number: C01011
Local Agency: VENTURA COUNTY
File Location: All Files are on GeoTracker or in the Local Agency Database
Local Case Number: 01011
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0611101370
Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Global Id: T0611101370
Contact Type: Local Agency Caseworker
Contact Name: DIANE B. WAHL
Organization Name: VENTURA COUNTY
Address: 800 S. VICTORIA AVE.
City: VENTURA
Email: diane.wahl@ventura.org
Phone Number: 8056545040

**SUMMIT GAS STATION - LA AVE (Continued)** **U003778477**

LUST:

| | |
|---|---|
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 12/11/2006 |
| Action: | Technical Correspondence / Assistance / Other - #24 |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 01/01/2008 |
| Action: | File Review - Closure |
| Global Id: | T0611101370 |
| Action Type: | Other |
| Date: | 06/28/2001 |
| Action: | Leak Reported |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 08/26/2009 |
| Action: | Staff Letter |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 08/03/2006 |
| Action: | Technical Correspondence / Assistance / Other - #23 |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 06/05/2008 |
| Action: | Technical Correspondence / Assistance / Other - #26 |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 06/12/2003 |
| Action: | * Historical Enforcement |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 01/13/2004 |
| Action: | * Historical Enforcement |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 06/08/2009 |
| Action: | LOP Case Closure Summary to RB |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 05/11/2005 |
| Action: | * Historical Enforcement - #20 |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 07/30/2003 |
| Action: | Monitoring Report - Quarterly |
| Global Id: | T0611101370 |

**SUMMIT GAS STATION - LA AVE (Continued)** **U003778477**

Action Type: ENFORCEMENT
Date: 06/01/2010
Action: Closure/No Further Action Letter

Global Id: T0611101370
Action Type: ENFORCEMENT
Date: 05/12/2006
Action: Technical Correspondence / Assistance / Other - #21

Global Id: T0611101370
Action Type: RESPONSE
Date: 07/31/2007
Action: Monitoring Report - Quarterly

Global Id: T0611101370
Action Type: RESPONSE
Date: 08/10/2007
Action: Unknown

Global Id: T0611101370
Action Type: Other
Date: 06/21/2001
Action: Leak Stopped

Global Id: T0611101370
Action Type: ENFORCEMENT
Date: 12/24/2009
Action: Staff Letter

Global Id: T0611101370
Action Type: RESPONSE
Date: 01/31/2005
Action: Remedial Progress Report

Global Id: T0611101370
Action Type: RESPONSE
Date: 10/20/2006
Action: Other Report / Document

Global Id: T0611101370
Action Type: ENFORCEMENT
Date: 07/05/2006
Action: Technical Correspondence / Assistance / Other - #22

Global Id: T0611101370
Action Type: RESPONSE
Date: 01/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0611101370
Action Type: RESPONSE
Date: 07/11/2003
Action: Interim Remedial Action Plan

Global Id: T0611101370
Action Type: RESPONSE
Date: 07/31/2003

**SUMMIT GAS STATION - LA AVE (Continued)** **U003778477**

| | |
|---|---|
| Action: | Interim Remedial Action Plan |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 07/31/2006 |
| Action: | Remedial Progress Report |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 11/21/2003 |
| Action: | Interim Remedial Action Report |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 09/26/2003 |
| Action: | Sensitive Receptor Survey Report |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 02/27/2004 |
| Action: | Soil and Water Investigation Report |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 11/30/2003 |
| Action: | Soil and Water Investigation Report |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 06/11/2007 |
| Action: | Technical Correspondence / Assistance / Other - #25 |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 10/24/2003 |
| Action: | Other Report / Document |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 10/30/2003 |
| Action: | Other Report / Document |
| Global Id: | T0611101370 |
| Action Type: | RESPONSE |
| Date: | 04/30/2008 |
| Action: | Monitoring Report - Quarterly |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 09/17/2003 |
| Action: | * Historical Enforcement |
| Global Id: | T0611101370 |
| Action Type: | ENFORCEMENT |
| Date: | 05/21/2003 |
| Action: | * Historical Enforcement |

**SUMMIT GAS STATION - LA AVE (Continued)** **U003778477**

Global Id: T0611101370
Action Type: Other
Date: 06/21/2001
Action: Leak Discovery

Global Id: T0611101370
Action Type: RESPONSE
Date: 08/15/2005
Action: Well Installation Report

Global Id: T0611101370
Action Type: RESPONSE
Date: 07/29/2005
Action: Monitoring Report - Quarterly

Global Id: T0611101370
Action Type: RESPONSE
Date: 07/29/2005
Action: Remedial Progress Report

Global Id: T0611101370
Action Type: RESPONSE
Date: 06/09/2006
Action: Other Report / Document

Global Id: T0611101370
Action Type: RESPONSE
Date: 06/09/2006
Action: Soil and Water Investigation Workplan

Global Id: T0611101370
Action Type: RESPONSE
Date: 10/30/2009
Action: Well Destruction Report

Global Id: T0611101370
Action Type: ENFORCEMENT
Date: 07/07/2003
Action: * Historical Enforcement

Global Id: T0611101370
Action Type: RESPONSE
Date: 10/13/2003
Action: Unknown

Global Id: T0611101370
Action Type: RESPONSE
Date: 10/10/2003
Action: Unknown

Global Id: T0611101370
Action Type: RESPONSE
Date: 06/18/2004
Action: Other Report / Document

Global Id: T0611101370
Action Type: ENFORCEMENT

**SUMMIT GAS STATION - LA AVE (Continued)** **U003778477**

Date: 10/10/2003
Action: Meeting

Global Id: T0611101370
Action Type: RESPONSE
Date: 01/02/2010
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0611101370
Action Type: REMEDIATION
Date: 09/22/2004
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0611101370
Action Type: ENFORCEMENT
Date: 04/20/2009
Action: File review

Global Id: T0611101370
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Semi-Annually

Global Id: T0611101370
Action Type: ENFORCEMENT
Date: 07/27/2009
Action: Staff Letter - #27

LUST:
Global Id: T0611101370
Status: Open - Case Begin Date
Status Date: 06/21/2001

Global Id: T0611101370
Status: Open - Site Assessment
Status Date: 12/08/2003

Global Id: T0611101370
Status: Open - Site Assessment
Status Date: 02/27/2004

Global Id: T0611101370
Status: Open - Remediation
Status Date: 01/01/2005

Global Id: T0611101370
Status: Open - Remediation
Status Date: 01/31/2005

Global Id: T0611101370
Status: Open - Remediation
Status Date: 07/29/2005

Global Id: T0611101370
Status: Open - Site Assessment
Status Date: 06/09/2006

**SUMMIT GAS STATION - LA AVE (Continued)** **U003778477**

Global Id: T0611101370
Status: Open - Remediation
Status Date: 07/31/2006

Global Id: T0611101370
Status: Open - Verification Monitoring
Status Date: 04/30/2008

Global Id: T0611101370
Status: Completed - Case Closed
Status Date: 06/01/2010

LUST REG 4:
Region: 4
Regional Board: 04
County: Ventura
Facility Id: C-01011
Status: Preliminary site assessment underway
Substance: Hydrocarbons
Substance Quantity: Not reported
Local Case No: 01011
Case Type: Undefined
Abatement Method Used at the Site: Not reported
Global ID: T0611101370
W Global ID: Not reported
Staff: UNK
Local Agency: 56000L
Cross Street: MOORPARK AVE.
Enforcement Type: LFOR
Date Leak Discovered: 6/21/2001
Date Leak First Reported: 6/28/2001
Date Leak Record Entered: Not reported
Date Confirmation Began: Not reported
Date Leak Stopped: 6/21/2001
Date Case Last Changed on Database: Not reported
Date the Case was Closed: Not reported
How Leak Discovered: Subsurface Monitoring
How Leak Stopped: Other Means
Cause of Leak: UNK
Leak Source: UNK
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 7642.641373977398903808194 4832
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: 12/8/2003
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: Not reported
Historical Max MTBE Date: 2/18/2004
Hist Max MTBE Conc in Groundwater: 57000
Hist Max MTBE Conc in Soil: 28700
Significant Interim Remedial Action Taken: Not reported

**SUMMIT GAS STATION - LA AVE (Continued)** **U003778477**

GW Qualifier: =
Soil Qualifier: =
Organization: Not reported
Owner Contact: Not reported
Responsible Party: SAM ATASSI
RP Address: 1842 ROSCOMARE RD.
Program: LUST
Lat/Long: 34.279037 / -1
Local Agency Staff: KEA
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

VENTURA CO. LUST:
Region: VENTURA
Facility ID: 01011
Status: Remedial action (cleanup) Underway

VENTURA CO. BWT:
Facility ID: HM 2955
Program: Not reported

Facility ID: HM 3720
Program: Not reported

Facility ID: HM 738
Program: Not reported

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**43** **SHELL SS - NEW LA AVE** **LUST S106568385**
**SW** **301 NEW LOS ANGELES AVE** **VENTURA CO. BWT N/A**
**1/4-1/2** **MOORPARK, CA 93021**
**0.475 mi.**
**2510 ft.**

**Relative:**
**Lower**

**Actual:**
**500 ft.**

LUST:
Lead Agency: VENTURA COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611123476
Global Id: T0611123476
Latitude: 34.2792059
Longitude: -118.8861292
Status: Completed - Case Closed
Status Date: 09/16/2008
Case Worker: GLT
RB Case Number: C04030
Local Agency: VENTURA COUNTY
File Location: Local Agency
Local Case Number: 04030
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0611123476

**SHELL SS - NEW LA AVE (Continued)** **S106568385**

Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Global Id: T0611123476
Contact Type: Local Agency Caseworker
Contact Name: GINA TERESA
Organization Name: VENTURA COUNTY
Address: 800 S. VICTORIA AVENUE
City: VENTURA
Email: gina.teresa@ventura.org
Phone Number: Not reported

LUST:
Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 11/06/2006
Action: Technical Correspondence / Assistance / Other - #15

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 04/09/2008
Action: LOP Case Closure Summary to RB - #16

Global Id: T0611123476
Action Type: Other
Date: 06/28/2004
Action: Leak Reported

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 07/17/2006
Action: Technical Correspondence / Assistance / Other - #14

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 12/30/2005
Action: * Historical Enforcement - #13

Global Id: T0611123476
Action Type: REMEDIATION
Date: 06/18/2004
Action: Excavation

Global Id: T0611123476
Action Type: Other
Date: 06/19/2004
Action: Leak Stopped

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 01/26/2007
Action: File review - #-

**SHELL SS - NEW LA AVE (Continued)** **S106568385**

Global Id: T0611123476
Action Type: RESPONSE
Date: 09/15/2005
Action: Soil and Water Investigation Workplan

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 01/01/2008
Action: File review

Global Id: T0611123476
Action Type: RESPONSE
Date: 09/12/2008
Action: Well Destruction Report

Global Id: T0611123476
Action Type: RESPONSE
Date: 09/15/2005
Action: Electronic Reporting Submittal Due

Global Id: T0611123476
Action Type: RESPONSE
Date: 02/15/2005
Action: Soil and Water Investigation Report

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 09/16/2008
Action: Closure/No Further Action Letter

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 12/14/2004
Action: * Historical Enforcement - #10

Global Id: T0611123476
Action Type: Other
Date: 06/18/2004
Action: Leak Discovery

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 07/12/2005
Action: * Historical Enforcement - #11

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 04/23/2008
Action: Technical Correspondence / Assistance / Other - #17

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 07/02/2008
Action: Staff Letter - #18

Global Id: T0611123476
Action Type: RESPONSE

**SHELL SS - NEW LA AVE (Continued)** **S106568385**

Date: 12/02/2005
Action: Soil and Water Investigation Report

Global Id: T0611123476
Action Type: RESPONSE
Date: 01/31/2006
Action: Monitoring Report - Quarterly

Global Id: T0611123476
Action Type: RESPONSE
Date: 10/31/2006
Action: Monitoring Report - Quarterly

Global Id: T0611123476
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0611123476
Action Type: RESPONSE
Date: 10/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0611123476
Action Type: ENFORCEMENT
Date: 09/14/2005
Action: * Historical Enforcement - #12

LUST:
Global Id: T0611123476
Status: Open - Case Begin Date
Status Date: 06/18/2004

Global Id: T0611123476
Status: Open - Remediation
Status Date: 07/01/2004

Global Id: T0611123476
Status: Open - Site Assessment
Status Date: 09/01/2004

Global Id: T0611123476
Status: Open - Site Assessment
Status Date: 12/14/2004

Global Id: T0611123476
Status: Open - Site Assessment
Status Date: 09/09/2005

Global Id: T0611123476
Status: Open - Verification Monitoring
Status Date: 09/29/2006

Global Id: T0611123476
Status: Completed - Case Closed
Status Date: 09/16/2008

**SHELL SS - NEW LA AVE (Continued)** **S106568385**

VENTURA CO. LUST:
Region: VENTURA
Facility ID: 04030
Status: Post remedial action monitoring

VENTURA CO. BWT:
Facility ID: HM 3755
Program: Not reported

---

**I44** **CHEVRON #9-0688** **LUST** **S105974848**
**SE** **502 LOS ANGELES AVE E** **N/A**
**1/4-1/2** **MOORPARK, CA 93021**
**0.481 mi.**
**2541 ft.** **Site 1 of 3 in cluster I**

**Relative: Higher**
**Actual: 525 ft.**

LUST:
Lead Agency: VENTURA COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611100314
Global Id: T0611100314
Latitude: 34.278786973
Longitude: -118.874476663
Status: Completed - Case Closed
Status Date: 04/21/2003
Case Worker: EKO
RB Case Number: C88067
Local Agency: VENTURA COUNTY
File Location: All Files are on GeoTracker or in the Local Agency Database
Local Case Number: 88067
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0611100314
Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Global Id: T0611100314
Contact Type: Local Agency Caseworker
Contact Name: ERIN K. O'CONNELL
Organization Name: VENTURA COUNTY
Address: 800 S. VICTORIA AVE
City: VENTURA
Email: erin.oconnell@ventura.org
Phone Number: Not reported

LUST:
Global Id: T0611100314
Action Type: ENFORCEMENT
Date: 04/11/2003
Action: Closure/No Further Action Letter

**CHEVRON #9-0688 (Continued)** **S105974848**

Global Id: T0611100314
Action Type: Other
Date: 08/15/1988
Action: Leak Discovery

Global Id: T0611100314
Action Type: Other
Date: 08/15/1988
Action: Leak Reported

LUST:
Global Id: T0611100314
Status: Open - Case Begin Date
Status Date: 08/15/1988

Global Id: T0611100314
Status: Open - Site Assessment
Status Date: 08/15/1988

Global Id: T0611100314
Status: Open - Site Assessment
Status Date: 10/13/1988

Global Id: T0611100314
Status: Completed - Case Closed
Status Date: 04/21/2003

LUST REG 4:
Region: 4
Regional Board: 04
County: Ventura
Facility Id: C88067
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: 88067
Case Type: Groundwater
Abatement Method Used at the Site: Vent Soil
Global ID: T0611100314
W Global ID: Not reported
Staff: UNK
Local Agency: 56000L
Cross Street: Not reported
Enforcement Type: CLOS
Date Leak Discovered: 8/15/1988
Date Leak First Reported: 8/15/1988
Date Leak Record Entered: Not reported
Date Confirmation Began: 8/15/1988
Date Leak Stopped: Not reported
Date Case Last Changed on Database: Not reported
Date the Case was Closed: 4/21/2003
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported

**CHEVRON #9-0688 (Continued)** **S105974848**

| | | |
|---|---|---|
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 8213.123802835543880658501448 |
| Source of Cleanup Funding: | | F |
| Preliminary Site Assessment Workplan Submitted: | | 8/15/1988 |
| Preliminary Site Assessment Began: | | 10/13/1988 |
| Pollution Characterization Began: | | 10/13/1988 |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | 8/15/1988 |
| Historical Max MTBE Date: | | 12/17/1997 |
| Hist Max MTBE Conc in Groundwater: | | 20 |
| Hist Max MTBE Conc in Soil: | | .092 |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | < | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | CHEVRON USA PRODUCTS COMPANY | |
| RP Address: | 145 S. STATE COLLEGE BLVD., RM #4084, BREA 92822-2292 | |
| Program: | LUST | |
| Lat/Long: | 34.27864499 / -1 | |
| Local Agency Staff: | EKO | |
| Beneficial Use: | Not reported | |
| Priority: | Not reported | |
| Cleanup Fund Id: | Not reported | |
| Suspended: | Not reported | |
| Assigned Name: | Not reported | |
| Summary: | 7/13/00 2ND QTR GW MON RPT 2000; 10/18/00 3RD QTR GW MON RPT 2000 | |

VENTURA CO. LUST:

| | |
|---|---|
| Region: | VENTURA |
| Facility ID: | 88067 |
| Status: | Case Closed |

---

**I45** **CHEVRON SS #0688** **VENTURA CO. BWT** **S103684163**
**SE** **502 LOS ANGELES** **HIST CORTESE** **N/A**
**1/4-1/2** **MOORPARK, CA 93021**
**0.481 mi.**
**2541 ft.** **Site 2 of 3 in cluster I**

**Relative:**
**Higher**

**Actual:**
**525 ft.**

VENTURA CO. BWT:

| | |
|---|---|
| Facility ID: | FA0004873 |
| Program: | HAZARDOUS WASTE GENERATOR/CUPA UNDERGROUND TANKS/BUSINESS PLAN |

HIST CORTESE:

| | |
|---|---|
| Region: | CORTESE |
| Facility County Code: | 56 |
| Reg By: | LTNKA |
| Reg Id: | C-88067 |

**I46** **TOSCO - 76 SS #4945** **LUST** **S103952686**
**SE** **506 LOS ANGELES AVE** **N/A**
**1/4-1/2** **MOORPARK, CA 93021**
**0.488 mi.**
**2575 ft.** **Site 3 of 3 in cluster I**

**Relative:**
**Higher**

**Actual:**
**525 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | VENTURA COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611101179 |
| Global Id: | T0611101179 |
| Latitude: | 34.278911 |
| Longitude: | -118.8740221 |
| Status: | Completed - Case Closed |
| Status Date: | 10/01/2004 |
| Case Worker: | Not reported |
| RB Case Number: | C98021 |
| Local Agency: | Not reported |
| File Location: | Local Agency Warehouse |
| Local Case Number: | 98021 |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Gasoline |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0611101179 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | DANIEL PIROTTON |
| Organization Name: | LOS ANGELES RWQCB (REGION 4) |
| Address: | Not reported |
| City: | R4 UNKNOWN |
| Email: | dpirotton@waterboards.ca.gov |
| Phone Number: | 2135766714 |

LUST:

| | |
|---|---|
| Global Id: | T0611101179 |
| Action Type: | Other |
| Date: | 08/03/1998 |
| Action: | Leak Reported |

| | |
|---|---|
| Global Id: | T0611101179 |
| Action Type: | Other |
| Date: | 08/03/1998 |
| Action: | Leak Discovery |

| | |
|---|---|
| Global Id: | T0611101179 |
| Action Type: | RESPONSE |
| Date: | 02/25/2009 |
| Action: | Correspondence |

| | |
|---|---|
| Global Id: | T0611101179 |
| Action Type: | ENFORCEMENT |
| Date: | 08/11/2003 |
| Action: | * No Action |

| | |
|---|---|
| Global Id: | T0611101179 |
| Action Type: | ENFORCEMENT |
| Date: | 02/19/2004 |
| Action: | * Historical Enforcement - #L01 |

**TOSCO - 76 SS #4945 (Continued)** **S103952686**

Global Id: T0611101179
Action Type: ENFORCEMENT
Date: 10/01/2004
Action: Technical Correspondence / Assistance / Other

Global Id: T0611101179
Action Type: ENFORCEMENT
Date: 04/27/2009
Action: Staff Letter - #DueDil

Global Id: T0611101179
Action Type: ENFORCEMENT
Date: 10/07/2004
Action: Closure/No Further Action Letter

LUST:
Global Id: T0611101179
Status: Open - Case Begin Date
Status Date: 06/02/1998

Global Id: T0611101179
Status: Open - Site Assessment
Status Date: 06/02/1998

Global Id: T0611101179
Status: Open - Site Assessment
Status Date: 08/03/1998

Global Id: T0611101179
Status: Completed - Case Closed
Status Date: 10/01/2004

Lead Agency: VENTURA COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611100511
Global Id: T0611100511
Latitude: 34.278911
Longitude: -118.8740221
Status: Completed - Case Closed
Status Date: 07/15/1993
Case Worker: Not reported
RB Case Number: C-89102
Local Agency: Not reported
File Location: Not reported
Local Case Number: 89102
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0611100511
Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN

**TOSCO - 76 SS #4945 (Continued)** **S103952686**

Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

LUST:
Global Id: T0611100511
Action Type: Other
Date: 07/26/1989
Action: Leak Discovery

Global Id: T0611100511
Action Type: ENFORCEMENT
Date: 08/04/1989
Action: * Historical Enforcement

Global Id: T0611100511
Action Type: Other
Date: 07/26/1989
Action: Leak Reported

LUST:
Global Id: T0611100511
Status: Open - Case Begin Date
Status Date: 07/26/1989

Global Id: T0611100511
Status: Open - Site Assessment
Status Date: 07/26/1989

Global Id: T0611100511
Status: Open - Site Assessment
Status Date: 10/15/1992

Global Id: T0611100511
Status: Open - Remediation
Status Date: 06/15/1993

Global Id: T0611100511
Status: Completed - Case Closed
Status Date: 07/15/1993

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**47**
**West**
**1/2-1**
**0.759 mi.**
**4005 ft.**

**VIKING ELECTRONICS INC** **ENVIROSTOR** **S104579043**
**5455 ENDEAVOUR CT** **WDS** **N/A**
**MOORPARK, CA 93021**

**Relative:**
**Lower**

**Actual:**
**484 ft.**

ENVIROSTOR:
Facility ID: 71003350
Status: Refer: Other Agency
Status Date: Not reported
Site Code: Not reported
Site Type: Tiered Permit
Site Type Detailed: Tiered Permit
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED

**VIKING ELECTRONICS INC (Continued)** **S104579043**

Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Chatsworth
Assembly: 44
Senate: 27
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 34.28387
Longitude: -118.8948
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAL000140644
Alias Type: EPA Identification Number
Alias Name: 71003350
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

WDS:
Facility ID: 4 56I014978
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 4
Facility Telephone: 8055539655
Facility Contact: JUSTIN KILLGORE
Agency Name: VIKING ELECTRONICS INC
Agency Address: 5455 Endeavour Ct
Agency City,St,Zip: Moorpark 930211712

**VIKING ELECTRONICS INC (Continued)** **S104579043**

| | |
|---|---|
| Agency Contact: | JUSTIN KILLGORE |
| Agency Telephone: | 8055539655 |
| Agency Type: | Private |
| SIC Code: | 0 |
| SIC Code 2: | Not reported |
| Primary Waste Type: | Not reported |
| Primary Waste: | Not reported |
| Waste Type2: | Not reported |
| Waste2: | Not reported |
| Primary Waste Type: | Not reported |
| Secondary Waste: | Not reported |
| Secondary Waste Type: | Not reported |
| Design Flow: | 0 |
| Baseline Flow: | 0 |
| Reclamation: | Not reported |
| POTW: | Not reported |
| Treat To Water: | Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality. |
| Complexity: | Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds. |

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**48**
**North**
**1/2-1**
**0.900 mi.**
**4754 ft.**

**WALNUT CANYON TRACT** **ENVIROSTOR** **S100204264**
**WALNUT CANYON RD-N OF MOORPARK 32&33** **N/A**
**MOORPARK, CA 93021**

**Relative:**
**Higher**

**Actual:**
**710 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 56490100 |
| Status: | No Further Action |
| Status Date: | 06/30/1991 |
| Site Code: | 300266 |
| Site Type: | Historical |
| Site Type Detailed: | * Historical |
| Acres: | 350 |
| NPL: | NO |
| Regulatory Agencies: | NONE SPECIFIED |
| Lead Agency: | NONE SPECIFIED |
| Program Manager: | Not reported |
| Supervisor: | * Mmonroy |
| Division Branch: | Cleanup Chatsworth |
| Assembly: | 37 |
| Senate: | 27 |
| Special Program: | Not reported |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | Not reported |
| Latitude: | 34.31505 |
| Longitude: | -118.8807 |
| APN: | NONE SPECIFIED |

**WALNUT CANYON TRACT (Continued)** **S100204264**

Past Use: ILLEGAL DUMPING
Potential COC: Arsenic Asbestos Containing Materials (ACM Total Chromium (1:6 ratio Cr VI:Cr III Lead TPH-gas Aluminum Beryllium and compounds Cadmium and compounds
Confirmed COC: 30001-NO 30005-NO 30013-NO 30025-NO 30047-NO 30080-NO 30108-NO 40001-NO
Potential Description: SOIL
Alias Name: WALNUT CANYON ASSOCIATION
Alias Type: Alternate Name
Alias Name: 300266
Alias Type: Project Code (Site Code)
Alias Name: 56490100
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 10/27/1994
Comments: CalSites Validation Program confirms NFA for DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/30/1991
Comments: Based on the information provided in the PEA and the addendum reports, the contamination at the site may not constitute a threat to human health and environment. Therefore, the Dept concurs with the PEA recommendation that no further action is needed at the site at this time.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 12/20/1990
Comments: Did not address the surface water and groundwater targets, did not put in any monitoring wells. Residential house in proximity. Few groundwater wells within one mile radius. Did not address metal contamination and did not take any deep soil samples to confirm petroleum hydrocarbon migration Medium priority PEA recommended.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Count: 1 records. ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| SIMI | 1003878606 | UNION OIL CO SIMI OIL FLD | BET MOORPARK COMM COLL & SIMI | 93021 | SEMS-ARCHIVE |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Federal NPL site list***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

***Federal Delisted NPL site list***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

***Federal CERCLIS list***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

***Federal RCRA CORRACTS facilities list***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

***Federal RCRA generators list***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

***Federal institutional controls / engineering controls registries***

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/16/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 78

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

***State- and tribal - equivalent NPL***

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

***State- and tribal - equivalent CERCLIS***

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/12/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 48

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Quarterly

***State and tribal leaking storage tank lists***

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/06/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

***State and tribal registered storage tank lists***

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 15

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 134

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

***State and tribal voluntary cleanup sites***

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

***State and tribal Brownfields sites***

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 38
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 21
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

***Local Lists of Landfill / Solid Waste Disposal Sites***

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 02/08/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 39

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/30/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/04/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Quarterly

***Local Lists of Registered Storage Tanks***

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 02/28/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 27

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 04/19/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 10

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Local Land Records***

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 01/28/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 46

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 94

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 02/08/2018
Date Data Arrived at EDR: 02/08/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 0

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 02/15/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/24/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/15/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 01/11/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/08/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 94

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/20/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/09/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 01/04/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 99

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 79

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/25/2018
Date Data Arrived at EDR: 02/28/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 72

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 92

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 38
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA LIVERMORE-PLEASANTON
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 02/28/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 64
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA SAN FRANCISCO CO
Cupa facilities

Date of Government Version: 04/20/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 10
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

DRYCLEAN AVAQMD: DRYCLEAN AVAQMD
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 52
Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 03/27/2018
Date Data Arrived at EDR: 03/29/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 36
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: DRYCLEAN SOUTH COAST
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/16/2018
Date Data Arrived at EDR: 03/20/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 45
Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 147

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 54

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 55

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/14/2018
Date Data Arrived at EDR: 02/16/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 46

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 97

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/08/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 02/27/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 42

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 03/14/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 04/19/2018
Number of Days to Update: 45

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/05/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/23/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 38

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

OTHER OIL GAS: OTHER OIL & GAS (GEOTRACKER)
Other Oil & Gas Projects sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

PROD WATER PONDS: PROD WATER PONDS (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

PROJECT: PROJECT (GEOTRACKER)
Projects sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

NON-CASE INFO: NON-CASE INFO (GEOTRACKER)
Non-Case Information sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

SAMPLING POINT: SAMPLING POINT (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

WELL STIM PROJ: WELL SAMP PROJ (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

CIWQS: The California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 60

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

UIC GEO: UIC GEO (GEOTRACKER)

Underground control injection sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**COUNTY RECORDS**

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 01/11/2018
Date Made Active in Reports: 02/22/2018
Number of Days to Update: 42

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 24

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List
Cupa Facility List

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 10

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 01/25/2018
Date Data Arrived at EDR: 01/26/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 47

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/26/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/26/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 14

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 48

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/30/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/05/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 40

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/25/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/08/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 39

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/30/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 9

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/08/2018
Date Made Active in Reports: 04/30/2018
Number of Days to Update: 53

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/21/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/26/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 47

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/08/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 56

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/02/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 54

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 11/14/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 28

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 02/06/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/16/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 56

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/16/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 29

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/17/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 05/01/2018
Date Made Active in Reports: 05/14/2018
Number of Days to Update: 13

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 01/17/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 28

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/17/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/18/2018
Number of Days to Update: 13

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 40

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 03/30/2018
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 28

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 01/11/2018
Date Data Arrived at EDR: 01/12/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 27

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 15

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/27/2018
Date Data Arrived at EDR: 03/29/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 18

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 05/21/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 30

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/31/2018
Date Data Arrived at EDR: 02/01/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 41

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/25/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/05/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/05/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 35

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/08/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/15/2018
Date Data Arrived at EDR: 03/19/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 46

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 03/15/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 50

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 24

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 24

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 01/03/2018
Date Made Active in Reports: 02/05/2018
Number of Days to Update: 33

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 01/03/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 42

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 11/01/2017
Date Data Arrived at EDR: 11/03/2017
Date Made Active in Reports: 11/17/2017
Number of Days to Update: 14

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/30/2017
Date Data Arrived at EDR: 12/01/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 46

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/07/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 40

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

Local Oversight Program Listing

A listing all LOP release sites that are or were under the County of San Diegoa??s jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/23/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 11

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/07/2017
Date Made Active in Reports: 12/19/2017
Number of Days to Update: 42

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/20/2018
Date Data Arrived at EDR: 03/22/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 43

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/16/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/18/2017
Number of Days to Update: 31

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 03/14/2018
Date Data Arrived at EDR: 03/20/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 45

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/15/2018
Date Data Arrived at EDR: 03/20/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 45

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/04/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 42

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 52

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 16

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 20

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/22/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2018
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 05/09/2018
Number of Days to Update: 33

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/22/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 02/06/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 37

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/16/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 01/08/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 29

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List
Cupa facilities

Date of Government Version: 01/26/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/22/2018
Date Made Active in Reports: 04/17/2018
Number of Days to Update: 26

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 50

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 48

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/23/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/26/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 54
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/23/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/28/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 16
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 03/27/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 31
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 02/01/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/25/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 107

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/23/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/09/2018
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/21/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/08/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

**STREET AND ADDRESS INFORMATION**

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# GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

MOORPARK RR DEPOT
E HIGH STREET
MOORPARK, CA 93021

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 34.28516 - 34° 17' 6.58'' |
| Longitude (West): | 118.880118 - 118° 52' 48.42'' |
| Universal Tranverse Mercator: | Zone 11 |
| UTM X (Meters): | 326942.1 |
| UTM Y (Meters): | 3795179.2 |
| Elevation: | 517 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 5630753 MOORPARK, CA |
| Version Date: | 2012 |
| Northeast Map: | 5630771 SIMI VALLEY WEST, CA |
| Version Date: | 2012 |

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

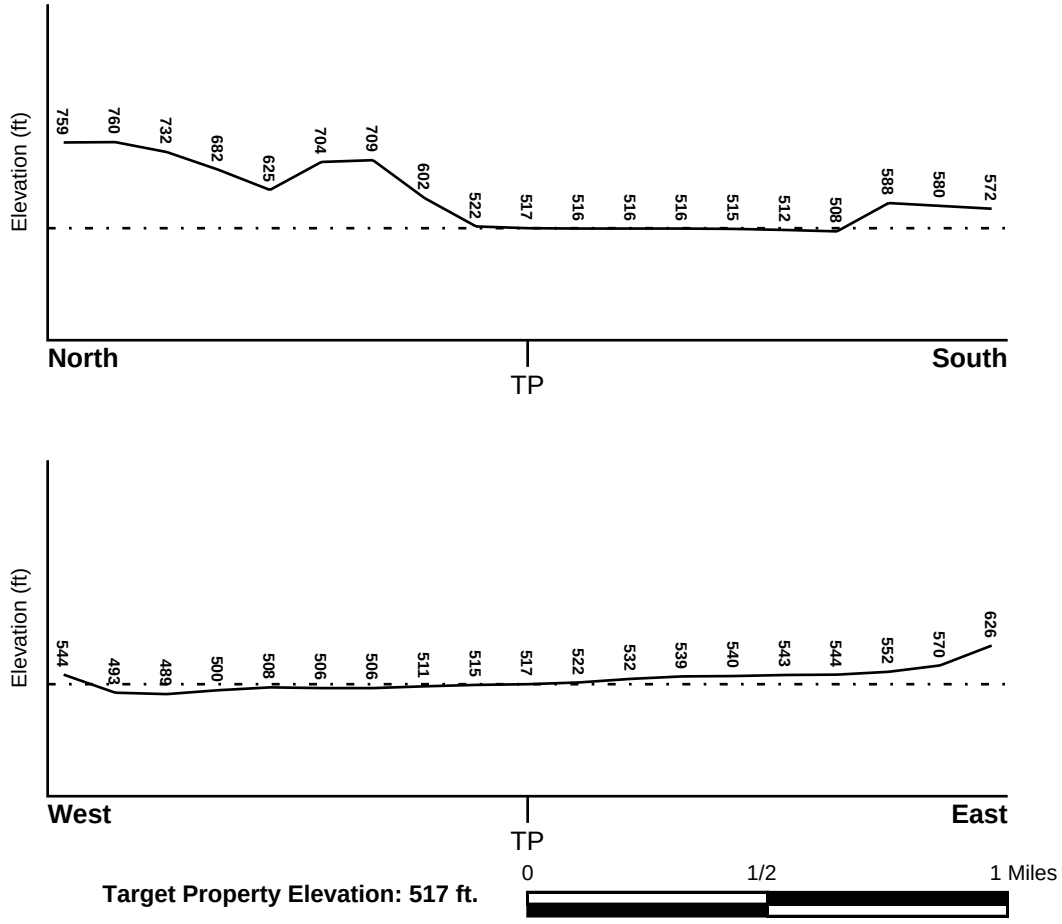
**TOPOGRAPHIC INFORMATION**

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General South

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**HYDROLOGIC INFORMATION**

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

**FEMA FLOOD ZONE**

| Flood Plain Panel at Target Property | FEMA Source Type |
|---|---|
| 06111C0817E | FEMA FIRM Flood data |

| Additional Panels in search area: | FEMA Source Type |
|---|---|
| 06111C0836E | FEMA FIRM Flood data |
| 06111C0819E | FEMA FIRM Flood data |
| 06111C0838E | FEMA FIRM Flood data |

**NATIONAL WETLAND INVENTORY**

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| MOORPARK | YES - refer to the Overview Map and Detail Map |

**HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

***Site-Specific Hydrogeological Data*:***

| | |
|---|---|
| Search Radius: | 1.25 miles |
| Status: | Not found |

**AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| Not Reported | | |

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

**GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT**

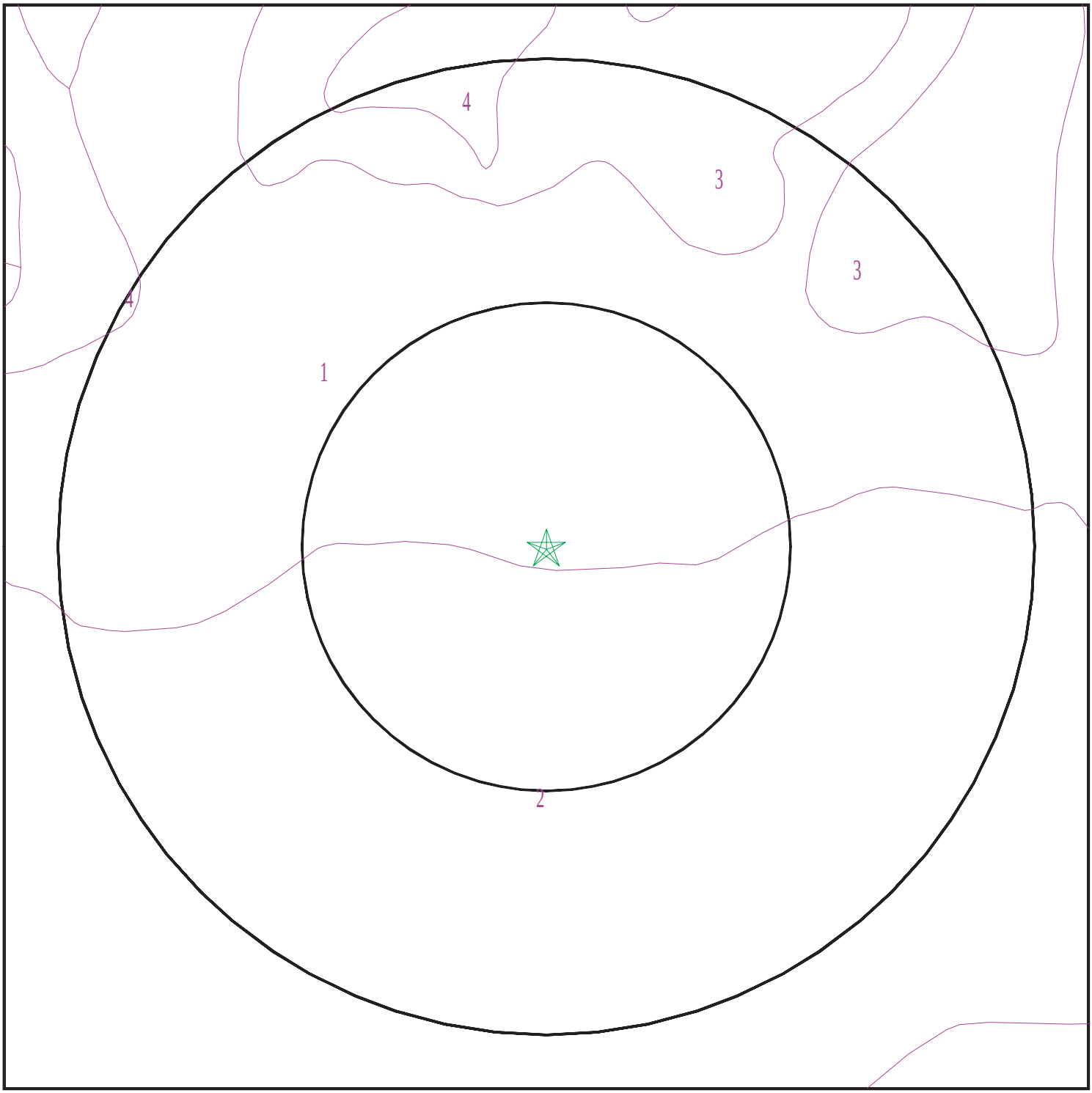
| | |
|---|---|
| Era: | Cenozoic |
| System: | Tertiary |
| Series: | Pliocene |
| Code: | Tp *(decoded above as Era, System & Series)* |

**GEOLOGIC AGE IDENTIFICATION**

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 05306248.2r




Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

| | | | |
|---|---|---|---|
| SITE NAME: | Moorpark RR Depot | CLIENT: | Rincon |
| ADDRESS: | E High Street<br>Moorpark CA 93021 | CONTACT: | Sarah Larese |
| | | INQUIRY #: | 05306248.2r |
| LAT/LONG: | 34.28516 / 118.880118 | DATE: | May 22, 2018 4:22 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY**

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

---

**Soil Map ID: 1**

Soil Component Name: GARRETSON

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

**Soil Layer Information**

| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
|---|---|---|---|---|---|---|---|
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 22 inches | loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt. | Max: 14 Min: 4 | Max: 7.3 Min: 6.1 |
| 2 | 22 inches | 59 inches | loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay | Max: 14 Min: 4 | Max: 7.8 Min: 6.1 |

**Soil Map ID: 2**

Soil Component Name: MOCHO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 16 inches | loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay | Max: 14<br>Min: 4 | Max: 8.4<br>Min: 7.9 |
| 2 | 16 inches | 59 inches | loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay | Max: 14<br>Min: 4 | Max: 8.4<br>Min: 7.9 |

**Soil Map ID: 3**

Soil Component Name: SOPER

Soil Surface Texture: gravelly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 11 inches | gravelly loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 14<br>Min: 4 | Max: 6.5<br>Min: 5.6 |
| 2 | 11 inches | 40 inches | very gravelly clay loam | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel | Max: 4<br>Min: 1.4 | Max: 7.8<br>Min: 6.1 |
| 3 | 40 inches | 44 inches | weathered bedrock | Not reported | Not reported | Max: 0<br>Min: 0 | Max: Min: |

---

**Soil Map ID: 4**

Soil Component Name: CHESTERTON

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 9 inches | coarse sandy loam | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 42<br>Min: 14 | Max: 6.5<br>Min: 5.6 |
| 2 | 9 inches | 25 inches | sandy clay | Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay | Max: 0.42<br>Min: 0.01 | Max: 6.5<br>Min: 5.5 |
| 3 | 25 inches | 35 inches | indurated | Not reported | Not reported | Max:<br>Min: | Max: Min: |
| 4 | 35 inches | 59 inches | sandy loam | Not reported | COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. | Max: 4<br>Min: 1.4 | Max: 7.8<br>Min: 7.4 |

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

**WELL SEARCH DISTANCE INFORMATION**

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 0.001 miles |
| State Database | 1.000 |

**FEDERAL USGS WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No Wells Found | | |

**FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No PWS System Found | | |

Note: PWS System location is not always the same as well location.

**STATE DATABASE WELL INFORMATION**

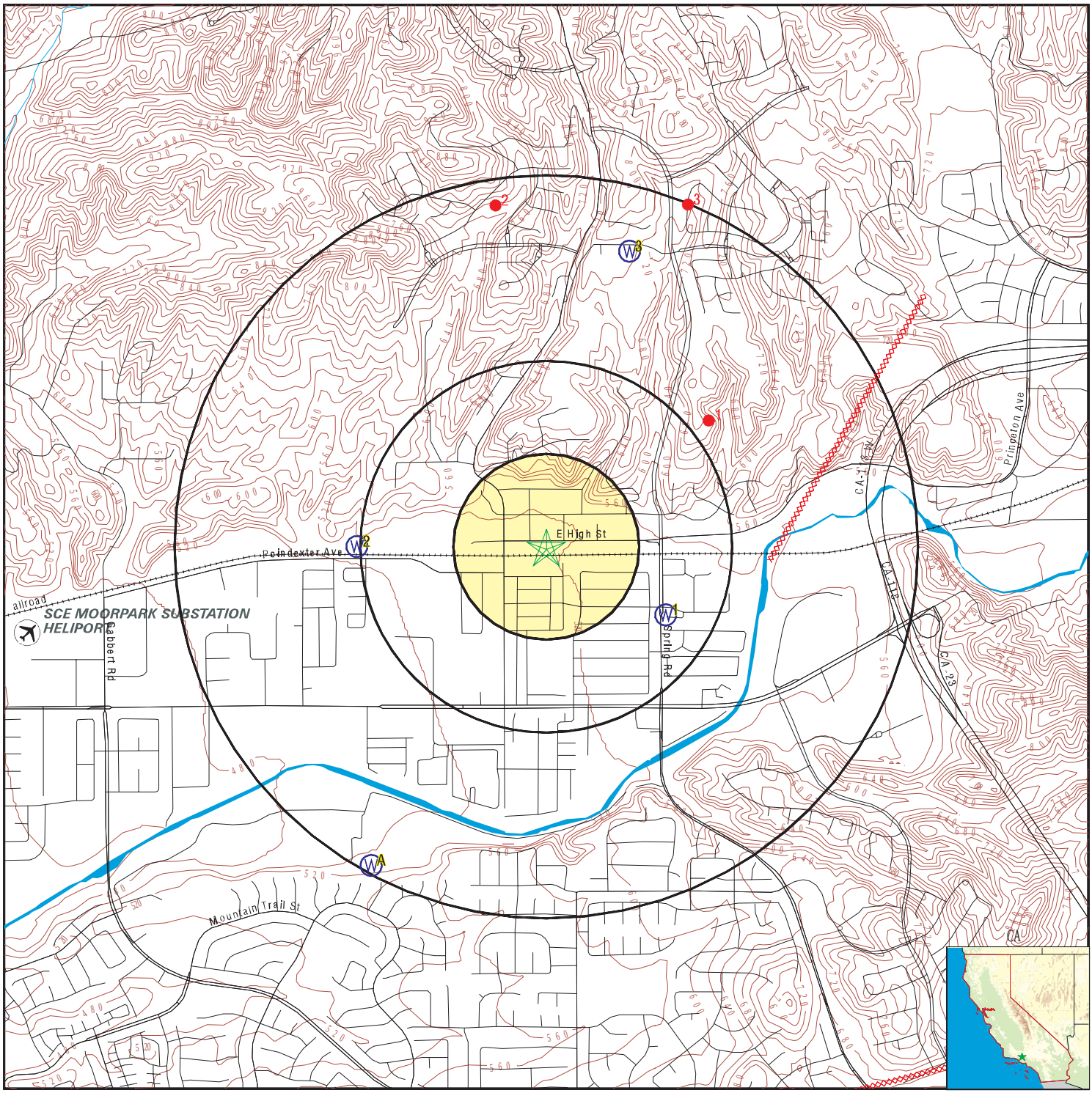
| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 1 | CADW60000016853 | 1/4 - 1/2 Mile ESE |
| 2 | CADW60000016854 | 1/2 - 1 Mile West |
| 3 | CADW60000019847 | 1/2 - 1 Mile NNE |
| A4 | CADW60000016860 | 1/2 - 1 Mile SSW |
| A5 | CADW60000033255 | 1/2 - 1 Mile SSW |

**OTHER STATE DATABASE INFORMATION**

**STATE OIL/GAS WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 1 | CAOG11000290596 | 1/2 - 1 Mile NE |
| 2 | CAOG11000284968 | 1/2 - 1 Mile North |
| 3 | CAOG11000284965 | 1/2 - 1 Mile NNE |

# PHYSICAL SETTING SOURCE MAP - 05306248.2r




- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

| | | | |
|---|---|---|---|
| SITE NAME: | Moorpark RR Depot | CLIENT: | Rincon |
| ADDRESS: | E High Street<br>Moorpark CA 93021 | CONTACT: | Sarah Larese |
| | | INQUIRY #: | 05306248.2r |
| LAT/LONG: | 34.28516 / 118.880118 | DATE: | May 22, 2018 4:22 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

| | Database | EDR ID Number |
|---|---|---|
| **1**<br>**ESE**<br>**1/4 - 1/2 Mile**<br>**Higher** | **CA WELLS** | **CADW60000016853** |

| | |
|---|---|
| Objectid: | 16853 |
| Latitude: | 34.2825 |
| Longitude: | -118.8745 |
| Site code: | 342825N1188745W001 |
| State well numbe: | 02N19W04K001S |
| Local well name: | '' |
| Well use id: | 6 |
| Well use descrip: | Unknown |
| County id: | 56 |
| County name: | Ventura |
| Basin code: | '4-8' |
| Basin desc: | Las Posas Valley |
| Dwr region id: | 80238 |
| Dwr region: | Southern Region Office |
| Site id: | CADW60000016853 |

---

| | | |
|---|---|---|
| **2**<br>**West**<br>**1/2 - 1 Mile**<br>**Lower** | **CA WELLS** | **CADW60000016854** |

| | |
|---|---|
| Objectid: | 16854 |
| Latitude: | 34.28517 |
| Longitude: | -118.88902 |
| Site code: | 342853N1188895W001 |
| State well numbe: | 02N19W05K001S |
| Local well name: | '02N19W05K01S' |
| Well use id: | 3 |
| Well use descrip: | Irrigation |
| County id: | 56 |
| County name: | Ventura |
| Basin code: | '4-8' |
| Basin desc: | Las Posas Valley |
| Dwr region id: | 80238 |
| Dwr region: | Southern Region Office |
| Site id: | CADW60000016854 |

---

| | | |
|---|---|---|
| **3**<br>**NNE**<br>**1/2 - 1 Mile**<br>**Higher** | **CA WELLS** | **CADW60000019847** |

| | |
|---|---|
| Objectid: | 19847 |
| Latitude: | 34.2967 |
| Longitude: | -118.8762 |
| Site code: | 342967N1188762W001 |
| State well numbe: | 03N19W33P003S |
| Local well name: | '' |
| Well use id: | 6 |
| Well use descrip: | Unknown |
| County id: | 56 |
| County name: | Ventura |

| | |
|---|---|
| Basin code: | '4-8' |
| Basin desc: | Las Posas Valley |
| Dwr region id: | 80238 |
| Dwr region: | Southern Region Office |
| Site id: | CADW60000019847 |

---

**A4**
**SSW** **CA WELLS** **CADW60000016860**
**1/2 - 1 Mile**
**Lower**

| | |
|---|---|
| Objectid: | 16860 |
| Latitude: | 34.27263 |
| Longitude: | -118.887696 |
| Site code: | 342722N1188870W001 |
| State well numbe: | 02N19W08H002S |
| Local well name: | '02N19W08H02S' |
| Well use id: | 3 |
| Well use descrip: | Irrigation |
| County id: | 56 |
| County name: | Ventura |
| Basin code: | '4-8' |
| Basin desc: | Las Posas Valley |
| Dwr region id: | 80238 |
| Dwr region: | Southern Region Office |
| Site id: | CADW60000016860 |

---

**A5**
**SSW** **CA WELLS** **CADW60000033255**
**1/2 - 1 Mile**
**Lower**

| | |
|---|---|
| Objectid: | 33255 |
| Latitude: | 34.2728 |
| Longitude: | -118.889 |
| Site code: | 342728N1188890W001 |
| State well numbe: | 02N19W08G003S |
| Local well name: | '' |
| Well use id: | 6 |
| Well use descrip: | Unknown |
| County id: | 56 |
| County name: | Ventura |
| Basin code: | '4-8' |
| Basin desc: | Las Posas Valley |
| Dwr region id: | 80238 |
| Dwr region: | Southern Region Office |
| Site id: | CADW60000033255 |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

**1**
**NE**
**1/2 - 1 Mile**

**OIL_GAS** **CAOG11000290596**

| | | | |
|---|---|---|---|
| District nun: | 2 | Api number: | 11105681 |
| Blm well: | N | Redrill can: | No |
| Dryhole: | Y | Well status: | P |
| Operator name: | ExxonMobil Corporation | | |
| County name: | Ventura | Fieldname: | Any Field |
| Area name: | Any Area | Section: | 4 |
| Township: | 02N | Range: | 19W |
| Base meridian: | SB | Elevation: | Not Reported |
| Gissourcec: | hud | | |
| Comments: | Not Reported | | |
| Leasename: | Edd H. Williams et ux | Wellnumber: | B-1 |
| Epawell: | N | Hydraulica: | N |
| Confidenti: | N | Spuddate: | 19-AUG-55 |
| Welldeptha: | 0 | | |
| Redrillfoo: | 0 | | |
| Abandonedd: | Not Reported | Completion: | Not Reported |
| Directiona: | Not Directionally drilled | Gissymbol: | PDH |
| Site id: | CAOG11000290596 | | |

---

**2**
**North**
**1/2 - 1 Mile**

**OIL_GAS** **CAOG11000284968**

| | | | |
|---|---|---|---|
| District nun: | 2 | Api number: | 11100864 |
| Blm well: | N | Redrill can: | No |
| Dryhole: | Y | Well status: | P |
| Operator name: | Petan Co. | | |
| County name: | Ventura | Fieldname: | Moorpark (ABD) |
| Area name: | Any Area | Section: | 33 |
| Township: | 03N | Range: | 19W |
| Base meridian: | SB | Elevation: | Not Reported |
| Gissourcec: | gps | | |
| Comments: | Not Reported | | |
| Leasename: | Not Reported | Wellnumber: | 1 |
| Epawell: | N | Hydraulica: | N |
| Confidenti: | N | Spuddate: | 31-MAY-60 |
| Welldeptha: | 0 | | |
| Redrillfoo: | 0 | | |
| Abandonedd: | Not Reported | Completion: | Not Reported |
| Directiona: | Not Directionally drilled | Gissymbol: | PDH |
| Site id: | CAOG11000284968 | | |

---

**3**
**NNE**
**1/2 - 1 Mile**

**OIL_GAS** **CAOG11000284965**

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

| | | | |
|---|---|---|---|
| District nun: | 2 | Api number: | 11100861 |
| Blm well: | N | Redrill can: | No |
| Dryhole: | Y | Well status: | P |
| Operator name: | Chevron U.S.A. Inc. | | |
| County name: | Ventura | Fieldname: | Moorpark (ABD) |
| Area name: | Any Area | Section: | 33 |
| Township: | 03N | Range: | 19W |
| Base meridian: | SB | Elevation: | Not Reported |
| Gissourcec: | hud | | |
| Comments: | Not Reported | | |
| Leasename: | Williams | Wellnumber: | 1 |
| Epawell: | N | Hydraulica: | N |
| Confidenti: | N | Spuddate: | Not Reported |
| Welldeptha: | 0 | | |
| Redrillfoo: | 0 | | |
| Abandonedd: | Not Reported | Completion: | Not Reported |
| Directiona: | Not Directionally drilled | Gissymbol: | PDH |
| Site id: | CAOG11000284965 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

State Database: CA Radon

Radon Test Results

| Zipcode | Num Tests | > 4 pCi/L |
|---|---|---|
| 93021 | 255 | 11 |

Federal EPA Radon Zone for VENTURA County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

---

Federal Area Radon Information for Zip Code: 93021

Number of sites tested: 4

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area - 1st Floor | 1.625 pCi/L | 100% | 0% | 0% |
| Living Area - 2nd Floor | Not Reported | Not Reported | Not Reported | Not Reported |
| Basement | Not Reported | Not Reported | Not Reported | Not Reported |

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

## HYDROGEOLOGIC INFORMATION

AQUIFLOW$^{R}$ Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

## OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

**STREET AND ADDRESS INFORMATION**

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# Appendix C

Historical Research Documentation

Moorpark RR Depot

E High Street

Moorpark, CA 93021

Inquiry Number: 5306248.4

May 22, 2018

# EDR Historical Topo Map Report

## with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Historical Topo Map Report

05/22/18

**Site Name:**

Moorpark RR Depot
E High Street
Moorpark, CA 93021
EDR Inquiry # 5306248.4

**Client Name:**

Rincon
180 North Ashwood Avenue
Ventura, CA 93003-0000
Contact: Sarah Larese

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Rincon were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

***Search Results:***

**P.O.#** 18-05844
**Project:** 18-05844

***Coordinates:***

| | |
|---|---|
| **Latitude:** | 34.28516 34° 17' 7" North |
| **Longitude:** | -118.880118 -118° 52' 48" West |
| **UTM Zone:** | Zone 11 North |
| **UTM X Meters:** | 326946.06 |
| **UTM Y Meters:** | 3795374.45 |
| **Elevation:** | 517.00' above sea level |

**Maps Provided:**

2012
1974
1969
1951
1944
1941
1921
1903

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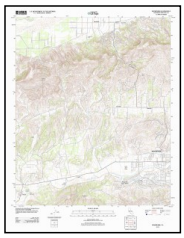
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## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2012 Source Sheets



Moorpark
2012
7.5-minute, 24000



Simi Valley West
2012
7.5-minute, 24000

### 1974 Source Sheets



Moorpark
1974
7.5-minute, 24000
Aerial Photo Revised 1969

### 1969 Source Sheets



Simi
1969
7.5-minute, 24000
Aerial Photo Revised 1947



Moorpark
1969
7.5-minute, 24000
Aerial Photo Revised 1969



Simi Valley West
1969
7.5-minute, 24000
Aerial Photo Revised 1969

### 1951 Source Sheets



Simi
1951
7.5-minute, 24000
Aerial Photo Revised 1947

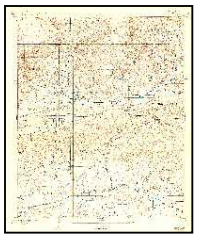


Moorpark
1951
7.5-minute, 24000
Aerial Photo Revised 1947

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1944 Source Sheets



PIRU
1944
15-minute, 62500

### 1941 Source Sheets



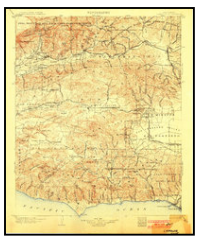
Piru
1941
15-minute, 62500

### 1921 Source Sheets



Piru
1921
15-minute, 62500

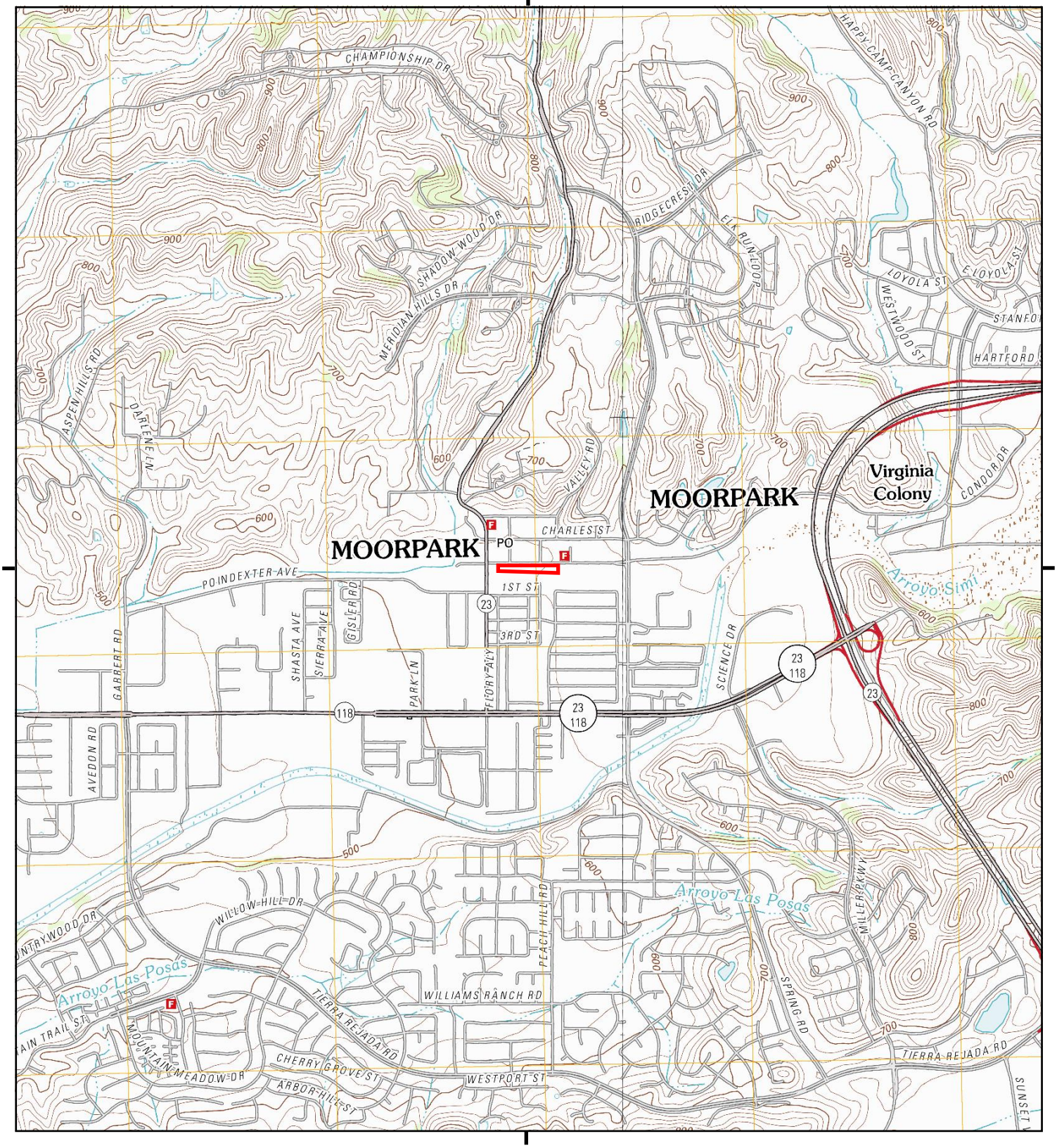
### 1903 Source Sheets



Camulos
1903
30-minute, 125000

# Historical Topo Map

2012




This report includes information from the following map sheet(s).

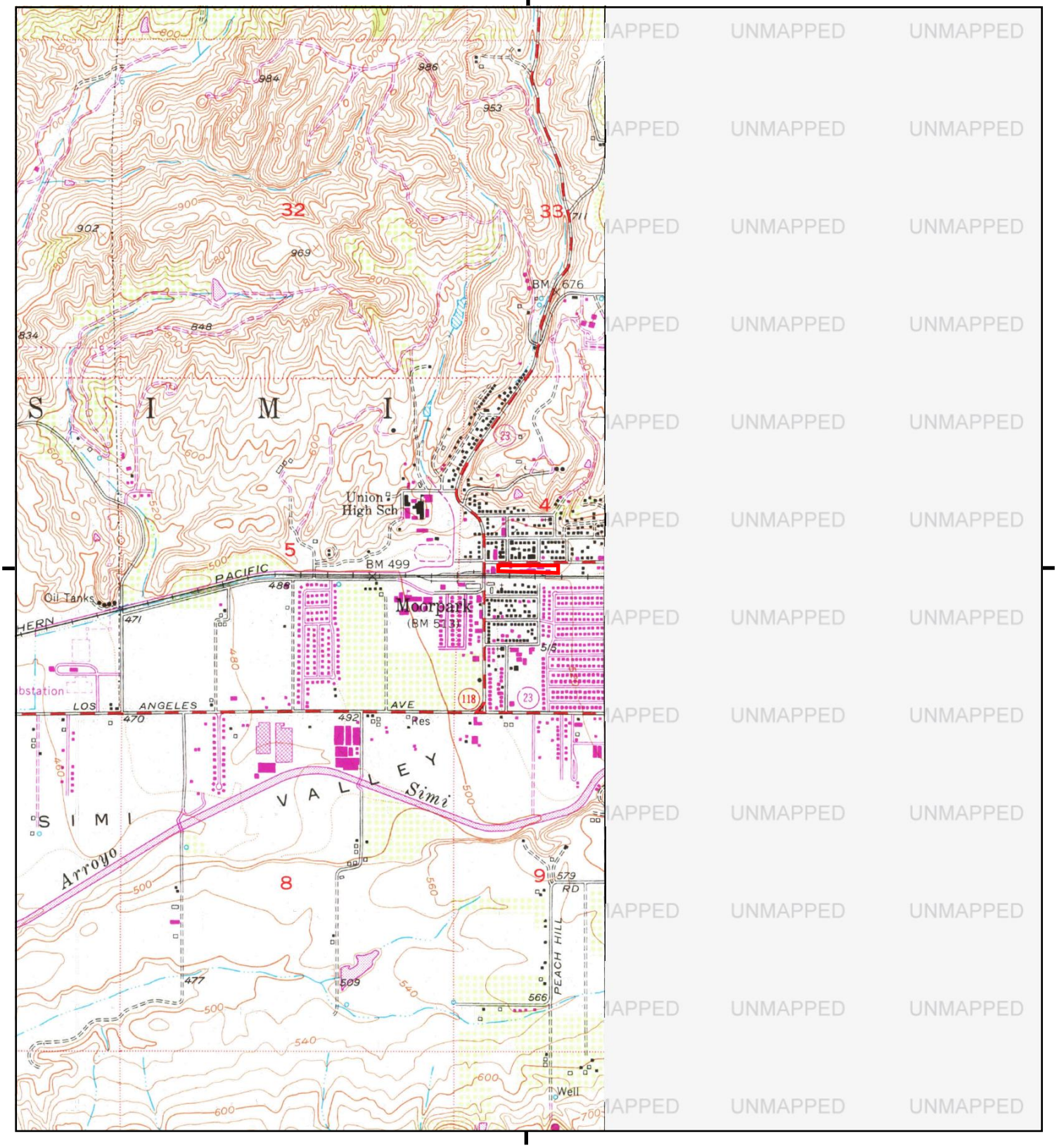
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Moorpark, 2012, 7.5-minute
NE, Simi Valley West, 2012, 7.5-minute

SITE NAME: Moorpark RR Depot
ADDRESS: E High Street
Moorpark, CA 93021
CLIENT: Rincon

N




This report includes information from the following map sheet(s).

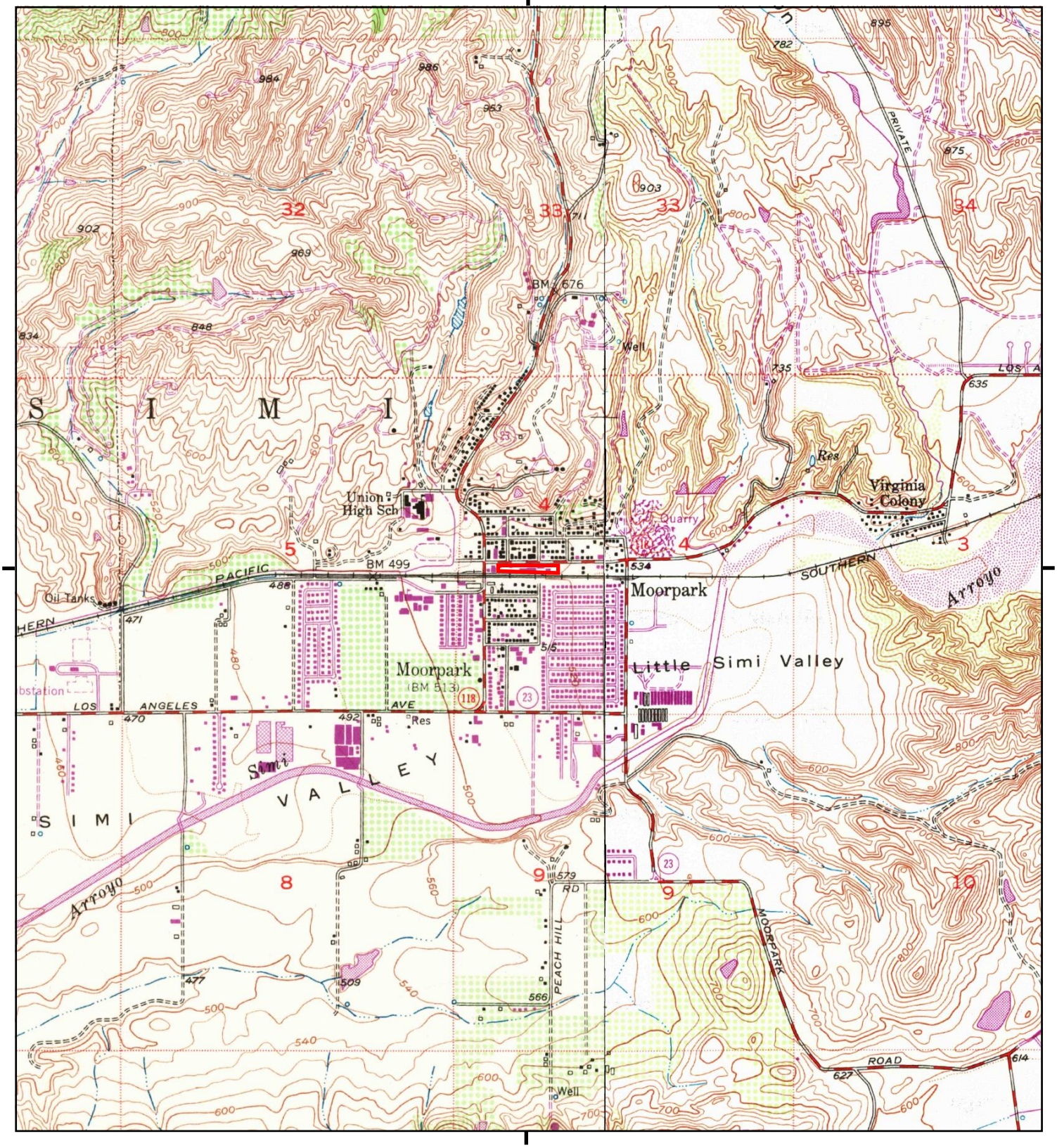
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Moorpark, 1974, 7.5-minute

SITE NAME: Moorpark RR Depot
ADDRESS: E High Street
Moorpark, CA 93021
CLIENT: Rincon

N




This report includes information from the following map sheet(s).

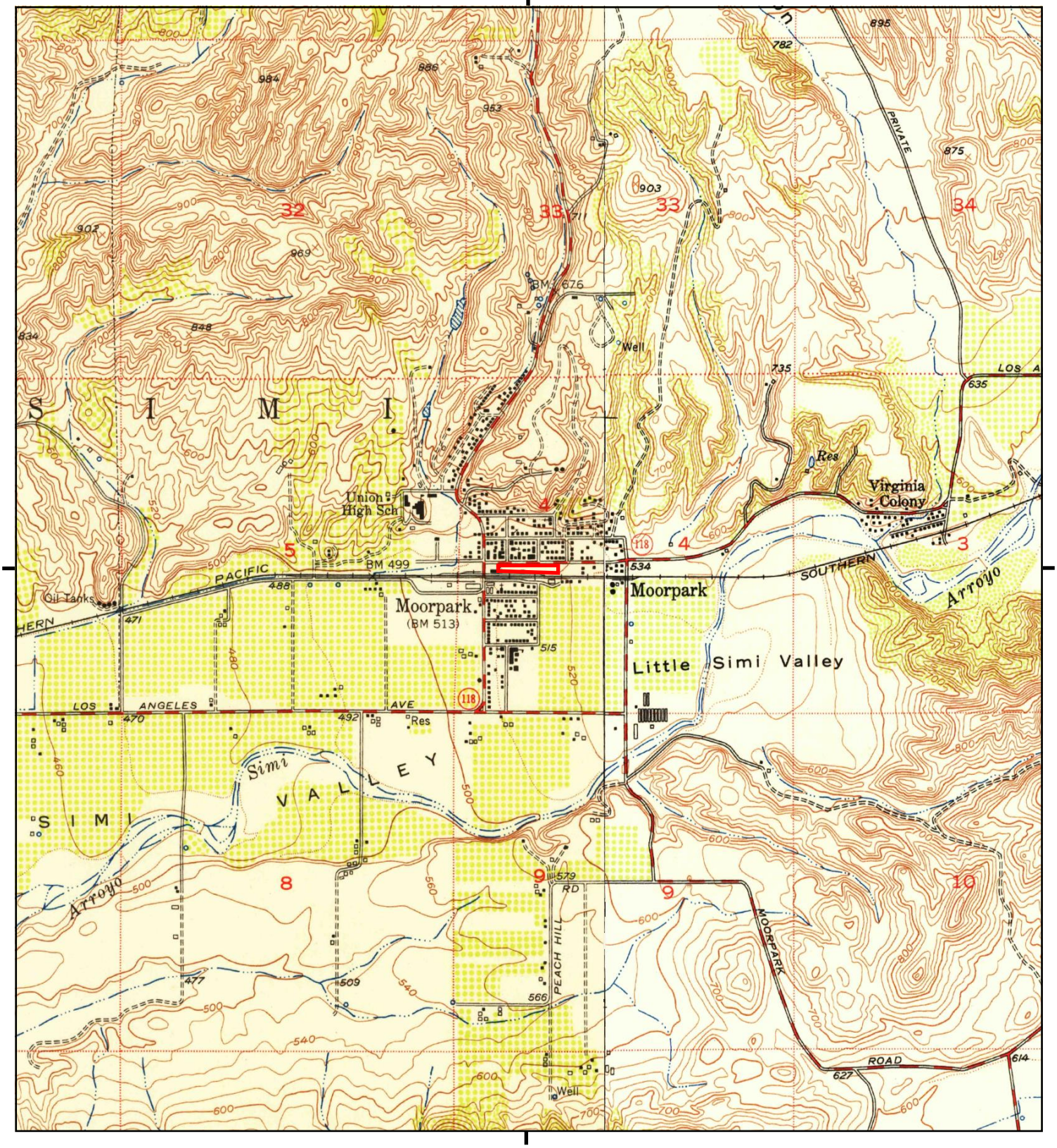
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Moorpark, 1969, 7.5-minute
NE, Simi, 1969, 7.5-minute
NE, Simi Valley West, 1969, 7.5-minute

SITE NAME: Moorpark RR Depot
ADDRESS: E High Street
Moorpark, CA 93021
CLIENT: Rincon

N




This report includes information from the following map sheet(s).

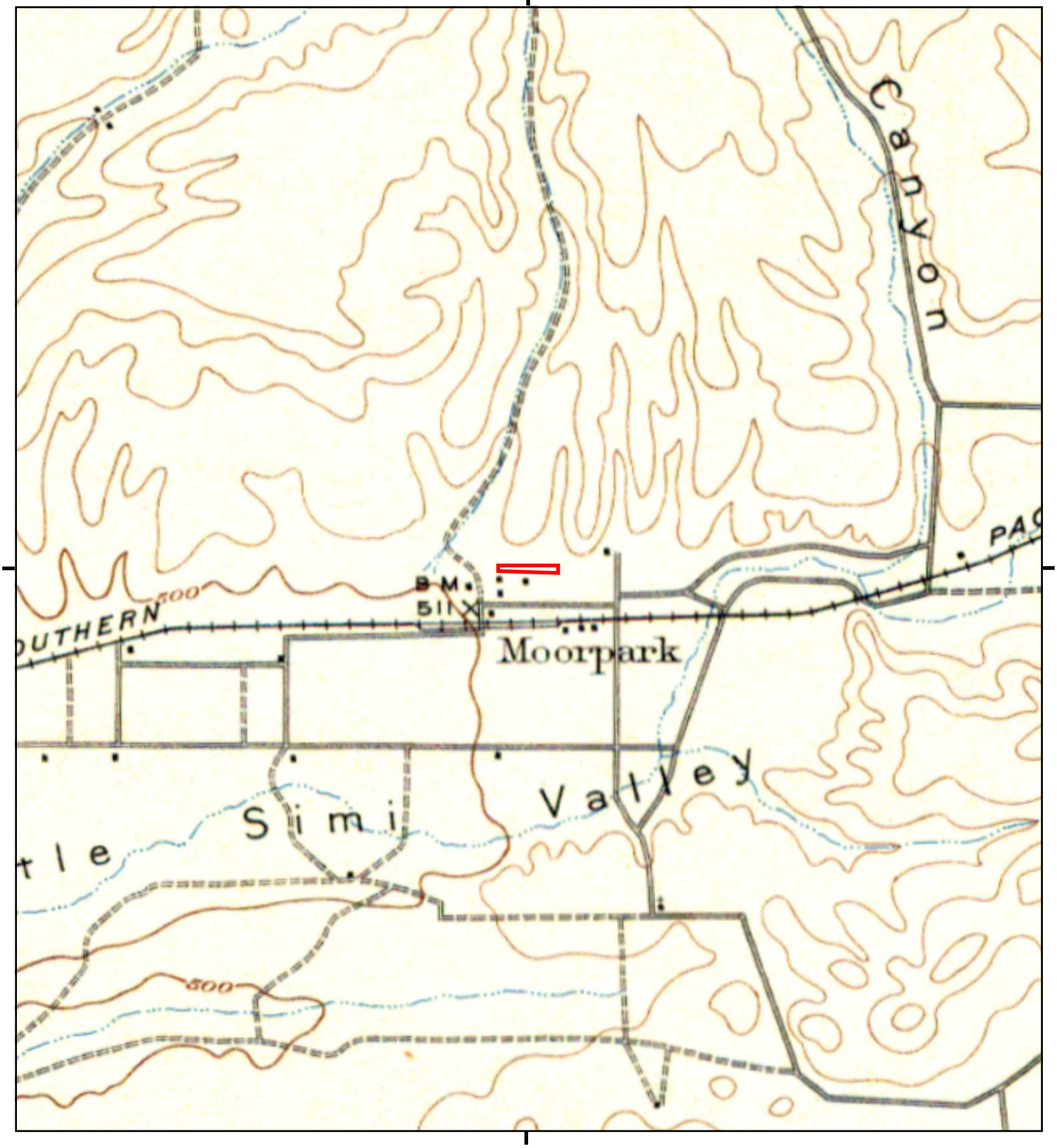
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Moorpark, 1951, 7.5-minute
NE, Simi, 1951, 7.5-minute

SITE NAME: Moorpark RR Depot
ADDRESS: E High Street
Moorpark, CA 93021
CLIENT: Rincon

N




This report includes information from the following map sheet(s).

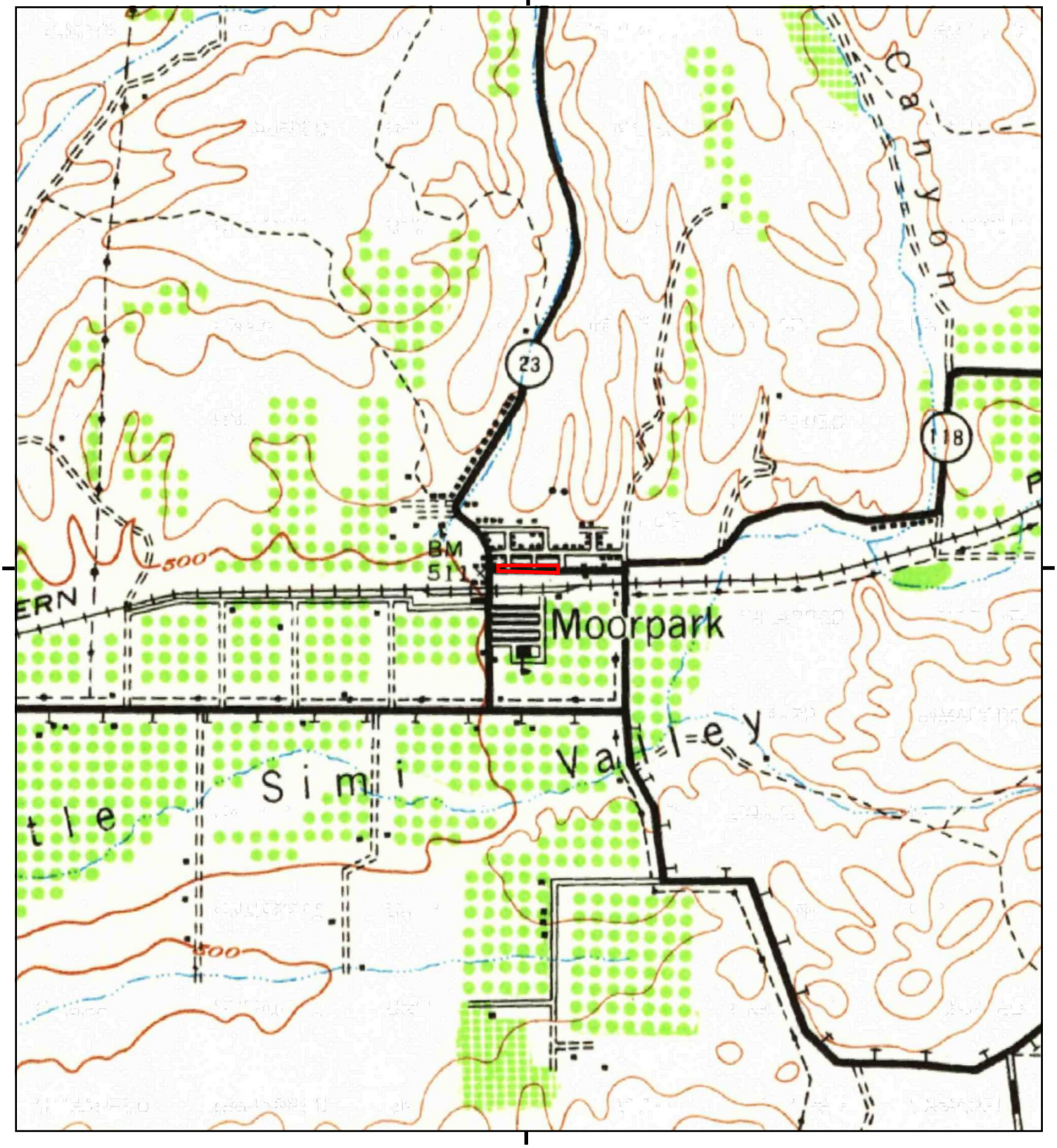
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, PIRU, 1944, 15-minute

SITE NAME: Moorpark RR Depot
ADDRESS: E High Street
Moorpark, CA 93021
CLIENT: Rincon

N




This report includes information from the following map sheet(s).

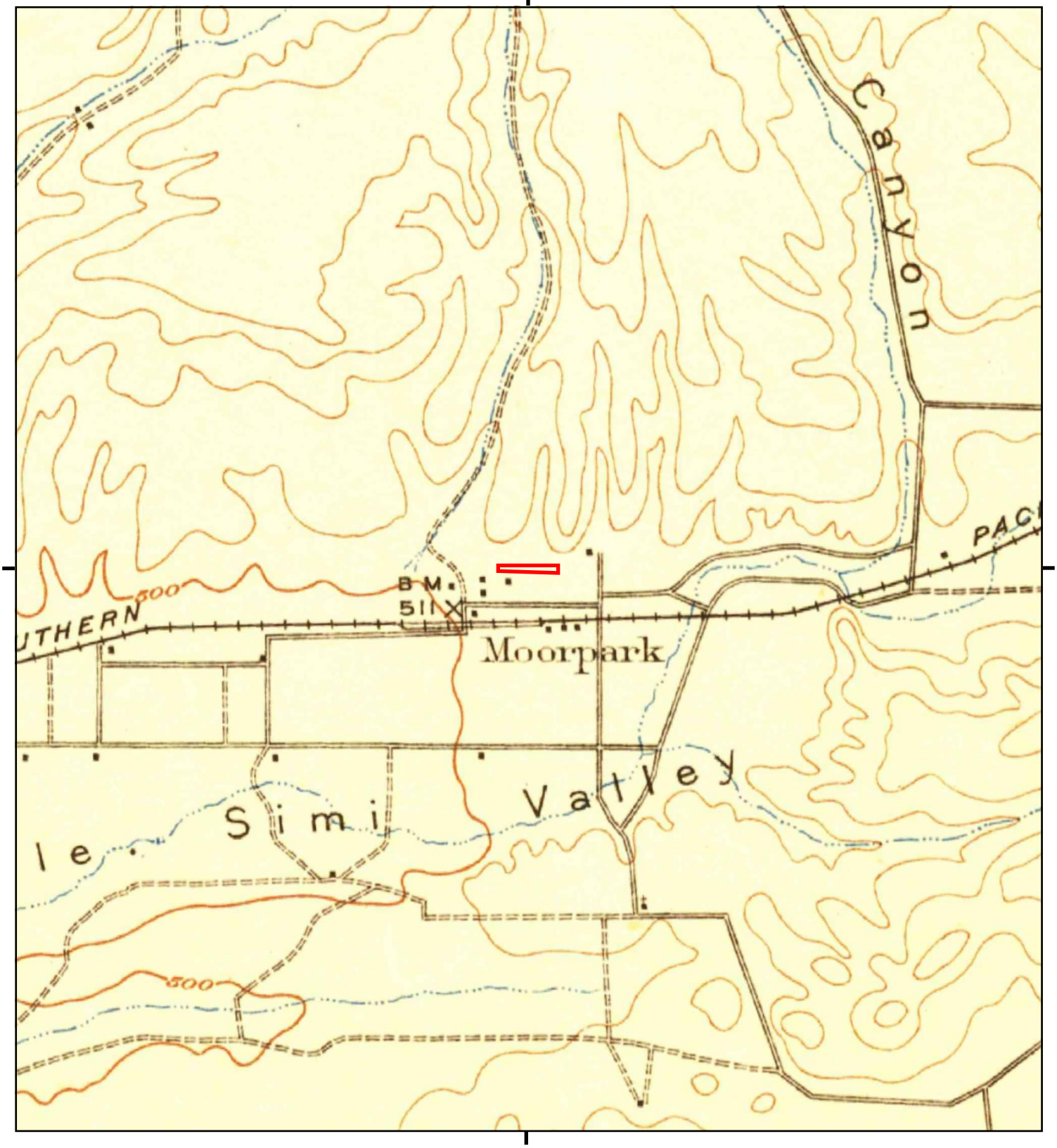
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Piru, 1941, 15-minute

SITE NAME: Moorpark RR Depot
ADDRESS: E High Street
Moorpark, CA 93021
CLIENT: Rincon

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Piru, 1921, 15-minute

SITE NAME: Moorpark RR Depot
ADDRESS: E High Street
Moorpark, CA 93021
CLIENT: Rincon

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Camulos, 1903, 30-minute

SITE NAME: Moorpark RR Depot
ADDRESS: E High Street
Moorpark, CA 93021
CLIENT: Rincon

N

**Moorpark RR Depot**

E High Street

Moorpark, CA 93021

Inquiry Number: 5306248.8

May 22, 2018

# The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

05/22/18

**Site Name:**

Moorpark RR Depot
E High Street
Moorpark, CA 93021
EDR Inquiry # 5306248.8

**Client Name:**

Rincon
180 North Ashwood Avenue
Ventura, CA 93003-0000
Contact: Sarah Larese

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

## *Search Results:*

| *Year* | *Scale* | *Details* | *Source* |
|---|---|---|---|
| 2016 | 1"=500' | Flight Year: 2016 | USDA/NAIP |
| 2012 | 1"=500' | Flight Year: 2012 | USDA/NAIP |
| 2009 | 1"=500' | Flight Year: 2009 | USDA/NAIP |
| 2005 | 1"=500' | Flight Year: 2005 | USDA/NAIP |
| 1994 | 1"=500' | Acquisition Date: June 01, 1994 | USGS/DOQQ |
| 1985 | 1"=500' | Flight Date: September 12, 1985 | USDA |
| 1978 | 1"=500' | Flight Date: September 21, 1978 | USDA |
| 1969 | 1"=500' | Flight Date: July 25, 1969 | USGS |
| 1959 | 1"=500' | Flight Date: August 21, 1959 | USDA |
| 1954 | 1"=500' | Flight Date: January 14, 1954 | USGS |
| 1947 | 1"=500' | Flight Date: August 20, 1947 | USGS |
| 1938 | 1"=500' | Flight Date: May 09, 1938 | USDA |

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INQUIRY #: 5306248.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 5306248.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 5306248.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 5306248.8
YEAR: 2005
= 500'
N
EDR


INQUIRY #: 5306248.8
YEAR: 1994
= 500'
N
EDR


INQUIRY #: 5306248.8
YEAR: 1985
= 500'
N
EDR



INQUIRY #: 5306248.8

YEAR: 1978

= 500'

N

EDR


INQUIRY #: 5306248.8
YEAR: 1969
= 500'
N
EDR



INQUIRY #: 5306248.8

YEAR: 1959

= 500'

N

EDR



INQUIRY #: 5306248.8

YEAR: 1954

= 500'

N

EDR



INQUIRY #: 5306248.8

YEAR: 1947

= 500'

N

EDR


INQUIRY #: 5306248.8
YEAR: 1938
= 500'
N
EDR

**Moorpark RR Depot**
E High Street
Moorpark, CA 93021

Inquiry Number: 5306248.5
May 22, 2018

# The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

# TABLE OF CONTENTS

## SECTION

**Executive Summary**

**Findings**

**City Directory Images**

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

## DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

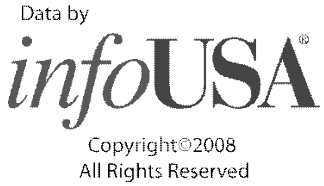
Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1926 through 2014. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

## RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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## RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

| Year | Source | TP | Adjoining | Text Abstract | Source Image |
|---|---|---|---|---|---|
| 2014 | EDR Digital Archive | - | X | X | - |
| 2010 | EDR Digital Archive | - | X | X | - |
| 2005 | EDR Digital Archive | - | X | X | - |
| 2002 | Haines & Company, Inc. | - | X | X | - |
| 2000 | Pacific Bell Telephone Co | - | - | - | - |
| 1996 | Pacific Bell | - | X | X | - |
| 1993 | GTE | - | X | X | - |
| 1986 | Pacific Bell | - | X | X | - |
| 1985 | Pacific Telephone Co | - | X | X | - |
| 1980 | Polk | - | X | X | - |
| 1976 | R. L. Polk & Co. | - | X | X | - |

# EXECUTIVE SUMMARY

| Year | Source | TP | Adjoining | Text Abstract | Source Image |
|---|---|---|---|---|---|
| 1975 | General Telephone Company of California | - | X | X | - |
| | Pacific Telephone Co | - | X | X | - |
| 1971 | B&G Publications | - | X | X | - |
| 1970 | General Telephone Company of California | - | X | X | - |
| 1968 | B&G Publications | - | X | X | - |
| 1965 | R. L. Polk & Co. | - | X | X | - |
| 1964 | Pacific Telephone Co | - | X | X | - |
| 1961 | R. L. Polk & Co. | - | X | X | - |
| 1957 | R. L. Polk  Co. of California | - | X | X | - |
| 1953 | R. L. Polk & Co. of California | - | X | X | - |
| 1949 | Los Angeles Directory Co. | - | X | X | - |
| 1940 | Southern California | - | X | X | - |
| 1930 | Los Angeles Directory Co. | - | X | X | - |
| 1926 | Los Angeles Directory Co. | - | X | X | - |

# FINDINGS

## TARGET PROPERTY INFORMATION

### ADDRESS

E High Street
Moorpark, CA 93021

### FINDINGS DETAIL

Target Property research detail.

# FINDINGS

## ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

### 1 SOUTH C ST

**43 1 SOUTH C ST**

| Year | Uses | Source |
|---|---|---|
| 1975 | Asbury Stanley DO | Pacific Telephone Co |

### 1 SOUTH F ST

**40 1 SOUTH F ST**

| Year | Uses | Source |
|---|---|---|
| 1975 | Tolliver Wm T | Pacific Telephone Co |

### 1ST

**40 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | MEDRANO SOLEDAD | B&G Publications |

**49 1ST**

| Year | Uses | Source |
|---|---|---|
| 1985 | Haswell D Equipment Co Inc | Pacific Telephone Co |
| 1971 | MC FADDEN R | B&G Publications |
| 1964 | Dencker Herman | Pacific Telephone Co |

**65 1ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Bauer Lynda Sue | Pacific Bell |
| 1971 | YOUNG CORA S MRS | B&G Publications |
| 1964 | Young Cora S Mrs | Pacific Telephone Co |

**77 1ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Moorpark | GTE |
| | Catholic Charities Oasis | GTE |
| | Catholic Charities | GTE |
| | Moorpark | GTE |
| | Catholic Charities Oasis | GTE |

# FINDINGS

**80 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | CLEMENTS I L | B&G Publications |

**96 1ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Moorpark Food Pantry Inc | Pacific Bell |
| 1971 | RODRIGUEZ N | B&G Publications |

**97 1ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Alcala Raodel | Pacific Bell |
| 1985 | Alcala Raodel | Pacific Telephone Co |
| 1971 | GOODMAN J M | B&G Publications |
| 1964 | Goodman Jewel M | Pacific Telephone Co |

**102 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | NO RETURN | B&G Publications |

**112 1ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Barren Pedro Jr | GTE |
| | Barren Pedro Jr | GTE |
| 1971 | WELLS JAMES J | B&G Publications |

**113 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | FRIESS BILLIE | B&G Publications |

**124 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | CRABILL FRED | B&G Publications |

**125 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | AMESCUA CAYLOS | B&G Publications |

**136 1ST**

| Year | Uses | Source |
|---|---|---|
| 1985 | Valerio Benito S Sr | Pacific Telephone Co |
| 1971 | VALERIO BEN | B&G Publications |

# FINDINGS

**143 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | NO RETURN | B&G Publications |

**146 1ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Valerio Jesse | Pacific Bell |
| 1985 | Valerio Jesse | Pacific Telephone Co |
| 1964 | Barker Wni H | Pacific Telephone Co |

**147 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | RHOADS JOSEPH | B&G Publications |
| 1964 | White Jess | Pacific Telephone Co |

**149 1ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Salgado Miguel S | Pacific Bell |
| 1971 | TRi CKEY BELLE MRS | B&G Publications |

**160 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | GARCIA PAUL | B&G Publications |

**164 1ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Fernandez Consuelo | Pacific Bell |
| 1985 | Femandez Consuelo | Pacific Telephone Co |
| 1971 | VASQUEZ JOE | B&G Publications |

**167 1ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Herbert F J | Pacific Bell |
| | Herbert Edna | Pacific Bell |
| 1971 | HERBERT EDN | B&G Publications |
| 1964 | Herbert Edna | Pacific Telephone Co |

**172 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | HEDRICK ELMER | B&G Publications |
| 1964 | Hedrick Elmer S | Pacific Telephone Co |

# FINDINGS

**173 1ST**

| Year | Uses | Source |
|---|---|---|
| 1964 | Carter Mable | Pacific Telephone Co |

**187 1ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Baraas Joseph @Oxnard | GTE |
| | Baraas Jose | GTE |
| | Baraas Jose | GTE |
| | Baralas Jose& Brenda @Oxnard | GTE |
| 1971 | CARDOZA A | B&G Publications |

**191 1ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Herrera Jose D | Pacific Bell |
| | Herrera Jose L | Pacific Bell |
| 1971 | PAIGE LINDALEE | B&G Publications |
| | CASTEEL RUBYLEE | B&G Publications |
| | SMITH GARY | B&G Publications |
| | STEPHENS ETHEL | B&G Publications |

**194 1ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | BROWN LAUR | B&G Publications |

## 1ST ST

**1 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | STPOINTMECH | Haines & Company, Inc. |
| | DSGNPFAb 80 N | Haines & Company, Inc. |

**6 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Frar kent | GTE |
| | Frar kent | GTE |
| 1986 | Or | Pacific Bell |

**7 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MONARCH | Haines & Company, Inc. |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2002 | SELECTADVISORS | Haines & Company, Inc. |
| | CONSTRRSC | Haines & Company, Inc. |
| | RICHTER SPECIALTY | Haines & Company, Inc. |
| | RAINBOW BUILDERS | Haines & Company, Inc. |
| | RM DESIGNS | Haines & Company, Inc. |
| | PROINKJETCOM | Haines & Company, Inc. |
| | ASSOCIATES | Haines & Company, Inc. |
| | OBRIENKATE | Haines & Company, Inc. |
| | NTERGRATION | Haines & Company, Inc. |
| | NETWORK SYSTEMS | Haines & Company, Inc. |
| | TECHNOLOGY | Haines & Company, Inc. |
| | NAC IMAGE | Haines & Company, Inc. |
| | SILKSCREEN PRINTING | Haines & Company, Inc. |

**8 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | KER 9 Joseph | Haines & Company, Inc. |

**9 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | BB BEATY FORD | Haines & Company, Inc. |

**21 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MONARCH | Haines & Company, Inc. |
| | STCENTURY | Haines & Company, Inc. |
| | UNIFORMS | Haines & Company, Inc. |
| | STCENTURY | Haines & Company, Inc. |

**27 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | DOMINGUEZ Pula | Haines & Company, Inc. |

**29 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1926 | Burns Perry S Linnie mgr Sparr Fruit Co | Los Angeles Directory Co. |
| | Burroughs Gilbert driller | Los Angeles Directory Co. |

# FINDINGS

**38 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1980 | Helms Roofing | Polk |
| 1968 | KEENEY FRED | B&G Publications |

**39 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1926 | Merry Chas E Sadie R formn | Los Angeles Directory Co. |
| | Methodist Episcopal Church Rev R K Swenerton pastor Sespe cor Fillmore | Los Angeles Directory Co. |

**40 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1980 | Barajas Simon | Polk |
| 1968 | MEDRANO S | B&G Publications |

**49 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | CEJAAracelr | Haines & Company, Inc. |
| 1996 | Amezcua Juan | Pacific Bell |
| 1975 | Mc Fadden Roy A | Pacific Telephone Co |
| | Mc Fadden Roy A | General Telephone Company of California |
| 1968 | DENCKER H | B&G Publications |

**65 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | TAMAYOJose A | Haines & Company, Inc. |
| | TAMAYOG | Haines & Company, Inc. |
| | ROBERTOTamayo | Haines & Company, Inc. |
| 1996 | Tamayo Jose A | Pacific Bell |
| 1980 | Goodman Jewel M | Polk |
| 1975 | Goodman Jewel M | General Telephone Company of California |
| | Goodman Jewel M | Pacific Telephone Co |
| 1968 | YOUNG C MRS | B&G Publications |

**77 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1996 | CATHOLIC CHARITIES OASIS | Pacific Bell |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1996 | CATHOLIC CHARITIES | Pacific Bell |
| 1980 | Moorpark Ofc | Polk |
| | Catholic Social Service | Polk |
| 1975 | Moorpark Ofc | General Telephone Company of California |
| | Moorpark Ofc | Pacific Telephone Co |
| | Catholic Social Service | Pacific Telephone Co |

**79 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1980 | Holy Cross C C D | Polk |
| 1975 | Holy Cross C C D | General Telephone Company of California |

**80 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1975 | Clements I L | Pacific Telephone Co |
| | Clements I L | General Telephone Company of California |
| 1968 | CLEMENTS I | B&G Publications |

**90 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | ISARRARASBeniamrn | Haines & Company, Inc. |
| | GARCIA Michael | Haines & Company, Inc. |

**96 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MIRESAlvhn | Haines & Company, Inc. |
| 1975 | Mires Mike | Pacific Telephone Co |

**97 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MORALES Ramon | Haines & Company, Inc. |
| 1968 | GOODMAN J | B&G Publications |

**101 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | Maurrlia | Haines & Company, Inc. |
| | SARAMBULAAn Alonin | Haines & Company, Inc. |
| | PEREZ Casanova | Haines & Company, Inc. |
| 1980 | Mendez M | Polk |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1968 | KOHLER F MRS | B&G Publications |

**102 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | OAGUILARAnionro | Haines & Company, Inc. |
| 1980 | Ramirez Alfonzo | Polk |
| 1968 | COOK JUNIOR | B&G Publications |

**112 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | BARRON Pedro Jr | Haines & Company, Inc. |
| | BARRONPedro C | Haines & Company, Inc. |
| | BA 8 RONPedro Jr | Haines & Company, Inc. |
| | VILLASANA Enedira | Haines & Company, Inc. |
| 1996 | B Barren Rene | Pacific Bell |
| | A Barren Pedro Jr | Pacific Bell |
| | A Barren Cornelia | Pacific Bell |
| 1980 | Barron Pedro C | Polk |
| 1975 | Barron Pedro C | Pacific Telephone Co |
| | Barron Pedro C | General Telephone Company of California |
| 1968 | DANIEL JAMES | B&G Publications |

**113 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | SMAGDALENOMrguel | Haines & Company, Inc. |
| 1980 | Tamayo Ricardo | Polk |
| 1968 | RODRIGUEZ JOE | B&G Publications |
| 1964 | Rodriguez Joe D | Pacific Telephone Co |

**124 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | SMAGOALENOMiguel | Haines & Company, Inc. |
| 1968 | CRABILL FRED | B&G Publications |
| 1964 | Crabill Fred | Pacific Telephone Co |

**125 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | J ARAIZAJesus | Haines & Company, Inc. |
| | LOVERAManuel | Haines & Company, Inc. |
| 1968 | SHROPSHIRE K | B&G Publications |

# FINDINGS

## 1st St

**136 1st St**

| Year | Uses | Source |
|---|---|---|
| 2005 | SUPREME ELECTRIC & ELECTRONICS | EDR Digital Archive |

## 1ST ST

**136 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | ELECTRIC&ELECTRON | Haines & Company, Inc. |
| | SUPREME | Haines & Company, Inc. |
| | SCASSESE Edward JJr | Haines & Company, Inc. |
| 1980 | Valerio Rosalinda | Polk |
| 1968 | SAN MIGUEL Y | B&G Publications |

**137 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MAGDALENOMrguel PALMAOb | Haines & Company, Inc. |
| | ESPINOZA Elizabelh | Haines & Company, Inc. |
| 1968 | PARKER NORMAN | B&G Publications |

**143 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1968 | VACANT | B&G Publications |

**145 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MAGDALENOMrguel | Haines & Company, Inc. |
| 1996 | Flores Juan | Pacific Bell |
| 1980 | Franklin D | Polk |
| 1975 | Withington Jan | General Telephone Company of California |
| | Withington Jan | Pacific Telephone Co |
| 1968 | NO RETURN | B&G Publications |

**146 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | VALERIOJesse | Haines & Company, Inc. |
| 1996 | Valerlo Jesse | Pacific Bell |
| | Valerio Jesse | Pacific Bell |
| 1980 | Valerio Jesse | Polk |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1980 | Fuentes Josefina | Polk |
| 1968 | BARKER BIRDIE | B&G Publications |
| 1964 | Rojas Vic S | Pacific Telephone Co |

**147 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| | 1ST 93021 CONT | Haines & Company, Inc. |
| 1980 | Moniot Curtis | Polk |
| 1968 | WILLIAMS BETTYE | B&G Publications |
| 1940 | Bond Eugene Mrs r | Southern California |

**149 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | PONCE Rogelo | Haines & Company, Inc. |
| 1980 | Salgado Miguel S | Polk |
| 1968 | SHAW F E | B&G Publications |

**160 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MAGOALENOM 0nuel | Haines & Company, Inc. |
| | GOMEZSrlvia | Haines & Company, Inc. |
| 1996 | Ramlrez M | Pacific Bell |
| | Ayala Raymundo | Pacific Bell |
| 1975 | Gamboa Alicia | General Telephone Company of California |
| | Gamboa Alicia | Pacific Telephone Co |
| 1968 | MADDOX JOS | B&G Publications |
| 1964 | Maddox Jos W | Pacific Telephone Co |

**162 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | VILLANUEVAJe | Haines & Company, Inc. |

**164 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | PEREZFelipe | Haines & Company, Inc. |
| 1975 | Munoz Leonor | General Telephone Company of California |
| 1968 | HENDERSON MARIAN | B&G Publications |

# FINDINGS

**167 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MAGDALENOMaguei | Haines & Company, Inc. |
| | Imelda | Haines & Company, Inc. |
| | HERNANDEZNAVA | Haines & Company, Inc. |
| 1980 | Herbert Edna | Polk |
| 1975 | Herbert Edna | General Telephone Company of California |
| 1968 | HERBERT EDN | B&G Publications |

**172 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MAGDALENOMUguel | Haines & Company, Inc. |
| 1975 | Bondurant Larry | General Telephone Company of California |
| | Bondurant Larry | Pacific Telephone Co |
| 1968 | HEDRICK E | B&G Publications |

**173 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | GONZALEZJesus | Haines & Company, Inc. |
| | MAGDALENOMrguel | Haines & Company, Inc. |
| 1980 | Holguin Pedro | Polk |
| 1975 | Magdaleno Miguel | Pacific Telephone Co |
| | Magdaleno Miguel | General Telephone Company of California |
| 1968 | MOHRMARGO | B&G Publications |

**175 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | AYALA Samuel | Haines & Company, Inc. |
| 1996 | Ayala Samuel | Pacific Bell |

**177 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | NAVARRETE Martha | Haines & Company, Inc. |
| 1996 | Covarrubias Fernando | Pacific Bell |
| | 194 Gonzalez Martha | Pacific Bell |

**187 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MAGDALENOMiguel | Haines & Company, Inc. |
| 1975 | Goettert J | Pacific Telephone Co |
| | Goettert J | General Telephone Company of California |

| Year | Uses | Source |
|---|---|---|
| 1968 | NO RETURN | B&G Publications |

**189 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |

**191 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | HERRERAJOse | Haines & Company, Inc. |
| 1980 | Herrera Jose D | Polk |
| 1975 | Stephens Ethel L | General Telephone Company of California |
| | Stephens Ethel L | Pacific Telephone Co |
| 1968 | STEPHENS E | B&G Publications |

**194 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | SMEZABennio | Haines & Company, Inc. |
| 1975 | Brusven Jas | Pacific Telephone Co |
| | Brusven Jas | General Telephone Company of California |
| 1968 | BROWN LAUR | B&G Publications |
| 1964 | Brown Laura E | Pacific Telephone Co |

## BARD

**420 BARD**

| Year | Uses | Source |
|---|---|---|
| 1971 | GLASSBURN R | B&G Publications |

**445 BARD**

| Year | Uses | Source |
|---|---|---|
| 1975 | Delgado Edgar A | Pacific Telephone Co |
| 1971 | JENKINS LINDA | B&G Publications |

**452 BARD**

| Year | Uses | Source |
|---|---|---|
| 1975 | Hopkins Dorothy | Pacific Telephone Co |
| 1971 | JORDAN RICHD | B&G Publications |

**453 BARD**

| Year | Uses | Source |
|---|---|---|
| 1971 | HILTON ROY | B&G Publications |

# FINDINGS

**468 BARD**

| Year | Uses | Source |
|---|---|---|
| 1975 | Donnelly Stephen | Pacific Telephone Co |
| 1971 | DONNELLY S | B&G Publications |

**484 BARD**

| Year | Uses | Source |
|---|---|---|
| 1971 | DURON ELIS | B&G Publications |

**496 BARD**

| Year | Uses | Source |
|---|---|---|
| 1975 | Dominguez John | Pacific Telephone Co |
| | Dominguez Benjamin | Pacific Telephone Co |
| 1971 | DOMINGUEZ J | B&G Publications |

**501 BARD**

| Year | Uses | Source |
|---|---|---|
| 1971 | LEONARD N | B&G Publications |
| 1968 | LEONARD N | B&G Publications |

**508 BARD**

| Year | Uses | Source |
|---|---|---|
| 1968 | PRESSLEY K | B&G Publications |

**520 BARD**

| Year | Uses | Source |
|---|---|---|
| 1971 | DEAL CLARENCE | B&G Publications |

**530 BARD**

| Year | Uses | Source |
|---|---|---|
| 1964 | Freytag Marion Mrs | Pacific Telephone Co |
| 1949 | Williamson Maldon C h | Los Angeles Directory Co. |
| | Freytag Marion wid C F h | Los Angeles Directory Co. |

**540 BARD**

| Year | Uses | Source |
|---|---|---|
| 1964 | Morris Earl R | Pacific Telephone Co |
| 1949 | Morse Earl R Annis bxmkr h | Los Angeles Directory Co. |

**655 BARD**

| Year | Uses | Source |
|---|---|---|
| 1968 | BARRERAA | B&G Publications |

# FINDINGS

## BARD ST

### 436 BARD ST

| Year | Uses | Source |
|---|---|---|
| 2002 | BROR 13 JEZFesnardo | Haines & Company, Inc. |
| | ROORBGUEZCo Ste Bo | Haines & Company, Inc. |
| 1996 | Rodriguez Salvador | Pacific Bell |
| 1980 | Bovee Alvin | Polk |
| 1964 | Bankson Robt E | Pacific Telephone Co |

### 445 BARD ST

| Year | Uses | Source |
|---|---|---|
| 2002 | WHITAEn RJamw | Haines & Company, Inc. |
| 1980 | Moormeister Don E | Polk |
| 1975 | Delgado Edgar A | General Telephone Company of California |
| 1964 | Orr Keith V | Pacific Telephone Co |

### 447 BARD ST

| Year | Uses | Source |
|---|---|---|
| 1985 | Miller P | Pacific Telephone Co |
| 1980 | Putnam Clifton | Polk |
| 1964 | Klukken Lowell | Pacific Telephone Co |

### 452 BARD ST

| Year | Uses | Source |
|---|---|---|
| 2002 | ALVARAOOEOEaanbo | Haines & Company, Inc. |
| | Lagw Mi | Haines & Company, Inc. |
| 1996 | Reynaga Yolanda | Pacific Bell |
| 1993 | Lepine G & M | GTE |
| | Lepine G & M | GTE |
| 1985 | Lepine G & M | Pacific Telephone Co |
| 1975 | Hopkins Dorothy | General Telephone Company of California |
| 1970 | Jordan Richard E | General Telephone Company of California |
| | Jordan Robert E Krotona Hi @Ojai | General Telephone Company of California |
| 1964 | Webster Frances M | Pacific Telephone Co |

### 453 BARD ST

| Year | Uses | Source |
|---|---|---|
| 2002 | HILTON Roy | Haines & Company, Inc. |
| 1996 | Hilton Roy | Pacific Bell |
| 1993 | Hilton Roy | GTE |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1993 | Hilton V M | GTE |
| | Hilton Roy | GTE |
| 1986 | Hilton Roy | Pacific Bell |
| | Hilton Security Service | Pacific Bell |
| | Hilton V M | Pacific Bell |
| 1985 | Hilton Roy | Pacific Telephone Co |
| 1980 | Hilton Roy | Polk |
| 1970 | Hilton Roy | General Telephone Company of California |

**468 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | PERRY Samrl B | Haines & Company, Inc. |
| 1996 | Perry Sam | Pacific Bell |
| 1993 | Perry Sam | GTE |
| | Perry Sam | GTE |
| 1986 | Olsen G & D | Pacific Bell |
| 1985 | Olsen G & D | Pacific Telephone Co |
| 1975 | Donnelly Stephen | General Telephone Company of California |
| 1970 | Donnelly Stephen | General Telephone Company of California |
| 1964 | Donnelly Stephen | Pacific Telephone Co |

**484 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 1985 | Duron Steve | Pacific Telephone Co |
| 1970 | Duron Elisa | General Telephone Company of California |

**496 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 1996 | Salgado Ramon | Pacific Bell |
| 1993 | Dominguez John | GTE |
| | Dominguez John | GTE |
| 1986 | Dominguez John | Pacific Bell |
| 1985 | Dominguez John | Pacific Telephone Co |
| 1980 | Dominguez John | Polk |
| 1975 | Dominguez Benjamin | General Telephone Company of California |
| 1970 | Dominguez John | General Telephone Company of California |
| 1964 | Dominguez John | Pacific Telephone Co |

# FINDINGS

**501 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1986 | Herrera Jose Maria Jr | Pacific Bell |
| 1985 | Herrera Jose Maria Jr | Pacific Telephone Co |
| 1980 | Diaz Maria | Polk |

**508 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | R 80 A 0 Aurora | Haines & Company, Inc. |
| 1964 | Pressley K C | Pacific Telephone Co |

**520 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | 7 TA 8 Y 06 Oclai | Haines & Company, Inc. |
| 1980 | Mize Bill & Sarah | Polk |
| 1970 | Deal Clarence | General Telephone Company of California |
| 1964 | Cisneros Emily | Pacific Telephone Co |

**544 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 1930 | Enright Albt J elk Safeway Stores | Los Angeles Directory Co. |

## Bard St

**621 Bard St**

| Year | Uses | Source |
|---|---|---|
| 2014 | TIMBERCRETE INC | EDR Digital Archive |

## BARD ST

**639 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | 0 XXX | Haines & Company, Inc. |
| 1996 | Cruz Rosa Ella | Pacific Bell |
| 1986 | Howton Adair | Pacific Bell |
| 1985 | Howton Adair | Pacific Telephone Co |

**640 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | UUMMr GSMe 8at | Haines & Company, Inc. |

| Year | Uses | Source |
|---|---|---|
| 1986 | Cummings C | Pacific Bell |
| 1985 | Cummings C | Pacific Telephone Co |

**650 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 1996 | Cummings Curran | Pacific Bell |
| 1993 | Cummings D K @Newbury Park | GTE |
| | Cummings Curran | GTE |
| | Cummings Curran | GTE |

## Bard St

**655 Bard St**

| Year | Uses | Source |
|---|---|---|
| 2010 | ANTONIO SOLANO | EDR Digital Archive |
| 2005 | ANTONIO SOLANO | EDR Digital Archive |

## BARD ST

**655 BARD ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | WHITAKER W 19an | Haines & Company, Inc. |
| 1986 | Colahan James & Shirley | Pacific Bell |
| 1985 | Colahan James & Shirley | Pacific Telephone Co |
| 1980 | Loughran N | Polk |
| 1964 | Duran Femando | Pacific Telephone Co |

## CHARLES

**16 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | BONTA ROBERT | B&G Publications |
| 1968 | BONTA ROBT | B&G Publications |

**34 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | SLADE KATE P | B&G Publications |
| 1968 | SLADE KATE | B&G Publications |

# FINDINGS

**35 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | COVEY MATT | B&G Publications |
| 1968 | COVEY MATT | B&G Publications |

**49 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | KELLEY ANN | B&G Publications |
| 1968 | KELLEY ANN | B&G Publications |

**64 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | GUTIERREZ RUDOLPH P | B&G Publications |
| 1968 | GUTIERREZ R | B&G Publications |

**71 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | BEZANSON L | B&G Publications |
| 1968 | RHINES DICK | B&G Publications |

**73 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | NO RETURN | B&G Publications |
| 1968 | NO RETURN | B&G Publications |

**81 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | BREWER FLOYD | B&G Publications |
| 1968 | BREWER FLOYD | B&G Publications |

**136 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | FRAKE JOHN | B&G Publications |
| 1968 | FRAKE JOHN | B&G Publications |

**137 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | RODRIQUEZ JOSE | B&G Publications |

**148 CHARLES**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1968 | BRUBAKERC J | B&G Publications |

# FINDINGS

**155 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1986 | Ramlrez Florentino | Pacific Bell |

**156 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | RASEY BERNICE | B&G Publications |
| 1968 | RASEY BERNICE | B&G Publications |

**161 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | REYNA LEO | B&G Publications |
| 1968 | REYNA LEO | B&G Publications |

**168 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | LOPEZ ROBERT | B&G Publications |

**172 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | VALDIVIA JOE | B&G Publications |

**195 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | VALDIVIA GEO | B&G Publications |
| 1968 | VALDIVIA GEO | B&G Publications |

**211 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1968 | RIVERAC | B&G Publications |

**212 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | JAMES CLIFFORD R | B&G Publications |
| 1968 | HOUSE FRANK | B&G Publications |

**224 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1968 | NO RETURN | B&G Publications |

**229 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1968 | VASQUEZ FRANK | B&G Publications |

**248 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | GARZA ANGEL | B&G Publications |
| 1968 | GARZA ANGEL | B&G Publications |

**259 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | RODRIGUEZ M | B&G Publications |
| 1968 | RODRIGUEZ M | B&G Publications |

**260 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1996 | B Solis Maria Del Carmen | Pacific Bell |
| 1971 | VARGAS VICKI | B&G Publications |
| 1968 | VARGAS VICKI | B&G Publications |

**272 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | CARAWAY AARON | B&G Publications |
| 1968 | RODRIGUEZ V | B&G Publications |

**301 CHARLES**

| Year | Uses | Source |
|---|---|---|
| 1971 | CASTRO H | B&G Publications |
| 1968 | CASTRO H | B&G Publications |

## CHARLES ST

**14 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | V 4 JAh R | Haines & Company, Inc. |

**16 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Mitchell J | Pacific Bell |
| 1985 | Bonta Robt S | Pacific Telephone Co |
| 1980 | Bonta Robt S | Polk |
| 1975 | Bonta Robt S | General Telephone Company of California |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1975 | Bonta Robt S | Pacific Telephone Co |
| 1970 | Bonta Robt S | General Telephone Company of California |
| 1964 | Bonta Robt S | Pacific Telephone Co |

**17 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | AMAYAEIFIlto | Haines & Company, Inc. |
| | t ALVAREZMaro A 845 23 75536 B | Haines & Company, Inc. |

**19 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | VALLEMaureln | Haines & Company, Inc. |

**34 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | REVESArnoeo | Haines & Company, Inc. |
| | SOUSMia Del Cannen | Haines & Company, Inc. |
| 1996 | Berg Guy Alan | Pacific Bell |
| | Berg Guy Alan | Pacific Bell |
| 1986 | Haney Wm B & Mary Ann | Pacific Bell |
| 1985 | Haney Wm B & Mary Ann | Pacific Telephone Co |
| 1980 | Vondera Mary Ann | Polk |
| | Vondera Michelle | Polk |
| 1975 | Holden Clyde | General Telephone Company of California |
| | Holden Clyde | Pacific Telephone Co |
| 1964 | Slade Kate P | Pacific Telephone Co |

**35 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1980 | Holy Cross Church | Polk |
| 1975 | Covey Matt | Pacific Telephone Co |
| | Covey Steven D | General Telephone Company of California |
| | Covey Matt | General Telephone Company of California |
| 1970 | Covey Matt | General Telephone Company of California |

**36 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XX 0 X | Haines & Company, Inc. |

# FINDINGS

**48 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | VERAJu Onta | Haines & Company, Inc. |

**49 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | E 0 BADICharl Jote | Haines & Company, Inc. |
| 1985 | Ekback Hugo G | Pacific Telephone Co |
| 1980 | Ekback Hugo G | Polk |
| 1975 | Ekback Hugo G | Pacific Telephone Co |
| | Ekback Hugo G | General Telephone Company of California |
| 1970 | Kelley Anna L | General Telephone Company of California |
| 1964 | Kelley H W | Pacific Telephone Co |

**54 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | B TBAEBETTene | Haines & Company, Inc. |

## Charles St

**64 Charles St**

| Year | Uses | Source |
|---|---|---|
| 2014 | R&D CONSTRUCTION | EDR Digital Archive |
| 2010 | R&D CONSTRUCTION | EDR Digital Archive |
| 2005 | R&D CONSTRUCTION | EDR Digital Archive |

## CHARLES ST

**64 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | Ja SSALEAGE | Haines & Company, Inc. |
| | LEPfl OHOND a 0&5 552 f | Haines & Company, Inc. |
| | LEPROHOAe M S | Haines & Company, Inc. |
| | t JSPR OHR B& 552 1a 6 B | Haines & Company, Inc. |
| | POHJEROYJenry K 53 9060 t | Haines & Company, Inc. |
| 1986 | Hanich Steven M | Pacific Bell |

**71 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXXc | Haines & Company, Inc. |
| 1975 | Ekback Elizabeth | Pacific Telephone Co |

| Year | Uses | Source |
|---|---|---|
| 1975 | Ekback Elizabeth | General Telephone Company of California |
| 1970 | Bezanson Lewis | General Telephone Company of California |
| 1964 | Best Hazel W | Pacific Telephone Co |

## Charles St

**73 Charles St**

| Year | Uses | Source |
|---|---|---|
| 2005 | FOOD SAFETY TRAINING SPE | EDR Digital Archive |

## CHARLES ST

**73 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | Xw XX | Haines & Company, Inc. |
| 1964 | Trickey Martha Bell | Pacific Telephone Co |

**81 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | BODRCUEZJose | Haines & Company, Inc. |
| 1985 | Brewer Floyd O | Pacific Telephone Co |
| 1980 | Brewer Floyd O | Polk |
| 1975 | Brewer Floyd O | Pacific Telephone Co |
| 1964 | Brewer Floyd O | Pacific Telephone Co |

## Charles St

**97 Charles St**

| Year | Uses | Source |
|---|---|---|
| 2014 | FIGUEROA GRADING | EDR Digital Archive |
| | FIGUEROA TOOL | EDR Digital Archive |
| 2010 | FIGUEROA TOOL | EDR Digital Archive |
| | FIGUEROA GRADING | EDR Digital Archive |

## CHARLES ST

**97 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | FIGEBOAAS M 15 49514 WS | Haines & Company, Inc. |
| | GRADING | Haines & Company, Inc. |
| 1996 | Figueroa Angel S Jr | Pacific Bell |

| Year | Uses | Source |
|---|---|---|
| 1996 | FIGUEROA A S GRADING | Pacific Bell |
| 1993 | Figueroa Carlos | GTE |
| | Figueroa C | GTE |
| | Figueroa Anthony @Camarillo @ State Hospital Grnds Camrio | GTE |
| | Figueroa Angel S Jr | GTE |
| | Figueroa A S Grading | GTE |
| | Figueroa Angel S Jr | GTE |
| | Figueroa A S Grading | GTE |
| 1986 | Figueroa A S Grading | Pacific Bell |
| | Figueroa C | Pacific Bell |
| | Figueroa Angel S Jr | Pacific Bell |
| | Figueroa Anthony | Pacific Bell |
| 1985 | Figueroa A S Grading | Pacific Telephone Co |
| | Figueroa Angel S Jr | Pacific Telephone Co |
| 1980 | Figueroa Angel S Jr | Polk |
| | Figueroa A S Grading | Polk |

**136 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Valdivia Joe & Angie | GTE |
| | Valdivia Joe & Angie | GTE |
| 1980 | Basquez Phillip E Sr | Polk |
| 1970 | Frake John A | General Telephone Company of California |
| 1964 | Frake John A | Pacific Telephone Co |

**137 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | RODR 4 UEZJose E | Haines & Company, Inc. |
| 1996 | Rodriguez Jose E | Pacific Bell |
| 1993 | Rodriguez Jose E | GTE |
| | Rodriguez Jose E | GTE |
| 1986 | Rodriguez Jose E drftsmn | Pacific Bell |
| | Rodriquez Jose E | Pacific Bell |
| | Rodriquez Jose E drftsmn | Pacific Bell |
| 1985 | Rodriquez Jose E | Pacific Telephone Co |
| 1980 | Rodriquez Jose E | Polk |
| 1975 | Rodriquez Jose E | General Telephone Company of California |
| | Rodriquez Jose E | Pacific Telephone Co |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1970 | Rodriquez Jose E | General Telephone Company of California |

**143 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | RODRIGUEZJose | Haines & Company, Inc. |
| 1993 | Rodriguez Concrete | GTE |
| | Rodriguez Concrete | GTE |

**148 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | ARAMBULARanmon | Haines & Company, Inc. |
| 1986 | Meza Ramos Benito | Pacific Bell |
| 1980 | Rosales Maria | Polk |

**155 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | ACEVESJosa | Haines & Company, Inc. |
| 1975 | Gutierrez Epifanio S | General Telephone Company of California |
| 1964 | Taylor Donald | Pacific Telephone Co |
| | Taylor La Donna | Pacific Telephone Co |

**156 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1996 | Rasey Bernice G | Pacific Bell |
| 1993 | Rasey Bernice G | GTE |
| | Rasey Bernice G | GTE |
| 1986 | Rasey Bernice G | Pacific Bell |
| 1985 | Rasey Bernice G | Pacific Telephone Co |
| 1980 | Rasey Bernice G | Polk |
| 1975 | Rasey Bernice G | General Telephone Company of California |
| | Rasey Bernice G | Pacific Telephone Co |
| 1970 | Rasey Bernice G | General Telephone Company of California |

**158 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | KIRULGERPatca | Haines & Company, Inc. |
| | RASEYBamtoe G | Haines & Company, Inc. |

# FINDINGS

## Charles St

**161 Charles St**

| Year | Uses | Source |
|---|---|---|
| 2010 | 9300 TELEPHONE ROAD LLC | EDR Digital Archive |

## CHARLES ST

**161 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | BIEYALBO | Haines & Company, Inc. |
| 1975 | Reyna Leo | Pacific Telephone Co |
| | Reyna Leo | General Telephone Company of California |
| 1970 | Reyna Leo | General Telephone Company of California |
| 1964 | Reyna Leo | Pacific Telephone Co |

**164 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1957 | Teague Robt C | R. L. Polk Co. of California |
| | Teague Court AHU | R. L. Polk Co. of California |

**168 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XX 0 X | Haines & Company, Inc. |

**170 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1964 | Barnard Ida | Pacific Telephone Co |
| 1957 | Barnard Ida Mrs | R. L. Polk Co. of California |

**171 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1996 | Espinoza Alicia Ana | Pacific Bell |
| 1993 | Espinoza Emilio | GTE |
| | Espinoza Angel | GTE |
| | Espinoza Angel | GTE |
| | Espinoza Emilio | GTE |

**172 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | VALDIVIAJee VAt IDWAJ | Haines & Company, Inc. |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1996 | Valdivia Joe & Juanita | Pacific Bell |
| 1993 | I Valdivia Joe & Juanita | GTE |
| | I Valdivia Joe & Juanita | GTE |
| | Valdivia Joe & Angie | GTE |
| 1986 | Valdivia Joe & Angle | Pacific Bell |
| | Valdivia Jose | Pacific Bell |
| 1985 | Valdivia Jose | Pacific Telephone Co |
| 1980 | Valdivia Joe | Polk |
| 1975 | Valdivia Joe | General Telephone Company of California |
| | Valdivia Joe | Pacific Telephone Co |
| 1970 | Valdiva Joe | General Telephone Company of California |
| 1965 | STRAKA ROBT C | R. L. Polk & Co. |
| 1964 | Casteel Erma I | Pacific Telephone Co |
| 1957 | Campanelli Mary Mrs | R. L. Polk  Co. of California |

**174 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1964 | Stewart Florence | Pacific Telephone Co |
| 1957 | Stead Joseph | R. L. Polk  Co. of California |

**181 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | VASP 00 EZF 0oraitno | Haines & Company, Inc. |
| | RAMIREZCauda RA 41 REZJuan M | Haines & Company, Inc. |
| 1993 | Ramirez Florentino | GTE |
| | Ramirez Florentino | GTE |

**184 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MARTINEZJnse | Haines & Company, Inc. |
| | GAR 4 CA Enae Id | Haines & Company, Inc. |

**195 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | DOBBINSTndd | Haines & Company, Inc. |
| 1986 | Valdivia Geo | Pacific Bell |
| 1985 | Valdivia Geo | Pacific Telephone Co |
| 1980 | Valdivia Geo | Polk |
| 1975 | Valdivia Geo | General Telephone Company of California |
| | Valdivia Geo | Pacific Telephone Co |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1970 | Valdivia Geo | General Telephone Company of California |
| 1964 | Valdivia Geo | Pacific Telephone Co |

**200 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1975 | Watkins Paul S | General Telephone Company of California |

**211 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | DOE 6 ZALE 2 Pedro | Haines & Company, Inc. |
| 1996 | Gonzalez Pedro | Pacific Bell |
| 1993 | Gonzalez Pedro | GTE |
| | Gonzalez Pedro | GTE |
| 1986 | Gonzalez Pedro | Pacific Bell |
| 1964 | Rivera Connie | Pacific Telephone Co |

**229 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | Mt 61 ERDennis | Haines & Company, Inc. |
| 1996 | Miller Dennis | Pacific Bell |
| 1993 | Miller Dennis | GTE |
| | Miller Dennis | GTE |

**230 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1975 | Aira Anthony S | General Telephone Company of California |
| | Bates Larry S | Pacific Telephone Co |
| 1970 | Armstrong Beverly S | General Telephone Company of California |

**239 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | OMEZAJoge | Haines & Company, Inc. |
| 1986 | Castro George Meza | Pacific Bell |
| 1985 | Castro George Meza | Pacific Telephone Co |
| 1980 | Nestor Brian | Polk |

**248 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | AGREDANOJne | Haines & Company, Inc. |
| | VERARo Sert | Haines & Company, Inc. |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1996 | Agredano Jose | Pacific Bell |
| 1993 | Agredano Jose | GTE |
| | Agredano Adrian | GTE |
| | Agredano Jose | GTE |
| | Agredano Jose & Yvonne | GTE |
| | Agredano Adrian | GTE |
| 1986 | Agri Fresh @Santa Paula | Pacific Bell |
| | Agredano Jose | Pacific Bell |
| 1985 | Agredano Jose | Pacific Telephone Co |
| 1980 | Garza Angel | Polk |
| | Agredano Jose | Polk |
| 1975 | Garza Angel | Pacific Telephone Co |
| | Garza Angel | General Telephone Company of California |
| 1970 | Garza Angel | General Telephone Company of California |

**250 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1957 | Sangster John M | R. L. Polk Co. of California |

**252 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1957 | Reugtin Harry | R. L. Polk Co. of California |

**256 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 1957 | Hill Harold M | R. L. Polk Co. of California |

**259 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | CRUt 2isa | Haines & Company, Inc. |
| 1975 | Rodriguez Martin | General Telephone Company of California |
| 1970 | Rodriguez Martin | General Telephone Company of California |
| 1964 | Rodriguez Martin | Pacific Telephone Co |

**260 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MAGIDALE 40 Mana | Haines & Company, Inc. |
| 1996 | h | Pacific Bell |
| | Magdeenro Maria | Pacific Bell |
| 1993 | Magdeleno Maria | GTE |

| Year | Uses | Source |
|---|---|---|
| 1993 | Magdeleno Maria | GTE |
| | Magdic Jamie @Thousand Oaks | GTE |
| | Magdich B @Camarillo | GTE |
| | Maged Jerome @Camarillo | GTE |
| | Maged Jerome | GTE |
| | Magee Joe & Pat | GTE |

**272 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | LERMAI | Haines & Company, Inc. |
| 1985 | Munoz Libby | Pacific Telephone Co |
| 1975 | Mendoza Manuel C | General Telephone Company of California |
| 1970 | Caraway Aaron C | General Telephone Company of California |
| 1964 | Rodriguez Kathy | Pacific Telephone Co |

**301 CHARLES ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | CBARRERAASear | Haines & Company, Inc. |
| 1980 | Barrera Alvaro Jr | Polk |
| 1964 | Castro Hortense | Pacific Telephone Co |

## DOROTHY

**241 DOROTHY**

| Year | Uses | Source |
|---|---|---|
| 1970 | Padilla Joe A | General Telephone Company of California |
| 1964 | Padilla Joe A | Pacific Telephone Co |

## DOROTHY AVE

**208 DOROTHY AVE**

| Year | Uses | Source |
|---|---|---|
| 1975 | Stephens T B Bert | Pacific Telephone Co |

**233 DOROTHY AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | SA GSOOjea a | Haines & Company, Inc. |

**241 DOROTHY AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | MORALES Jenus | Haines & Company, Inc. |

| Year | Uses | Source |
|---|---|---|
| 2002 | TAMUAYORBcario | Haines & Company, Inc. |
| 1986 | Lopez Eddie @Oxnard | Pacific Bell |
| | Lopez E Lucy | Pacific Bell |
| 1971 | PADILLA JOE | B&G Publications |
| 1968 | PADILLA JOE | B&G Publications |

**255 DOROTHY AVE**

| Year | Uses | Source |
|---|---|---|
| 1968 | AMAVISCA A | B&G Publications |

## E 1ST ST

**18 E 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1970 | Ofc l | General Telephone Company of California |

**52 E 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1953 | Fire Dept No | R. L. Polk & Co. of California |

**131 E 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | Young Cora S Mrs r | Southern California |

**134 E 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | So Calif Edison Co Ltd | Southern California |

**143 E 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1964 | Shaw F E | Pacific Telephone Co |

**156 E 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | Graham E C r | Southern California |

**191 E 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1964 | Stephens W H | Pacific Telephone Co |

# FINDINGS

## E HIGH

**15 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Kern Jos P D atty | Pacific Telephone Co |
| | Scoles John F atty | Pacific Telephone Co |

**17 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | MOORPARK RENDEZVOUS | Pacific Telephone Co |
| | Moorpark Rendezvous Card Room | Pacific Telephone Co |

**18 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Tytler Jas | Pacific Telephone Co |

**43 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | ENTERPRISE..Sti J & NEWS | Pacific Telephone Co |

**45 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Moorpark Theatre | Pacific Telephone Co |

**49 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Schlosser Mark DOS | Pacific Telephone Co |

**87 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | MOORPARK PHARMACY | Pacific Telephone Co |

**95 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | BANK OF A LEVY | Pacific Telephone Co |
| | vloorpark Ofc | Pacific Telephone Co |

**104 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Ventura County Peace Officers Association | Pacific Telephone Co |

# FINDINGS

**105 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Bobs Moorpark Mkt | Pacific Telephone Co |

**135 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1940 | Houser Bros Mkt | Southern California |

**139 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | DEMPSEY REALTY | Pacific Telephone Co |

**169 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Morpark | Pacific Telephone Co |
| | VENTURA COUNTY OF Contd LIBRARY SERVICES AGENCY Contd | Pacific Telephone Co |

**179 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Whitakers Hardware | Pacific Telephone Co |

**189 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | USS Norton Sound AVM | Pacific Telephone Co |
| | Moorpark | Pacific Telephone Co |

**197 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Cactus Patch Restaurant I | Pacific Telephone Co |

**220 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Moorpark Electronics | Pacific Telephone Co |

**235 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1940 | Moorpark Enterprise | Southern California |

**247 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1940 | Richards Letha C r Walnut Canyon | Southern California |
| | Red & White Grocery | Southern California |

# FINDINGS

**249 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1940 | Holland Drug Co | Southern California |

**255 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1986 | Moorpark Video Shoppe | Pacific Bell |
| | Little Bow Tique | Pacific Bell |
| | Litle K TOks | Pacific Bell |
| | Litle Boutique | Pacific Bell |
| 1985 | Moorpark Video Shoppe | Pacific Telephone Co |
| | Little Bow Tique | Pacific Telephone Co |
| 1975 | INDICE SPORTS WEAR | Pacific Telephone Co |

**273 E HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Meyer Roger T | Pacific Telephone Co |

## E HIGH ST

**1 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | RAMIREZ Herman IB | Haines & Company, Inc. |

## E High St

**11 E High St**

| Year | Uses | Source |
|---|---|---|
| 2010 | TREES OF INSPIRATION 1 OF 1 BY | EDR Digital Archive |
| 2005 | MOORPARK BICYCLES INC | EDR Digital Archive |

## E HIGH ST

**11 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MOORPKBICYCLES | Haines & Company, Inc. |
| 1993 | Petals N Pine | GTE |
| | Petals N Pine | GTE |
| 1971 | HALLS VARIETY STORE | B&G Publications |

# FINDINGS

**15 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1986 | Robertos Barber Shop | Pacific Bell |
| 1980 | State Farm Insurance Companies Agencies | Polk |
| | Moorpark | Polk |
| 1975 | Kern Jos P D atty | General Telephone Company of California |
| 1971 | FITZSIMMONS J | B&G Publications |
| 1970 | Fitzsimons J David atty | General Telephone Company of California |
| | Fitzsimons Raymond G Sr | General Telephone Company of California |

## E High St

**17 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | AMADOR WHITTLE ARCHITECTS INC | EDR Digital Archive |
| 2010 | AMADOR WHITTLE ARCHITECTS INC | EDR Digital Archive |
| 2005 | AMADOR WHITTLE ARCHITECTS INC | EDR Digital Archive |
| | BESTSTUFF MEDIA PROMOTIONS | EDR Digital Archive |
| | DOO-DAH DEPOT | EDR Digital Archive |

## E HIGH ST

**17 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1993 | Monikas General Store | GTE |
| | Monikas General Store | GTE |
| 1986 | Double L Saloon | Pacific Bell |
| | Double R | Pacific Bell |
| | DOUBLE R TOW IN G | Pacific Bell |
| 1985 | Moorpark Rendezvous Card Room | Pacific Telephone Co |
| 1980 | Moorpark Rendezvous Bar | Polk |
| | MOORPARK RENDEZVOUS CARD ROOM | Polk |
| | Rendezvous Bar | Polk |
| 1975 | Moorpark Rendezvous Card Room | General Telephone Company of California |

# FINDINGS

## E High St

**18 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | LAW OFFCES OF DOUGLAS H RIDLEY | EDR Digital Archive |

## E HIGH ST

**18 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Moorpark Office | Pacific Bell |
| 1985 | First Nationwide Savings Moorpark Office | Pacific Telephone Co |
| 1980 | Citizens Savings & Loan Association | Polk |
| | Moorpark Office | Polk |

## E High St

**33 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | MOORPARK FOUNDATION FOR THE AR | EDR Digital Archive |
| | R C S INSURANCE SERVICES INC | EDR Digital Archive |
| | ACME INSURANCE & FINANCIAL SVC | EDR Digital Archive |
| | GREEN SCOTT LAW OFFICES OF | EDR Digital Archive |
| 2010 | GREEN SCOTT LAW OFFICES OF | EDR Digital Archive |
| | SCOTT GREEN & ASSOC A LAW CORP | EDR Digital Archive |
| | PEARL CANYON DEVELOPMENT LLC | EDR Digital Archive |
| | ACME FINANCIAL AND INSUR SVCS | EDR Digital Archive |
| | ACME INSURANCE & FINANCIAL SVC | EDR Digital Archive |
| 2005 | RAGTIME AEROLITE INC | EDR Digital Archive |
| | ALL AMERICAN WATER HEATERS & P | EDR Digital Archive |
| | CARI CO LLC | EDR Digital Archive |
| | SOUTH EQUIPMENT INC | EDR Digital Archive |
| | MASINO PLASTERING INC | EDR Digital Archive |
| | SHAMROCK STUCCO LLC | EDR Digital Archive |
| | GREEN SCOTT LAW OFFICES OF | EDR Digital Archive |
| | SCOTT GREEN & ASSOC A LAW CORP | EDR Digital Archive |
| | TIERRA PACIFIC DEVELOPMENT LLC | EDR Digital Archive |
| | DELFINO DEVELOPMENT INC | EDR Digital Archive |
| | GOLDEN PACIFIC HOLDINGS LLC | EDR Digital Archive |
| | 310 PROPERTY DEVELOPMENT LLC | EDR Digital Archive |

| Year | Uses | Source |
|---|---|---|
| 2005 | EASY LAW INC | EDR Digital Archive |

## E HIGH ST

**33 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | OFCOF | Haines & Company, Inc. |
| | GREENSCOTTLAW | Haines & Company, Inc. |
| | EASYLAWINC | Haines & Company, Inc. |
| 1993 | Plant Fruitvale Av @Moorpark | GTE |
| | ator Taxes & Insurance Services | GTE |
| | Valovich Paul J | GTE |
| | Office | GTE |
| | Independent Pools Inc | GTE |
| | Independent Builders Inc | GTE |
| | Gladys Valbuena | GTE |
| | Community Christian Church Of Moorpark | GTE |
| | ator Taxes & Insurance Services | GTE |
| | QUALITY S E CRE TARIAL S E RVICE @Camarillo | GTE |
| | Office | GTE |
| | Independent Pools Inc | GTE |
| | Independent Building Inspections | GTE |
| | Independent Builders Inc | GTE |
| | Community Christian Church Of Moorpark | GTE |
| | Gladys Valbuena | GTE |
| | Glagovich Don | GTE |
| | Glaister A E | GTE |
| 1986 | Thousand Oaks | Pacific Bell |
| | Camarillo | Pacific Bell |
| | QUALITY ROOFIN G CO | Pacific Bell |
| | Office | Pacific Bell |
| 1985 | Moorpark | Pacific Telephone Co |
| | SNEED DARREL INS AGENT | Pacific Telephone Co |
| | Office | Pacific Telephone Co |
| | Coughlon Robert E atty | Pacific Telephone Co |
| | After Hours Limousine Service | Pacific Telephone Co |

# FINDINGS

**41 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |

**43 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1985 | Village Haircutters | Pacific Telephone Co |
| 1980 | Village Haircutters | Polk |
| 1971 | ENTERPRISE SUN & NEWS | B&G Publications |

**45 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1993 | Moorpark Melodrama | GTE |
| | Magnificent Moorpark Melodrama & Vaudeville Co The | GTE |
| | Bredemann Linda | GTE |
| | Moorpark Melodrama | GTE |
| | Magno Jerry & Kim | GTE |
| | Magnificent Moorpark Melodrama & Vaudeville Co The | GTE |
| | Bredemann Linda | GTE |
| 1986 | Moorpark Melodrama | Pacific Bell |
| | Magnificent Moorpark Melodrama & Vaudeville Co The | Pacific Bell |
| 1985 | Moorpark Melodrama | Pacific Telephone Co |
| | Magnificent Moorpark Melodrama & Vaudeville Co The | Pacific Telephone Co |
| 1980 | Horizon Players The communty theatre | Polk |
| 1975 | Moorpark Union Elementary School Dist | General Telephone Company of California |
| | Moorpark Theatre | General Telephone Company of California |
| 1971 | VALLEY THEATRE | B&G Publications |
| 1964 | Cain PW | Pacific Telephone Co |

**49 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1980 | H & R Block Co | Polk |
| | BLOCK H & R CO | Polk |
| | Albright J A rl est brkr | Polk |
| 1975 | Schlosser Mark DDS | General Telephone Company of California |
| 1971 | PANIK J J DDS | B&G Publications |

| Year | Uses | Source |
|---|---|---|
| 1970 | Panik Jerome J DDS | General Telephone Company of California |

## E High St

**61 E High St**

| Year | Uses | Source |
|---|---|---|
| 2010 | MOORPARK SIMI VALLEY NEIGHBR | EDR Digital Archive |
| | MOOPARK FAMILY RESOURCE CENTER | EDR Digital Archive |
| 2005 | ELLIS IRA PHOTOGRAPHERS | EDR Digital Archive |

## E HIGH ST

**61 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | COR 8 ERSTONE 889 S | Haines & Company, Inc. |
| | PHOTOGRAPHIC | Haines & Company, Inc. |
| | AIKENKHri | Haines & Company, Inc. |
| 1964 | BOHANON JOHN H Moorpark Laundromat | Pacific Telephone Co |

## E High St

**68 E High St**

| Year | Uses | Source |
|---|---|---|
| 2005 | BAR BQ JOINT | EDR Digital Archive |

## E HIGH ST

**68 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | BARBUEJOINTTHE | Haines & Company, Inc. |
| 1993 | BAR B QUE JOIN T THE | GTE |
| | BAR B QUE JOIN T THE | GTE |
| 1986 | Redwood Cafe | Pacific Bell |
| 1985 | Redwood Cafe | Pacific Telephone Co |

# FINDINGS

## E High St

**71 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | JENNIFERS HAIR & NAIL | EDR Digital Archive |
| 2010 | JENNIFERS HAIR & NAIL | EDR Digital Archive |
| 2005 | JENNIFERS HAIR & NAIL | EDR Digital Archive |

## E HIGH ST

**71 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | JENNIFEIESHAIR 9 NAIL | Haines & Company, Inc. |
| 1993 | Robertos Barber Shop | GTE |
| | Robertos Barber Shop | GTE |
| 1986 | Vinces Barber Shop | Pacific Bell |
| 1985 | Vinces Barber Shop | Pacific Telephone Co |
| 1975 | CHARLE S OF MOORPARK | General Telephone Company of California |
| | Charles Ralph | General Telephone Company of California |
| 1971 | CHARLES OF MPK | B&G Publications |
| 1970 | Charles Ralph | General Telephone Company of California |
| | CHARLE S OF MOORPARK | General Telephone Company of California |

**73 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXX 0 X | Haines & Company, Inc. |
| 1985 | MOORPARK CHIROPRATIC | Pacific Telephone Co |
| 1980 | Moyers R A DC | Polk |

**75 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1971 | LAWLEY LEE | B&G Publications |
| 1970 | Lawley Lee | General Telephone Company of California |

## E High St

**79 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | OLD TOWN BREAKFAST & BAKE | EDR Digital Archive |
| 2010 | OLD TOWN BREAKFAST & BAKE | EDR Digital Archive |
| 2005 | OLD TOWN BREAKFAST & BAKE | EDR Digital Archive |

# FINDINGS

## E HIGH ST

### 79 E HIGH ST

| Year | Uses | Source |
|---|---|---|
| 1980 | Country Properties Ltd | Polk |
| | Moorpark Investment Co | Polk |

### 81 E HIGH ST

| Year | Uses | Source |
|---|---|---|
| 2002 | MEXTECTS | Haines & Company, Inc. |
| | ARCHITECTS | Haines & Company, Inc. |
| | REDMONDJCKW | Haines & Company, Inc. |
| | DOSAPROCRP | Haines & Company, Inc. |
| | Wb ASSOCSATES | Haines & Company, Inc. |
| | NEWTONJOHN | Haines & Company, Inc. |
| | fe MEWC 08 JRTF 1 NANCIAL | Haines & Company, Inc. |
| | ADVANTAGE REALTY | Haines & Company, Inc. |
| | e MOORPARK 808 378 M | Haines & Company, Inc. |
| | ARCH APROCORP | Haines & Company, Inc. |
| | TTE 800 T 8053 M PUBLSHING B 090 UEZRICKD 0 S | Haines & Company, Inc. |
| | BUTO TIMTODOS | Haines & Company, Inc. |
| | LAB 9 Hf 9 BRSLEY M 8 S | Haines & Company, Inc. |
| | r BOROUEZRICK 00 S | Haines & Company, Inc. |

### 87 E HIGH ST

| Year | Uses | Source |
|---|---|---|
| 1985 | Wood John W OD | Pacific Telephone Co |
| 1975 | MOORPARK PHARMACY | General Telephone Company of California |
| 1971 | GUNTER PHARM | B&G Publications |
| 1970 | GUN TE R PHARMACY | General Telephone Company of California |
| 1964 | Moorpark Pharmacy | Pacific Telephone Co |

## E High St

### 95 E High St

| Year | Uses | Source |
|---|---|---|
| 2014 | CELERITIVE TECHNOLOGIES INC | EDR Digital Archive |
| 2010 | IVY TECH CHARTER SCHOOL | EDR Digital Archive |
| 2005 | R&R MUSIC | EDR Digital Archive |

# FINDINGS

## E HIGH ST

### 95 E HIGH ST

| Year | Uses | Source |
|---|---|---|
| 2002 | INDUSTRYMU 8 SICAL | Haines & Company, Inc. |
| 1985 | Moorpark Moorpark Ofc | Pacific Telephone Co |
| 1980 | BANK OF A LEVY | Polk |
| | Moorpark Ofc | Polk |
| 1975 | Moorpark Ofc | General Telephone Company of California |
| 1971 | BANK OF A LEVY | B&G Publications |
| 1970 | From @Agoura@ telephones call | General Telephone Company of California |
| | Moorpark Ofc | General Telephone Company of California |
| | Olsen&Moorprk Rds @Thousand Oaks@ | General Telephone Company of California |
| 1964 | FIRST WESTRN BANK & TRUST CO | Pacific Telephone Co |

### 004 E HIGH ST

| Year | Uses | Source |
|---|---|---|
| 1970 | Eppies Frosti I | General Telephone Company of California |

## E High St

### 104 E High St

| Year | Uses | Source |
|---|---|---|
| 2014 | MARIAS FAMILY RESTUARANT | EDR Digital Archive |
| 2010 | MARIAS FAMILY RESTUARANT | EDR Digital Archive |
| 2005 | MARIAS FAMILY RESTUARANT | EDR Digital Archive |
| | PATS CB & STEREO | EDR Digital Archive |

## E HIGH ST

### 104 E HIGH ST

| Year | Uses | Source |
|---|---|---|
| 1993 | W E S TE RN UN ION Contd Credit Card Money Transfers | GTE |
| | Pats CB & Stereo | GTE |
| | Pats CB & Stereo | GTE |
| | La Playita | GTE |
| | Pats CB & Stereo | GTE |
| | Pats CB & Stereo | GTE |
| | La Playita | GTE |
| 1986 | Pats CB & Stereo | Pacific Bell |

| Year | Uses | Source |
|---|---|---|
| 1986 | La Playlta | Pacific Bell |
| 1985 | Pats CB & Stereo | Pacific Telephone Co |
| | Chuck & Stellas Sport Shop | Pacific Telephone Co |
| 1980 | Donut Shop The | Polk |
| 1971 | EPPIES FROSTI | B&G Publications |
| 1964 | Eppies Frosti | Pacific Telephone Co |

## E High St

**105 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | MAYFLOWER MARKET | EDR Digital Archive |
| 2010 | MAYFLOWER MARKET | EDR Digital Archive |
| 2005 | MAYFLOWER MARKET | EDR Digital Archive |

## E HIGH ST

**105 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | Hi JAZMiusafa r MAYF | Haines & Company, Inc. |
| | MARKET&LIOUORIHE | Haines & Company, Inc. |
| 1993 | Mayflower Market The | GTE |
| | Mayflower Transit Agency | GTE |
| | Mayflower Market The | GTE |
| 1986 | Mayflower Market The | Pacific Bell |
| 1985 | The Mayflower Market | Pacific Telephone Co |
| 1980 | Bobs Moorpark Mkt | Polk |
| 1975 | Bobs Moorpark Mkt | General Telephone Company of California |
| 1971 | BOBS MPK MKT | B&G Publications |
| 1970 | BOBS MOORPARK MKT | General Telephone Company of California |
| | BOBS MOTORCYCLE S ALE S & S E RVICE @Thousand Oaks | General Telephone Company of California |
| 1964 | Bobs Moorpark Mkt | Pacific Telephone Co |

**135 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | CARENRaymard | Haines & Company, Inc. |
| 1971 | ZEPEDA ARISTEO | B&G Publications |
| 1970 | Zepeda Aristeo | General Telephone Company of California |

# FINDINGS

**136 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |

## E High St

**137 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | LUCAS TOM STATEONE INSURANCE | EDR Digital Archive |
| 2010 | LUCAS TOM STATEONE INSURANCE | EDR Digital Archive |
| 2005 | LUCAS TOM STATEONE INSURANCE | EDR Digital Archive |

## E HIGH ST

**137 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | G&A Video | GTE |
| | G&A Video | GTE |
| 1986 | J TS GE N E RAL S TORE No Charge To Calling Party | Pacific Bell |
| | J T F Enterprises | Pacific Bell |
| | JTJ Construction & Equipment | Pacific Bell |
| 1985 | GRACE CHAPEL FOURSQUARE CHURCH | Pacific Telephone Co |
| 1980 | H & P Tax Service Inc | Polk |
| 1971 | CURLY TOP BTY SALON | B&G Publications |
| 1964 | CURLY TOP BEAUTY SALON | Pacific Telephone Co |

**139 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Hartmans Radio & TV | Pacific Bell |
| | From Saticoy Telephones Call | Pacific Bell |
| | Ace Appliance Service | Pacific Bell |
| 1980 | UNITED FARM AGENCY | Polk |
| 1975 | I DE MPS E Y RE ALTY | General Telephone Company of California |
| | Dempsey Road Mutual Water Co | General Telephone Company of California |
| 1971 | DEMPSEY S | B&G Publications |
| 1964 | Dempsey S A Jack rl est | Pacific Telephone Co |

**141 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | Amer Commercial & Savings Bank | Southern California |

# FINDINGS

**161 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1980 | Russell Jan | Polk |
| 1971 | NO RETURN | B&G Publications |

## E High St

**165 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | ALLUVIUM CORPORATION | EDR Digital Archive |
| | NEWTON JOHN W & ASSOCIATES | EDR Digital Archive |
| | CANALE DAVID | EDR Digital Archive |
| | LARRY BRISLEY ARCHITECT INC | EDR Digital Archive |
| 2010 | LARRY BRISLEY ARCHITECT INC | EDR Digital Archive |
| | RCS INSURANCE SERVICES INC | EDR Digital Archive |
| | MEYER SASADA DIANNE MFT | EDR Digital Archive |
| | JILL GRANNIS DMD | EDR Digital Archive |
| | STUDIO X ARCHITECTS INC | EDR Digital Archive |
| | NEWTON JOHN W & ASSOCIATES | EDR Digital Archive |
| | ALLUVIUM CORPORATION | EDR Digital Archive |
| 2005 | ADVANTAGE REALTY | EDR Digital Archive |
| | NEWTON JOHN W & ASSOCIATES | EDR Digital Archive |
| | BRISLEY LRRY ARCHT A PRFSSSNAL | EDR Digital Archive |
| | STUDIO X ARCHITECTS INC | EDR Digital Archive |
| | WILLIAM CHARLES GROUP | EDR Digital Archive |
| | DIVINE FAMILY CHIROPRACTI | EDR Digital Archive |
| | RCS INSURANCE SERVICES INC | EDR Digital Archive |
| | BILL PERKINS | EDR Digital Archive |

## E HIGH ST

**165 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | ACMS | GTE |
| | Borquez Rick DDS | GTE |
| | Coughlon Robert E atty | GTE |
| | Redmond Jack W II A Professional Corp d DS | GTE |
| | Ricatto Paul | GTE |
| | State Farm Insurance Companies Regional Ofc | GTE |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1993 | Moorpark | GTE |
| | I AC RLeasing | GTE |
| | A C R A Credit Reporting Agency | GTE |
| | Borquez Rick DDS | GTE |
| | Borquez S J | GTE |
| | Coughlon Robert E atty | GTE |
| | Redmond Jack W II A Professional Corp d DS | GTE |
| | Ricatto Paul | GTE |
| | Moorpark | GTE |
| | I AC RLeasing | GTE |
| 1986 | Borquez Rick DDS | Pacific Bell |
| | Buto Tim T DDS | Pacific Bell |
| | Coughlon Robert E atty | Pacific Bell |
| | Newton John W Consulting | Pacific Bell |
| | Redmond Jack W II A Professional Corp d DS | Pacific Bell |
| 1985 | Borquez Rick DDS | Pacific Telephone Co |
| | Buto Tim T DDS | Pacific Telephone Co |
| | Kovacs Civil Engineering | Pacific Telephone Co |
| | Newton John W Consulting | Pacific Telephone Co |
| | Redmond Jack W II A Professional Corp d DS | Pacific Telephone Co |

## E High St

**169 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | MOORPARK PRINTERS | EDR Digital Archive |
| 2010 | MOORPARK PRINTERS | EDR Digital Archive |
| 2005 | MOORPARK PRINTERS | EDR Digital Archive |

## E HIGH ST

**169 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Moorpark Printers | GTE |
| | Moorpark Printers | GTE |
| | Moorpark Rubbish Disposal | GTE |
| 1986 | Moorpark Printers | Pacific Bell |

| Year | Uses | Source |
|---|---|---|
| 1985 | Moorpark Printers | Pacific Telephone Co |
| 1980 | Moorpark | Polk |
| | Volunteer Services Branch Libraries | Polk |
| 1975 | Moorpark | General Telephone Company of California |
| 1971 | VENTURA CNTY LIBRARY DEPT | B&G Publications |
| 1970 | Moorpark Br | General Telephone Company of California |

## E High St

**173 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | ACF VET CLINIC MOORPARK | EDR Digital Archive |
| 2010 | ACF VET CLINIC MOORPARK | EDR Digital Archive |
| 2005 | ACF VET CLINIC MOORPARK | EDR Digital Archive |

## E HIGH ST

**173 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | r PHIIUPJEANNEMDM | Haines & Company, Inc. |
| | ACSVETER 18 ARY | Haines & Company, Inc. |
| | CLINIC | Haines & Company, Inc. |
| 1993 | Philp Jeanne MDVM | GTE |
| | Phatp Scott& | GTE |
| | Philp Jeanne MDVM | GTE |
| 1986 | ACS Veterinary Clinic | Pacific Bell |
| | Philip Jeanne M DVM | Pacific Bell |
| 1985 | ACS Veterinary Clinic | Pacific Telephone Co |
| | Philip Jeanne M DVM | Pacific Telephone Co |
| 1980 | Vendor Accounts Payable | Polk |
| | Moorpark | Polk |
| 1964 | ROSES DEPT STORE | Pacific Telephone Co |

**177 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |

**178 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | H 000 RPARK | Haines & Company, Inc. |

| Year | Uses | Source |
|---|---|---|
| 2002 | r WH 1 TAKER HARDWARE | Haines & Company, Inc. |
| | HARDWARE | Haines & Company, Inc. |

## E High St

**179 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | WHITAKER HARDWARE INC | EDR Digital Archive |
| | MOORPARK HARDWARE | EDR Digital Archive |
| 2010 | WHITAKER HARDWARE INC | EDR Digital Archive |
| | MOORPARK HARDWARE | EDR Digital Archive |
| 2005 | WHITAKER HARDWARE INC | EDR Digital Archive |
| | MOORPARK HARDWARE | EDR Digital Archive |

## E HIGH ST

**179 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Whitakers Hardware | GTE |
| | Whitakers Hardware | GTE |
| 1986 | Whitakers Hardware | Pacific Bell |
| | Whitby L | Pacific Bell |
| 1985 | Whitakers Hardware | Pacific Telephone Co |
| 1980 | Whitakers Hardware | Polk |
| 1975 | Whitakers Hardware | General Telephone Company of California |
| 1971 | WHITAKERS HARDWARE | B&G Publications |
| 1970 | Whitakers Hdwe | General Telephone Company of California |
| 1964 | Whitakers Hdwe | Pacific Telephone Co |

**181 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |

**184 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | LAPLAYITA | Haines & Company, Inc. |

**185 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | ADVA 8 TAOE REALTY | Haines & Company, Inc. |

# FINDINGS

## E High St

**189 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | LUTHERS ATTIC | EDR Digital Archive |
| 2010 | LUTHERS ATTIC | EDR Digital Archive |
| 2005 | LUTHERS ATTIC | EDR Digital Archive |

## E HIGH ST

**189 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | re MOORPARK PR 41 NERS 868 S | Haines & Company, Inc. |
| | ri OORPKPRINTEJS | Haines & Company, Inc. |
| | WOKALDona | Haines & Company, Inc. |
| 1993 | Luthers Attic | GTE |
| | Luthria Anita | GTE |
| | Luthers Attic | GTE |
| 1986 | Lutners Attic | Pacific Bell |
| 1980 | Moorpark | Polk |
| | USS Quapaw ATF 110 | Polk |
| 1975 | Moorpark | General Telephone Company of California |
| 1971 | POST OFFICE | B&G Publications |

**192 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Foster Enterprises | GTE |
| | Foster Enterprises | GTE |
| 1986 | FOS TE R E N TE RPRIS E S | Pacific Bell |
| 1980 | S & K RANCH INC FEED MILL | Polk |
| 1971 | FAIRVIEW MILLING | B&G Publications |
| 1970 | Fairview Milling Inc | General Telephone Company of California |

## E High St

**197 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | CACTUS PATCH THE | EDR Digital Archive |
| 2010 | CACTUS PATCH THE | EDR Digital Archive |
| 2005 | CACTUS PATCH THE | EDR Digital Archive |

# FINDINGS

## E HIGH ST

**197 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | RESTAURANT | Haines & Company, Inc. |
| | WHITAKERJames | Haines & Company, Inc. |
| | CACTUS PATCH | Haines & Company, Inc. |
| 1993 | Cactus Patch Restaurant | GTE |
| | Cactus Patch Restaurant | GTE |
| 1986 | Cactus Patch Restaurant | Pacific Bell |
| 1985 | Cactus Patch Restaurant | Pacific Telephone Co |
| 1980 | Cactus Patch Restaurant | Polk |
| 1975 | Cactus Patch Restaurant | General Telephone Company of California |
| 1971 | MPK COMMITTEE FOR JR COLLEGES | B&G Publications |
| 1970 | Moorpark Committee for Junior Colleges | General Telephone Company of California |

**201 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | Adairs Grocery | Southern California |

**209 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | So Pac Co depot Moorpark | Southern California |
| | So Calif Telephone Co | Southern California |

## E High St

**213 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | HEARTS OF JADE LLC | EDR Digital Archive |
| | MOORPARK AUTO GLASS | EDR Digital Archive |
| 2005 | CUMMINGS JOY | EDR Digital Archive |

## E HIGH ST

**213 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | GASSTATIONTHE | Haines & Company, Inc. |
| | CUMMINGSCurnan | Haines & Company, Inc. |
| 1993 | o Childrens Learning Center @Oxnard@ | GTE |
| | Gas Station The | GTE |

| Year | Uses | Source |
|---|---|---|
| 1993 | Gas Station The | GTE |
| | Childrens Hour The | GTE |
| | Childrens Hour The | GTE |
| 1985 | Four Suns Bike Shop | Pacific Telephone Co |
| 1980 | FOUR SUNS BIKE SHOP | Polk |
| 1975 | Four Suns Bike Shop | General Telephone Company of California |
| 1971 | TIRE TOWN | B&G Publications |
| 1970 | Tire Town | General Telephone Company of California |

**217 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | Bradley A Jean r | Southern California |

**218 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |

## E High St

**220 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | MOORPARK ACTIVE SENIORS INC | EDR Digital Archive |
| 2010 | MOORPARK ACTIVE SENIORS INC | EDR Digital Archive |
| 2005 | MOORPARK ACTIVE SENIORS INC | EDR Digital Archive |

## E HIGH ST

**220 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Anchor Sheet Metal | GTE |
| | One More Time Senior Thrift Shop | GTE |
| | One More Time Senior Thrift Shop | GTE |
| | Anchor Sheet Metal | GTE |
| 1986 | RE P Manufacturing | Pacific Bell |
| | RE P Manufacturing | Pacific Bell |
| | Moorpark Senior Citizens | Pacific Bell |
| | Moorpark Rubbish Disposal | Pacific Bell |
| | Moorpark Rentals & Sales | Pacific Bell |
| 1985 | REP Manufacturing | Pacific Telephone Co |
| | REP Manufacturing | Pacific Telephone Co |

| Year | Uses | Source |
|---|---|---|
| 1985 | Paikins Color Port | Pacific Telephone Co |
| | MOORPARK RENTALS & SALES | Pacific Telephone Co |
| 1980 | MOORPARK RENTALS & SALES | Polk |
| 1975 | Moorpark Electronics | General Telephone Company of California |
| 1971 | MENASHES OF MPK | B&G Publications |
| 1970 | ME N AS HES OF MOORPARK | General Telephone Company of California |

**222 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |

**226 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | JECO PLUMBING INC | Haines & Company, Inc. |
| 1993 | Tonys Auto & Truck Repair | GTE |
| | Tonys Auto & Truck Repair | GTE |
| 1986 | MWorpark Mental Health Center | Pacific Bell |
| 1985 | Moorpark Mental Health Center | Pacific Telephone Co |
| | Liberty Inspection Co | Pacific Telephone Co |
| 1980 | Moorpark Medical Group | Polk |
| | Leir Roger K | Polk |
| 1975 | Moorpark | General Telephone Company of California |
| | Moorpark Center | General Telephone Company of California |
| | Moorpark Health Service & Referral Center | General Telephone Company of California |
| | Flurys Backhoe Service | General Telephone Company of California |
| | From Saticoy Telephones Call | General Telephone Company of California |
| 1971 | HARRIS VERLE | B&G Publications |
| | OLSEN CHARLES | B&G Publications |
| | VENTURA CNTY SOC WELFARE DEPT | B&G Publications |
| 1970 | Moorpark | General Telephone Company of California |
| | Olsen Chas E chirprctr | General Telephone Company of California |
| | Harris Verle Civil Engineering | General Telephone Company of California |
| 1964 | PAIGE MARVIN R CO INC Business Ofc | Pacific Telephone Co |

**227 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | Simi Valley Cash Feed Store | Southern California |

# FINDINGS

**228 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | ONE MORETIME | Haines & Company, Inc. |
| | XXXX | Haines & Company, Inc. |
| | SENIOR THRIFTSH | Haines & Company, Inc. |

## E High St

**233 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | WARDLOW DICK INSURANCE BROKERS | EDR Digital Archive |
| 2010 | WARDLOW DICK INSURANCE BROKERS | EDR Digital Archive |
| 2005 | WARDLOW DICK INSURANCE BROKERS | EDR Digital Archive |

## E HIGH ST

**233 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | WARDLOW Rchard | Haines & Company, Inc. |
| | INSURANCE | Haines & Company, Inc. |
| | DICKWA | Haines & Company, Inc. |
| 1993 | California Clowns | GTE |
| | eamery The | GTE |
| | Toy Attic | GTE |
| | Toy G W @Camarillo | GTE |
| | eamery The | GTE |
| | Toy Attic | GTE |
| 1986 | Top Notch The | Pacific Bell |
| | Gardens | Pacific Bell |
| | From @Canoga Park @ Telephones Call | Pacific Bell |
| | W ALTE RS RE AL | Pacific Bell |
| | Better Homes And Gardens Walters Real Estate | Pacific Bell |
| | Christines Interiors | Pacific Bell |
| | Christines Interiors & Giftware | Pacific Bell |
| | Moorpark General Store | Pacific Bell |
| 1985 | Better Homes And Gardens Walters Real Estate | Pacific Telephone Co |
| | Cristines Interiors | Pacific Telephone Co |

| Year | Uses | Source |
|---|---|---|
| 1985 | Christines Interiors & Giftware | Pacific Telephone Co |
| | Moorpark General Store | Pacific Telephone Co |
| | Soda Fountain The | Pacific Telephone Co |
| | Top Notch The | Pacific Telephone Co |
| | Walters Real Estate Better Homes And Gardens | Pacific Telephone Co |

**243 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1940 | Whitaker Hardware Co | Southern California |

## E High St

**255 E High St**

| Year | Uses | Source |
|---|---|---|
| 2014 | CONTINENTAL GARDEN INC | EDR Digital Archive |
| 2010 | CONTINENTAL GARDEN INC | EDR Digital Archive |
| 2005 | CONTINENTAL GARDEN INC | EDR Digital Archive |

## E HIGH ST

**255 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | SECRETG | Haines & Company, Inc. |
| 1986 | Moorpark Flower Emporium | Pacific Bell |
| 1985 | Moorpark Flower Emporium | Pacific Telephone Co |
| 1975 | IN DICE S PORTS W E AR | General Telephone Company of California |
| 1971 | CASTROS MARKET | B&G Publications |
| 1970 | Castros Market | General Telephone Company of California |
| 1964 | Castros Market | Pacific Telephone Co |

**273 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| | XXXX | Haines & Company, Inc. |
| | MARTINEZTnnidad | Haines & Company, Inc. |
| | MA 1 T 1 NEZ 7 S 2va Juan | Haines & Company, Inc. |
| | GONSLEZUMaria E | Haines & Company, Inc. |
| | AVINAMana R | Haines & Company, Inc. |
| | APARTMENTS | Haines & Company, Inc. |

| Year | Uses | Source |
|---|---|---|
| 2002 | QOGDINZTrenidad | Haines & Company, Inc. |

**285 E HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1986 | Meza Enrique | Pacific Bell |

## HIGH

**123 HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Deleon Carmen I | Pacific Telephone Co |

**156 HIGH**

| Year | Uses | Source |
|---|---|---|
| 1970 | Ramirez Pat Jr | General Telephone Company of California |

## HIGH E

**11 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | MOORPARK MELODRAMA COSTUME ANNEX | Pacific Bell |
| 1968 | HALLS STORE | B&G Publications |

**15 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | COMM ACTION COUNCIL OF MP | B&G Publications |

**17 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | RITZY RAGS | Pacific Bell |

**20 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | UNION OIL | B&G Publications |

**33 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | F WAYNE J SAND & GRAVEL INC | Pacific Bell |
| | E VALTOR TAXES & INSURANCE SERVICES | Pacific Bell |
| | CHURCH OF MOORPARK | Pacific Bell |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1996 | A COMMUNITY CHRISTIAN | Pacific Bell |
| | D F 0 R DENTAL LABORATORY | Pacific Bell |

**43 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | ARABIAN | B&G Publications |

**45 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | MOORPARK | Pacific Bell |
| | MELODRAMA & VAUDEVILLE | Pacific Bell |
| | REAR Bredemann Linda | Pacific Bell |
| | MAGNIFICENT | Pacific Bell |
| 1968 | VALLEY THEATRE | B&G Publications |

**47 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | ONEAL LEE | B&G Publications |
| | SHROPSHIRE | B&G Publications |

**49 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | MOORPARK REALTY | B&G Publications |

**61 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | MOORPARK LNDRY | B&G Publications |
| | CHANEY ENTERPR | B&G Publications |

**68 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | BAR B QUE JOINT THE | Pacific Bell |

**71 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | WATCH SHOP | B&G Publications |

**75 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | LAWLEY LEE | B&G Publications |

# FINDINGS

**79 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | VACANT | B&G Publications |

**83 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | MPK TRAILER PRK | B&G Publications |
| | RENOE RICHD | B&G Publications |
| | CLARK TED | B&G Publications |
| | GANTS GLEN | B&G Publications |
| | WILLIS T MRS | B&G Publications |
| | STUART MARY | B&G Publications |
| | DAVIS LOY | B&G Publications |
| | ERICKSON R | B&G Publications |
| | BERGE CARL | B&G Publications |
| | NICKEL IMRS | B&G Publications |
| | KRAVA ANN | B&G Publications |
| | PETERSON N | B&G Publications |

**87 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | GUNTER PHARM | B&G Publications |

**95 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | 1ST WESTERN BANK | B&G Publications |

**100 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | RAY C MRS | B&G Publications |

**104 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | LA PLAYITA | Pacific Bell |
| 1968 | EPPIES FROSTI | B&G Publications |

**105 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | THE MAYFLOWER MARKET & LIQUOR | Pacific Bell |
| 1968 | BOBS MKT | B&G Publications |

# FINDINGS

**115 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | NO RETURN | B&G Publications |

**137 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | G & A VIDEO | Pacific Bell |
| 1968 | JOCELYNS HAIR FASHIONS | B&G Publications |

**139 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | DEMPSEY S | B&G Publications |

**161 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | URIBE JUAN | B&G Publications |

**165 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | 101 BORQUEZ RICK DOS | Pacific Bell |
| | 101 BUTO TIM T DDS | Pacific Bell |
| | 101 REDMOND JACK W II | Pacific Bell |
| | 205 WARD ROBERT C | Pacific Bell |
| | 106 EDWARD JONES | Pacific Bell |
| | ADVANTAGE REALTY | Pacific Bell |
| | 103 MOORPARK | Pacific Bell |
| | A PROFESSIONAL CORP | Pacific Bell |

**169 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | MOORPARK PRINTERS | Pacific Bell |
| 1968 | CNTY LIBRARY | B&G Publications |

**173 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | ACS VETERINARY CLINIC | Pacific Bell |
| 1968 | VACANT | B&G Publications |

**179 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | 189 LUTHERS ATTIC | Pacific Bell |
| | WHITAKER HARDWARE | Pacific Bell |

| Year | Uses | Source |
|---|---|---|
| 1968 | WHITAKERS HRDWRE | B&G Publications |

**189 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | POST OFFICE | B&G Publications |

**192 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | FOSTER ENTERPRISES | Pacific Bell |

**197 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | CACTUS PATCH RESTAURANT | Pacific Bell |

**213 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | GAS STATION THE | Pacific Bell |
| 1968 | SWINKS TEXACO | B&G Publications |

**220 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | ONE MORE TIME SENIOR THRIFT SHOP | Pacific Bell |
| 1968 | MOORPARK HDWRE | B&G Publications |

**222 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | PAIKINS COLOR PORT | Pacific Bell |

**226 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | JEMCO PLUMBING INC | Pacific Bell |
| | 255 MARCELINES | Pacific Bell |
| 1968 | BERGER I DDS | B&G Publications |
| | BERGER J DDS | B&G Publications |
| | ROBINSON V | B&G Publications |
| | ADMARK | B&G Publications |

**230 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | FARRELL JIM | B&G Publications |

# FINDINGS

**255 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | CASTROS MKT | B&G Publications |

**273 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1996 | Martinez Trinidad | Pacific Bell |
| 1968 | SALINAS EFRAIN | B&G Publications |

**285 HIGH E**

| Year | Uses | Source |
|---|---|---|
| 1968 | MEDELLIN J | B&G Publications |

## HIGH W

**18 HIGH W**

| Year | Uses | Source |
|---|---|---|
| 1996 | CHARLES ABBOTT ASSOCIATES INC | Pacific Bell |

**21 HIGH W**

| Year | Uses | Source |
|---|---|---|
| 1996 | AA MOORPARK | Pacific Bell |
| | TRANSMISSIONS SPECIALIST | Pacific Bell |

## HIGH ST

**123 HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1975 | Deleon Carmen I | General Telephone Company of California |

**125 HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1970 | Herrera Nellie I | General Telephone Company of California |
| 1940 | Moorpark Cafe | Southern California |

**129 HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1975 | Espinoza Esther I | General Telephone Company of California |

**137 HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1970 | Curly Top Beauty Salon | General Telephone Company of California |

# FINDINGS

**139 HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1964 | Moorpark | Pacific Telephone Co |

**156 HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1975 | Ramirez Pat Jr I | General Telephone Company of California |

**161 HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1964 | Edge David R | Pacific Telephone Co |

**189 HIGH ST**

| Year | Uses | Source |
|---|---|---|
| 1970 | For Zip Code Information call | General Telephone Company of California |
| | Moorpark | General Telephone Company of California |

## I First Investigative Consultants

**180 I First Investigative Consultants**

| Year | Uses | Source |
|---|---|---|
| 1993 | Financial Services 6 | GTE |

## MAGNOLIA AVE

**712 MAGNOLIA AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | G 9 RCIAAI | Haines & Company, Inc. |

**740 MAGNOLIA AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | Uribe Juan A | GTE |
| | Uribe Juan A | GTE |
| | Uribe Lucy | GTE |
| 1986 | Uribe Juan A | Pacific Bell |
| 1985 | Uribe Juan A | Pacific Telephone Co |
| 1980 | Uribe Juan A | Polk |

# FINDINGS

## MAGNOLIA ST

### 712 MAGNOLIA ST

| Year | Uses | Source |
|---|---|---|
| 1971 | GARCIA HIPOLITO | B&G Publications |
| 1968 | GARCIA H | B&G Publications |

### 740 MAGNOLIA ST

| Year | Uses | Source |
|---|---|---|
| 1975 | Uribe Juan A | Pacific Telephone Co |
| | Uribe Juan A | General Telephone Company of California |
| 1971 | URIBE JUAN | B&G Publications |

## MILLARD

### 487 MILLARD

| Year | Uses | Source |
|---|---|---|
| 1971 | BURD FORREST | B&G Publications |
| 1968 | BURD FORREST | B&G Publications |
| 1964 | Burd Forrest | Pacific Telephone Co |

### 507 MILLARD

| Year | Uses | Source |
|---|---|---|
| 1971 | ONEY HENRY | B&G Publications |
| 1968 | ONEY HENRY | B&G Publications |

## MILLARD ST

### 487 MILLARD ST

| Year | Uses | Source |
|---|---|---|
| 2002 | GONSALEZ Victor M | Haines & Company, Inc. |
| | AMEZCORJorga | Haines & Company, Inc. |
| | ALFAROJonge Eneque | Haines & Company, Inc. |
| 1986 | Woolard Dan | Pacific Bell |
| | Teenager Telephone | Pacific Bell |
| 1985 | Woolard Dan | Pacific Telephone Co |
| 1980 | Woolard Dan | Polk |
| 1975 | Woolard Dan | General Telephone Company of California |
| 1970 | Burd Forrest | General Telephone Company of California |

# FINDINGS

**507 MILLARD ST**

| Year | Uses | Source |
|---|---|---|
| 1996 | Velazquez Ana Bertha | Pacific Bell |
| 1993 | Mendiola Gustavo & Sandra | GTE |
| | Velazquez Ana Bertha | GTE |
| | Mendiondo M B | GTE |
| | Mendiola Gustavo & Sandra | GTE |
| | Velazquez Ana Bertha | GTE |
| 1986 | Barrera Agustin S | Pacific Bell |
| 1985 | Barrera Armando | Pacific Telephone Co |
| | Barrera Agustin S | Pacific Telephone Co |
| 1980 | Barrera Agustin S | Polk |
| 1975 | Oney Henry | General Telephone Company of California |
| 1970 | Oney Henry | General Telephone Company of California |
| 1964 | Oney Henry | Pacific Telephone Co |

## MOORPARK

**499 MOORPARK**

| Year | Uses | Source |
|---|---|---|
| 1964 | AITKEN FRED CHEVRON SERV STN | Pacific Telephone Co |

**601 MOORPARK**

| Year | Uses | Source |
|---|---|---|
| 1964 | MORARK AUTO PARTS | Pacific Telephone Co |

**624 MOORPARK**

| Year | Uses | Source |
|---|---|---|
| 1964 | Streets Key & Saw Shop | Pacific Telephone Co |

## Moorpark

**625 Moorpark**

| Year | Uses | Source |
|---|---|---|
| 1993 | Wefls R G And Co | GTE |

## MOORPARK

**679 MOORPARK**

| Year | Uses | Source |
|---|---|---|
| 1964 | Mc Cown Lee | Pacific Telephone Co |

# FINDINGS

## MOORPARK AVE

### 475 MOORPARK AVE

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1980 | Flugum Jon K | Polk |

### 496 MOORPARK AVE

| Year | Uses | Source |
|---|---|---|
| 2002 | PLUS MINUS MRKT | Haines & Company, Inc. |
| | 09 HEEMA Paramji MOORPK 99 CENT | Haines & Company, Inc. |
| 1993 | La Cabanita | GTE |
| | La Cabanita | GTE |
| 1985 | Pizza Stop Etc | Pacific Telephone Co |
| 1980 | Brothers Antiques & General Store | Polk |
| 1975 | Marz Harold G | General Telephone Company of California |
| | Cuddy Mary Louise | General Telephone Company of California |
| | Marys This & That | Pacific Telephone Co |
| | Cuddy Mary Louise | Pacific Telephone Co |
| | Marys This & That | General Telephone Company of California |
| 1970 | Taylor Les Second Hand Furniture Dealer | General Telephone Company of California |

### 499 MOORPARK AVE

| Year | Uses | Source |
|---|---|---|
| 1970 | MOOW ARK CHE VRON S E RVICE | General Telephone Company of California |

### 526 MOORPARK AVE

| Year | Uses | Source |
|---|---|---|
| 1980 | Nishikawa Wallace Y MD | Polk |
| 1975 | Nishikawa Wallace Y MD | Pacific Telephone Co |
| | Nishilkawa Wallace Y MD | General Telephone Company of California |

### 528 MOORPARK AVE

| Year | Uses | Source |
|---|---|---|
| 1980 | Braun Bail Bonds | Polk |
| | Camarillo III Ward Bishops Ofc | Polk |
| | Moorpark Branch | Polk |
| | KING ORSON REALTY | Polk |
| | MAY TRANSFER & STORAGE CO | Polk |
| | MAYFLOWER MOVING & STORAGE | Polk |
| | ORSON KING REALTY | Polk |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1975 | King Orson Realty | General Telephone Company of California |
| | ORS ON KIN G RE ALTY | General Telephone Company of California |
| | ORSON KING REALTY | Pacific Telephone Co |
| 1970 | Otten Leonard M geni contr | General Telephone Company of California |

## Moorpark Ave

**530 Moorpark Ave**

| Year | Uses | Source |
|---|---|---|
| 2014 | OASIS HAIR & NAILS | EDR Digital Archive |
| | GREER PH CO INC | EDR Digital Archive |
| | COASTER COMPANY | EDR Digital Archive |
| | SAASSOFT LLC | EDR Digital Archive |
| | JILL GRANNIS DMD | EDR Digital Archive |
| | J W MILLS MANAGEMENT LLC | EDR Digital Archive |
| | CLICKWARE INC | EDR Digital Archive |
| | A A N INSURANCE SERVICES | EDR Digital Archive |
| 2010 | A A N INSURANCE SERVICES | EDR Digital Archive |
| | INSURANCE BROKER | EDR Digital Archive |
| | SIMPLEFY INC | EDR Digital Archive |
| | MD MEDICAL & HM HEALTHCARE SUP | EDR Digital Archive |
| | MOORFIELD ENTERPRISES LLC | EDR Digital Archive |
| | DANA HEALTHCARE CORP | EDR Digital Archive |
| | COASTER COMPANY | EDR Digital Archive |
| | GREER PH CO INC | EDR Digital Archive |
| | OASIS HAIR & NAILS | EDR Digital Archive |
| | AURELIO INSURANCE AGENCY | EDR Digital Archive |
| | JONES GREGORY S MAI & COMPANY | EDR Digital Archive |
| 2005 | JONES GREGORY S MAI & COMPANY | EDR Digital Archive |
| | GARDNER RICHARD L MD | EDR Digital Archive |
| | M AND R LANDSCAPE CONSTRUCTION | EDR Digital Archive |
| | HAIR MAKEUP BY MARCIA ORELLANA | EDR Digital Archive |
| | AURELIO INSURANCE AGENCY | EDR Digital Archive |
| | DANA HEALTHCARE CORP | EDR Digital Archive |
| | SERVOY INC | EDR Digital Archive |
| | IRELAND PACKS & BUSINESS SVCS | EDR Digital Archive |
| | SHARP JMCO | EDR Digital Archive |
| | DARANCARE CORP | EDR Digital Archive |
| | OASIS HAIR & NAILS | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2005 | CLICKWARE INC | EDR Digital Archive |
| | COHN RONALD M CPA PC | EDR Digital Archive |
| | NOBLE RONALD A FARMERS INSUR | EDR Digital Archive |
| | MITCHELL DONNA | EDR Digital Archive |

## MOORPARK AVE

### 530 MOORPARK AVE

| Year | Uses | Source |
|---|---|---|
| 2002 | BUILDING | Haines & Company, Inc. |
| | AUL 8 EUOTONY | Haines & Company, Inc. |
| | FARMERS INS AGENT | Haines & Company, Inc. |
| | COHNRONALDM | Haines & Company, Inc. |
| | DARANCAREINC | Haines & Company, Inc. |
| | G 0 RDNER RICHARDL MD HAIR&MAKE | Haines & Company, Inc. |
| | ORELLANA IR | Haines & Company, Inc. |
| | TAX&BUSINESS | Haines & Company, Inc. |
| | SERVICES | Haines & Company, Inc. |
| | IRELAND WALTER EA JONESGREGORYS 0 M | Haines & Company, Inc. |
| | MAI&COMPANY KATHYSNAILS | Haines & Company, Inc. |
| | MOORPARK | Haines & Company, Inc. |
| | EDUCATORS ASSOCIATION 0 N 0 BLE | Haines & Company, Inc. |
| | AFARMERSINS 5 SHARP 4 JMCO | Haines & Company, Inc. |
| | TMETRICSINC 80538 009 W TANIAS A | Haines & Company, Inc. |
| | TANIASAGENCY | Haines & Company, Inc. |
| 1993 | Accounting Software & Products | GTE |
| | Avenues In Travel | GTE |
| | Blue Shield Agent Tony Aurelio | GTE |
| | Canejo Pediatric Assoc | GTE |
| | COHN RON ALD M | GTE |
| | Aurelio Tony | GTE |
| | Fillmore | GTE |
| | Gardner Richard LMD | GTE |
| | Ireland Tax & Business Services | GTE |
| | Mitchell Chas W | GTE |
| | I Mitchell Chizma Donna Ins Agcy | GTE |
| | Moorpark Chamber Of Commerce | GTE |
| | Moorpark Educators Association | GTE |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1993 | Moorpark Medical Group | GTE |
| | MOORPARK N E W S MIRROR | GTE |
| | My Bookie Bookkeeping Service | GTE |
| | T Metrics Inc | GTE |
| | Accounting Software & Products | GTE |
| | Accounting Solutions | GTE |
| | Avenues In Travel | GTE |
| | Blue Shield Agent Tony Aurelio | GTE |
| | Blue Shield Authorized Agent No Charge To Calling Party | GTE |
| | Blue Shield Group Sales | GTE |
| | Blue Shield Medicare Supplements | GTE |
| | Blue Shield New Enrollment | GTE |
| | Blue Shield Of California | GTE |
| | Canejo Pediatric Assoc | GTE |
| | COHN RON ALD M | GTE |
| | Aurelio Tony | GTE |
| | Gardner Richard LMD | GTE |
| | Gardner Robert & Janet | GTE |
| | Ireland Tax & Business Services | GTE |
| | Iren Senem | GTE |
| | I Mitchell Chizma Donna Ins Agcy | GTE |
| | Moorpark Chamber Of Commerce | GTE |
| | Moorpark Educators Association | GTE |
| | Moorpark Electro Optics | GTE |
| | Moorpark Medical Group | GTE |
| | MOORPARK N E W S MIRROR | GTE |
| | My Bookie Bookkeeping Service | GTE |
| | T Metrics Inc | GTE |
| | Wasser Harris MD | GTE |
| | Wasserman D | GTE |
| | Wasser Harris MD | GTE |
| 1986 | A Printing | Pacific Bell |
| | Avenues In Travel | Pacific Bell |
| | COHN RON ALD M | Pacific Bell |
| | Diet Center Of Moorpark | Pacific Bell |
| | Aurelio Tony | Pacific Bell |
| | HUFFMAN CHIROPRACTIC | Pacific Bell |
| | May Transfer & Storage Co | Pacific Bell |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1986 | Mayflower Moving & Storage | Pacific Bell |
| | Mission Construction | Pacific Bell |
| | Moorpark Medical Group | Pacific Bell |
| | Moorpark Microsystems | Pacific Bell |
| | Tabs Secretarial Services | Pacific Bell |
| | Tabullo Silbino V @Oxnard | Pacific Bell |
| | Tate Richard J elctrncs engnr | Pacific Bell |
| | Wasser Harris MD | Pacific Bell |
| 1985 | Avenues In Travel | Pacific Telephone Co |
| | COHN RONALD M | Pacific Telephone Co |
| | HUFFMAN CHIROPRACTIC | Pacific Telephone Co |
| | KAZA ADI L MRS MD | Pacific Telephone Co |
| | Kaza Adi MD | Pacific Telephone Co |
| | MAY TRANSFER & STORAGE CO | Pacific Telephone Co |
| | MAYFLOWER MOVING & STORAGE | Pacific Telephone Co |
| | Medical Clinic Of Moorpark | Pacific Telephone Co |
| | Mission Construction | Pacific Telephone Co |
| | Moorpark Microsystems | Pacific Telephone Co |
| | PS For Kids tutoring | Pacific Telephone Co |
| | Puri Surinder MD | Pacific Telephone Co |
| | Rodriguez Jose E drftsmn | Pacific Telephone Co |
| | Rodriquez Jose E drftsmn | Pacific Telephone Co |
| | Tate Richard J elctrncs engnr | Pacific Telephone Co |
| | Diet Center Of Moorpark | Pacific Telephone Co |
| 1980 | Borquez Richard G DDS | Polk |
| 1975 | Schools | General Telephone Company of California |
| | Moorpark Union Elementary School Dist | Pacific Telephone Co |

**532 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 1970 | Luv Bug Coiffures | General Telephone Company of California |

**534 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |

**536 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 1975 | If No Answer Call | General Telephone Company of California |

| Year | Uses | Source |
|---|---|---|
| 1975 | Moorpark Ofc | General Telephone Company of California |

**538 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 1980 | BRAUN REALTY | Polk |
| 1975 | OZZIES | Pacific Telephone Co |
| | Pacific Coast Clinical Laboratory | Pacific Telephone Co |
| | Pacific Coast Clinical Laboratory | General Telephone Company of California |

**539 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1980 | ROGERS WAYNE L TRUCKING | Polk |
| 1975 | ROGE RS W AYN E L TRUCKIN G | General Telephone Company of California |

**540 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | AR OYOCindy | Haines & Company, Inc. |

**542 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1980 | HANSON QUENTON E CPA | Polk |
| 1975 | Moody Arthur A M CPA | Pacific Telephone Co |
| | Moody Arthur A M CPA | General Telephone Company of California |

**544 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 1970 | N ATL RE TIRE D TE ACHE RS AS S N | General Telephone Company of California |
| | Nat l Life & Accident Ins Co | General Telephone Company of California |

**546 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 1980 | ENTERPRISE SUN & NEWS | Polk |
| 1975 | Nati Life & Accident Ins Co | General Telephone Company of California |
| | Nati Life & Accident Ins Co | Pacific Telephone Co |

**601 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | F 100 RIGUE 2 A | Haines & Company, Inc. |
| | SARABIAPa U | Haines & Company, Inc. |

| Year | Uses | Source |
|---|---|---|
| 2002 | THAKRARMukesh M | Haines & Company, Inc. |
| | CAESAR CARPETS | Haines & Company, Inc. |
| 1985 | Fines Welding & Supply | Pacific Telephone Co |
| | Fines Auto Repair & Trailer Service | Pacific Telephone Co |
| | Fines Auto Repair & Trailor Service | Pacific Telephone Co |
| 1980 | MOORPARK AUTO PARTS INC | Polk |
| | Moorpark Machine Shop | Polk |
| 1975 | MOORPARK AUTO PARTS IN C | General Telephone Company of California |
| | MOORPARK AUTO PARTS INC | Pacific Telephone Co |

## Moorpark Ave

**624 Moorpark Ave**

| Year | Uses | Source |
|---|---|---|
| 2010 | A PLUS NUTRITION | EDR Digital Archive |
| 2005 | A PLUS NUTRITION | EDR Digital Archive |

## MOORPARK AVE

**624 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | A Plus INtr 4tion | Haines & Company, Inc. |
| 1993 | Thorn Books Antiquarian | GTE |
| | Thorn Books Antiquarian | GTE |
| 1986 | Moorpark Chamber Of Commerce | Pacific Bell |

**631 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | HAIR SALON | Haines & Company, Inc. |
| | ENRIQUE 1 SPLACE | Haines & Company, Inc. |
| 1993 | Moorpark Sew & Vac | GTE |
| | Moorpark Sew & Vac | GTE |
| 1986 | Moorpark | Pacific Bell |
| | Lawson Karl | Pacific Bell |
| | United Financial Resources | Pacific Bell |
| 1970 | ORDYS CAS A DE BE AUTY | General Telephone Company of California |

**643 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | XPERTAX | Haines & Company, Inc. |

| Year | Uses | Source |
|---|---|---|
| 1993 | Ramirez Lucia | GTE |
| | Sofias Little Shop | GTE |
| | Ramirez Lucia | GTE |
| | Sofias Little Shop | GTE |
| 1980 | Oasis | Polk |
| 1970 | Wig Box The | General Telephone Company of California |

**661 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | DAL 14 DOT 9odoro | Haines & Company, Inc. |
| 1986 | Kannard K Bll | Pacific Bell |
| 1985 | Yeyna Gregg | Pacific Telephone Co |
| 1980 | Yeyna Gregg | Polk |
| 1975 | Tanner I G | General Telephone Company of California |
| | Tanner I G | Pacific Telephone Co |

**675 MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1993 | Jemco Plumbing Inc | GTE |
| | Jemco Plumbing Inc | GTE |
| 1986 | Jemco Plumbing Inc | Pacific Bell |
| | Jenci N TOks | Pacific Bell |
| 1985 | Jemco Plumbing Inc | Pacific Telephone Co |
| 1980 | Moorpark Printers | Polk |
| 1975 | Moorpark Printers | General Telephone Company of California |
| | MOORPARK RE N DE ZVOUS 9513 | General Telephone Company of California |

## MOORPARK RD

**364 MOORPARK RD**

| Year | Uses | Source |
|---|---|---|
| 1971 | PACE JOHN W | B&G Publications |

**375 MOORPARK RD**

| Year | Uses | Source |
|---|---|---|
| 1971 | SPENCERS MKT | B&G Publications |

# FINDINGS

**380 MOORPARK RD**

| Year | Uses | Source |
|---|---|---|
| 1971 | BARRY M J | B&G Publications |

## S MOORPARK AVE

**560 S MOORPARK AVE**

| Year | Uses | Source |
|---|---|---|
| 1940 | Holland M L r | Southern California |

## W 1ST ST

**2 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1993 | Castaneda Stanle IKt Astoria POwr 485 | GTE |
| | Castaneda Stanle IKt Astoria POwr$485 | GTE |

**3 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1976 | Waddell R | R. L. Polk & Co. |

**4 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1976 | Guerro Jose C | R. L. Polk & Co. |

**5 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1957 | 47 N o return | R. L. Polk Co. of California |

**6 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | B 3 WENNERHOLMAlce I | Haines & Company, Inc. |
| | WENNERHOLMBruce | Haines & Company, Inc. |
| 1976 | Perez Richd | R. L. Polk & Co. |

**7 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1976 | Luna Jose | R. L. Polk & Co. |

**8 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1976 | Vacant | R. L. Polk & Co. |

# FINDINGS

**23 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1957 | 5 Johnson Clifford | R. L. Polk Co. of California |

**29 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1961 | Vacant | R. L. Polk & Co. |
| | Z 35 Sieland Louise A Mrs AHU | R. L. Polk & Co. |

**52 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1961 | Ib Shitterly Grover | R. L. Polk & Co. |
| 1957 | Id Vacant | R. L. Polk Co. of California |

**53 W 1ST ST**

| Year | Uses | Source |
|---|---|---|
| 1961 | 7b Lindburg Geo | R. L. Polk & Co. |
| | 7c Chaffee Lucille Mrs hu | R. L. Polk & Co. |

## W HIGH

**3 W HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Bingham H J S | Pacific Telephone Co |

**21 W HIGH**

| Year | Uses | Source |
|---|---|---|
| 1975 | Ocker Louis Auto Clinic | Pacific Telephone Co |
| | Auto Clinic Ocker Louis | Pacific Telephone Co |

## W High St

**18 W High St**

| Year | Uses | Source |
|---|---|---|
| 2010 | MOORPARK CITY OF | EDR Digital Archive |
| 2005 | MOORPARK CITY OF | EDR Digital Archive |
| | ABBOTT CHARLES ASSOCIATES INC | EDR Digital Archive |

# FINDINGS

## W HIGH ST

### 18 W HIGH ST

| Year | Uses | Source |
|---|---|---|
| 2002 | CHARLESABBOTT | Haines & Company, Inc. |
| | ASSOCIATES INC | Haines & Company, Inc. |
| | BLDNOISFTY | Haines & Company, Inc. |
| | MOORPKCl Y | Haines & Company, Inc. |
| 1971 | CLINE RICHFIELD SERVICE | B&G Publications |

### 20 W HIGH ST

| Year | Uses | Source |
|---|---|---|
| 1964 | Moorpark Whsle Distrs | Pacific Telephone Co |

### 21 W HIGH ST

| Year | Uses | Source |
|---|---|---|
| 2002 | AA MOORPARK | Haines & Company, Inc. |
| | TRNSMSSNSSPCLST | Haines & Company, Inc. |
| 1993 | AA Moorpark Transmissions Specialist | GTE |
| | AA Moorpark Transmissions Specialist | GTE |
| | A & A Professional Cleaning Service | GTE |
| 1986 | Hager Automotive | Pacific Bell |
| 1985 | Hager Automotive | Pacific Telephone Co |
| 1980 | OCKER LOUIS AUTO CLINIC | Polk |
| | AUTO CLINIC OCKER LOUIS | Polk |
| 1975 | Ocker Louis Auto Clinic | General Telephone Company of California |
| | Auto Clinic Ocker Louis | General Telephone Company of California |
| 1971 | MPK GARAGE | B&G Publications |
| 1970 | Moorpark Garage | General Telephone Company of California |

### 100 W HIGH ST

| Year | Uses | Source |
|---|---|---|
| 1964 | Herron John O | Pacific Telephone Co |

### 101 W HIGH ST

| Year | Uses | Source |
|---|---|---|
| 1980 | Moorpark Co Op Nursery | Polk |

### 161 W HIGH ST

| Year | Uses | Source |
|---|---|---|
| 1975 | Hernandez Frank L | General Telephone Company of California |

# FINDINGS

## WALNUT

### 661 WALNUT

| Year | Uses | Source |
|---|---|---|
| 1971 | CHANEY ENTERPRISES | B&G Publications |

### 680 WALNUT

| Year | Uses | Source |
|---|---|---|
| 1971 | FOURSQUARE CH | B&G Publications |
| | SCOTT FRED | B&G Publications |
| 1968 | FOURSQUARE CH | B&G Publications |
| 1964 | Scott Fred Rev | Pacific Telephone Co |

### 681 WALNUT

| Year | Uses | Source |
|---|---|---|
| 1971 | TAKAHASHI K | B&G Publications |
| 1968 | WOOFF EDW | B&G Publications |
| 1964 | Wooff Edw A | Pacific Telephone Co |

### 686 WALNUT

| Year | Uses | Source |
|---|---|---|
| 1968 | NORCO ENGRG | B&G Publications |

### 690 WALNUT

| Year | Uses | Source |
|---|---|---|
| 1968 | MRPK AUTO BODY SERVICE | B&G Publications |

### 702 WALNUT

| Year | Uses | Source |
|---|---|---|
| 1971 | FIRST BAPT CH | B&G Publications |
| 1968 | FIRST BAPTIST CH | B&G Publications |
| 1964 | First Baptist Church | Pacific Telephone Co |

### 760 WALNUT

| Year | Uses | Source |
|---|---|---|
| 1971 | HILL H W | B&G Publications |
| 1968 | HILL H W | B&G Publications |

# FINDINGS

## WALNUT AVE

**700 WALNUT AVE**

| Year | Uses | Source |
|---|---|---|
| 1926 | Brand Merle | Los Angeles Directory Co. |

**750 WALNUT AVE**

| Year | Uses | Source |
|---|---|---|
| 1926 | Garner W B | Los Angeles Directory Co. |

**756 WALNUT AVE**

| Year | Uses | Source |
|---|---|---|
| 1926 | Johnson Bert | Los Angeles Directory Co. |

**760 WALNUT AVE**

| Year | Uses | Source |
|---|---|---|
| 1926 | Larramendy P A | Los Angeles Directory Co. |

## WALNUT ST

**651 WALNUT ST**

| Year | Uses | Source |
|---|---|---|
| 1965 | SARGENT RAY E | R. L. Polk & Co. |

## Walnut St

**661 Walnut St**

| Year | Uses | Source |
|---|---|---|
| 2014 | MOORPARK PRODUCE | EDR Digital Archive |
| 2010 | MOORPARK PRODUCE | EDR Digital Archive |
| 2005 | MOORPARK PRODUCE | EDR Digital Archive |

## WALNUT ST

**661 WALNUT ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | MOORPARK PRODUCE | Haines & Company, Inc. |
| 1996 | MOORPARK PRODUCE | Pacific Bell |
| 1985 | Janelles Dance Etc | Pacific Telephone Co |
| 1980 | Bilingual Education Program | Polk |
| | MOORPARK COLLEGE | Polk |
| 1975 | MOORPARK DROP IN CE N TE R | General Telephone Company of California |

| Year | Uses | Source |
|---|---|---|
| 1975 | MOORPARK DROP IN CENTER | Pacific Telephone Co |
| 1970 | Arts West Valley Refrigeration | General Telephone Company of California |
| | Chaney Enterprises Appliance Sales & Service | General Telephone Company of California |
| | Chaney Fred F I OOBlackbrn Pl @Ventura | General Telephone Company of California |
| | West Valley Refrigeration | General Telephone Company of California |

## Walnut St

**680 Walnut St**

| Year | Uses | Source |
|---|---|---|
| 2014 | SEASONAL ADVENTURES | EDR Digital Archive |
| 2010 | SEASONAL ADVENTURES | EDR Digital Archive |
| | SEPICH ASSOCIATES | EDR Digital Archive |
| 2005 | A ONE PRINTING | EDR Digital Archive |
| | VILLAGE DEVELOPMENT | EDR Digital Archive |

## WALNUT ST

**680 WALNUT ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | SEPICHJ | Haines & Company, Inc. |
| | SEPICH ASSOCIATES | Haines & Company, Inc. |
| 1993 | Life Centers Pregnancy Counseling Center | GTE |
| | Life Safe Safety Services PO Box 1407 @Ojai | GTE |
| | Life Management | GTE |
| | Life Centers Of Ventura County | GTE |
| | Life Centers | GTE |
| | Life Centers | GTE |
| | Life Centers Of Ventura County | GTE |
| | Life Centers Pregnancy Counseling Center | GTE |
| 1980 | GRACE CHAPEL FOURSQUARE CHURCH | Polk |
| 1975 | Foursquare Church | Pacific Telephone Co |
| | Foursquare Church | General Telephone Company of California |
| 1970 | Foursquare Church | General Telephone Company of California |
| | Scott Fred Rev | General Telephone Company of California |
| 1964 | Foursquare Church | Pacific Telephone Co |

# FINDINGS

**681 WALNUT ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | GARCIA Fon da | Haines & Company, Inc. |
| | LIVO Theresa | Haines & Company, Inc. |
| 1993 | Lazo Maldonado Tomas | GTE |
| | Lazo Maldonado Tomas | GTE |
| 1980 | Oviedo Ramon Sr | Polk |
| 1975 | Franklin Geo A | Pacific Telephone Co |
| | Franklin Geo A | General Telephone Company of California |
| 1970 | Takahashi Koki | General Telephone Company of California |

## Walnut St

**686 Walnut St**

| Year | Uses | Source |
|---|---|---|
| 2005 | WAGGIN TAILS | EDR Digital Archive |

## WALNUT ST

**686 WALNUT ST**

| Year | Uses | Source |
|---|---|---|
| 2002 | WAG 61 N TAILS | Haines & Company, Inc. |
| | BRONSONOCai Ses | Haines & Company, Inc. |
| 1996 | WAGGIN TAILS | Pacific Bell |
| 1993 | Waggin Tails | GTE |
| | Waggin Tails | GTE |
| 1986 | Waggin Tails | Pacific Bell |
| 1985 | Waggin Tails | Pacific Telephone Co |

## Walnut St

**690 Walnut St**

| Year | Uses | Source |
|---|---|---|
| 2010 | 690 MARTIAL ARTS & FITNESS | EDR Digital Archive |
| | J & H VENTURES LLC | EDR Digital Archive |
| 2005 | BOULEVARD MOTORCAR COMPANY | EDR Digital Archive |
| | BRONSON INVESTMENTS | EDR Digital Archive |

## WALNUT ST

### 690 WALNUT ST

| Year | Uses | Source |
|---|---|---|
| 2002 | B 60 NSON 10nestenats | Haines & Company, Inc. |
| 1993 | Berard Michael Garage | GTE |
| | Berard Michael Garage | GTE |
| 1986 | Faircloth Classic Restoration | Pacific Bell |

### 691 WALNUT ST

| Year | Uses | Source |
|---|---|---|
| 2002 | Oo YOTheresa | Haines & Company, Inc. |
| 1986 | Nunez Jimmy & Mimi | Pacific Bell |
| 1975 | Cretsinger Robt D | General Telephone Company of California |
| | CretsInger Robt D | Pacific Telephone Co |

## Walnut St

### 702 Walnut St

| Year | Uses | Source |
|---|---|---|
| 2014 | FIRST BAPTIST CHURCH MOORPA | EDR Digital Archive |
| 2010 | FIRST BAPTIST CHURCH MOORPA | EDR Digital Archive |
| 2005 | FIRST BAPTIST CHURCH MOORPA | EDR Digital Archive |

## WALNUT ST

### 702 WALNUT ST

| Year | Uses | Source |
|---|---|---|
| 2002 | XXXX | Haines & Company, Inc. |
| 1993 | Moorpark Community Church S BC | GTE |
| | Moorpark Community Church S BC | GTE |
| 1986 | First Baptist Church So Of Moorpark | Pacific Bell |
| 1985 | First Baptist Church So Of Moorpark | Pacific Telephone Co |
| 1980 | First Baptist Church So Of Moorpark | Polk |
| 1975 | First Baptist Church So Of Moorpark | General Telephone Company of California |
| 1970 | First Baptist Church | General Telephone Company of California |
| | If no answer call @Simi@ | General Telephone Company of California |

### 760 WALNUT ST

| Year | Uses | Source |
|---|---|---|
| 2002 | KALESEri | Haines & Company, Inc. |

| Year | Uses | Source |
|---|---|---|
| 1996 | Hill HW | Pacific Bell |
| 1993 | Hill H W | GTE |
| | Hill H Wayne & Penny @Thousand Oaks | GTE |
| | Hill H W | GTE |
| 1986 | Hill H W | Pacific Bell |
| 1985 | Hill H W | Pacific Telephone Co |
| 1980 | Hill H W | Polk |
| 1975 | Hill H W | General Telephone Company of California |
| 1970 | Hill H W | General Telephone Company of California |
| 1964 | Hill H W | Pacific Telephone Co |

## YOU2167 1ST

**4 YOU2167 1ST**

| Year | Uses | Source |
|---|---|---|
| 1980 | Space | Polk |
| | Space | Polk |

# FINDINGS

## TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

| Address Researched | Address Not Identified in Research Source |
|---|---|
| E High Street | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |

## ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 004 E HIGH ST | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 1 1ST ST | 2014, 2010, 2005, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 1 E HIGH ST | 2014, 2010, 2005, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 100 HIGH E | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 100 W HIGH ST | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 101 1ST ST | 2014, 2010, 2005, 2000, 1996, 1993, 1986, 1985, 1976, 1975, 1971, 1970, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 101 W HIGH ST | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 102 1ST | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 102 1ST ST | 2014, 2010, 2005, 2000, 1996, 1993, 1986, 1985, 1976, 1975, 1971, 1970, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 54 CHARLES ST | 2014, 2010, 2005, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 540 BARD | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1961, 1957, 1953, 1940, 1930, 1926 |
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| 542 MOORPARK AVE | 2014, 2010, 2005, 2000, 1996, 1993, 1986, 1985, 1976, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 546 MOORPARK AVE | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1976, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 560 S MOORPARK AVE | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1930, 1926 |
| 6 1ST ST | 2014, 2010, 2005, 2002, 2000, 1996, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 6 W 1ST ST | 2014, 2010, 2005, 2000, 1996, 1993, 1986, 1985, 1980, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 601 MOORPARK | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |

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| 61 E HIGH ST | 2014, 2010, 2005, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 61 HIGH E | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 624 MOORPARK | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 624 MOORPARK AVE | 2014, 2010, 2005, 2000, 1996, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 624 Moorpark Ave | 2014, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 625 Moorpark | 2014, 2010, 2005, 2002, 2000, 1996, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 631 MOORPARK AVE | 2014, 2010, 2005, 2000, 1996, 1985, 1980, 1976, 1975, 1971, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 639 BARD ST | 2014, 2010, 2005, 2000, 1993, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 640 BARD ST | 2014, 2010, 2005, 2000, 1996, 1993, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 65 1ST | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1985, 1980, 1976, 1975, 1970, 1968, 1965, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 65 1ST ST | 2014, 2010, 2005, 2000, 1993, 1986, 1985, 1976, 1971, 1970, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 650 BARD ST | 2014, 2010, 2005, 2002, 2000, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 651 WALNUT ST | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 655 Bard St | 2014, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 661 WALNUT ST | 2014, 2010, 2005, 2000, 1993, 1986, 1976, 1971, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 661 Walnut St | 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 675 MOORPARK AVE | 2014, 2010, 2005, 2000, 1996, 1976, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
| 679 MOORPARK | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 700 WALNUT AVE | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930 |
| 702 WALNUT | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1970, 1965, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |

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| 702 Walnut St | 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 71 E HIGH ST | 2014, 2010, 2005, 2000, 1996, 1980, 1976, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 71 HIGH E | 2014, 2010, 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |
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| 97 Charles St | 2005, 2002, 2000, 1996, 1993, 1986, 1985, 1980, 1976, 1975, 1971, 1970, 1968, 1965, 1964, 1961, 1957, 1953, 1949, 1940, 1930, 1926 |

Moorpark RR Depot

E High Street

Moorpark, CA 93021

Inquiry Number: 5306248.3

May 22, 2018

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

05/22/18

**Site Name:**

Moorpark RR Depot
E High Street
Moorpark, CA 93021
EDR Inquiry # 5306248.3

**Client Name:**

Rincon
180 North Ashwood Avenue
Ventura, CA 93003-0000
Contact: Sarah Larese

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**Project** 18-05844

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- ☑ Library of Congress
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# Appendix I

Noise Data and Modeling Worksheets

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

# Ambient Noise Survey Data Sheet

**Instructions:** Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

**Project Name:** Moorpark Depot **Job Number:** 18-05844
**Date:** 06-12-2018 **Operator Name:** Jamie Power

## Measurement #1

**Location:** 2 (project site, High st) **Begin time:** 7:41 am **Finish time:** 7:56 am
**Measurement No.:** 1 **Wind (mph):** _____ **Direction:** _____
**Cloud Cover Class:** Overcast (>80%) ○ Light (20-80%) ○ Sunny (<20%) ⊗
**Calibration (dB):** Start: _____ End: _____
**Primary Noise Sources:** Traffic along High st **Distance:** ~60 ft from centerline
**Secondary Noise Sources:** birds, pedestrians
**Notes:** _____

**Traffic Count:** Passenger Cars: N/A
Medium to Heavy Duty Trucks (3 axles): _____ Heavy Duty Trucks (4+ axles): _____
**Instantaneous Noise Sources/Levels** (e.g., airplane, bus airbrake, etc.): _____
**Leq:** 65.4 **SEL:** _____ **Lmax:** 78.7 **Lmin:** 44.6 **PK:** 98.6
**L(05):** _____ **L(10):** _____ **L(50):** _____ **L(90):** _____ **L(95):** _____
**Response:** Slow ○ Fast ○ Peak ○ Impulse ○

## Measurement #2

**Location:** 1 (along High st) **Begin time:** 7:57 am **Finish time:** 8:12 am
**Measurement No.:** 2 **Wind (mph):** _____ **Direction:** _____
**Cloud Cover Class:** Overcast (>80%) ○ Light (20-80%) ○ Sunny (<20%) ⊗
**Calibration (dB):** Start: _____ End: _____
**Primary Noise Sources:** Traffic High st. **Distance:** ~30 ft centerline
**Secondary Noise Sources:** pedestrians, train x-ing bells, train (100 ft away)
**Notes:** siren-ambulance, traffic Moorpark

**Traffic Count:** Passenger Cars: (76)
Medium to Heavy Duty Trucks (3 axles): _____ Heavy Duty Trucks (4+ axles): _____
**Instantaneous Noise Sources/Levels** (e.g., airplane, bus airbrake, etc.): _____
**Leq:** 69.0 **SEL:** _____ **Lmax:** 88.8 **Lmin:** 51.3 **PK:** 114.8
**L(05):** _____ **L(10):** _____ **L(50):** _____ **L(90):** _____ **L(95):** _____
**Response:** Slow ○ Fast ○ Peak ○ Impulse ○

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Environmental Scientists Planners Engineers
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# Ambient Noise Survey Data Sheet

**Instructions:** Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

**Project Name:** Moorpark Depot **Job Number:** 18-05 844

**Date:** 06-12-2018 **Operator Name:** Jamie Power

## Measurement #1

Walnut St

**Location:** 3 (nearest residence) **Begin time:** 8:16 am **Finish time:** 8:31 am

**Measurement No.:** 3 **Wind (mph):** _____ **Direction:** _____

**Cloud Cover Class:** Overcast (>80%) ○ Light (20-80%) ○ Sunny (<20%) ⊗

**Calibration (dB):** Start: _____ End: _____

**Primary Noise Sources:** Traffic high st **Distance:** ~30 ft

**Secondary Noise Sources:** Traffic Walnut, pedestrians

**Notes:** _____

**Traffic Count:** Passenger Cars: N/A

Medium to Heavy Duty Trucks (3 axles): _____ Heavy Duty Trucks (4+ axles): _____

**Instantaneous Noise Sources/Levels** (e.g., airplane, bus airbrake, etc.): _____

**Leq:** 55.0 **SEL:** _____ **Lmax:** 73.4 **Lmin:** 45.2 **PK:** 98.5

**L(05):** _____ **L(10):** _____ **L(50):** _____ **L(90):** _____ **L(95):** _____

**Response:** Slow ○ Fast ○ Peak ○ Impulse ○

## Measurement #2

**Location:** _____ **Begin time:** _____ **Finish time:** _____

**Measurement No.:** _____ **Wind (mph):** _____ **Direction:** _____

**Cloud Cover Class:** Overcast (>80%) ○ Light (20-80%) ○ Sunny (<20%) ○

**Calibration (dB):** Start: _____ End: _____

**Primary Noise Sources:** _____ **Distance:** _____

**Secondary Noise Sources:** _____

**Notes:** _____

**Traffic Count:** Passenger Cars: _____

Medium to Heavy Duty Trucks (3 axles): _____ Heavy Duty Trucks (4+ axles): _____

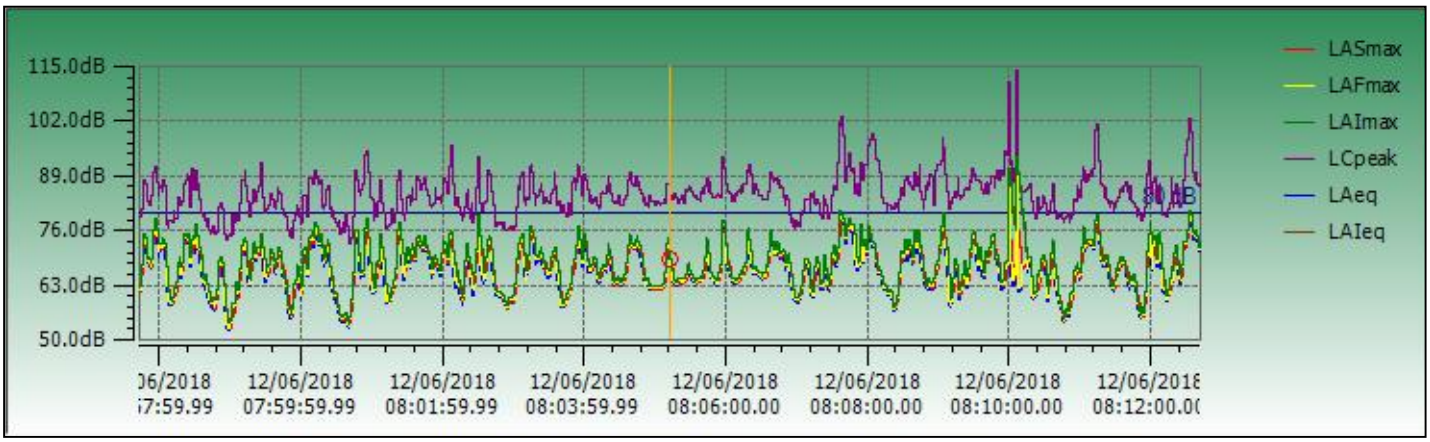
**Instantaneous Noise Sources/Levels** (e.g., airplane, bus airbrake, etc.): _____

**Leq:** _____ **SEL:** _____ **Lmax:** _____ **Lmin:** _____ **PK:** _____

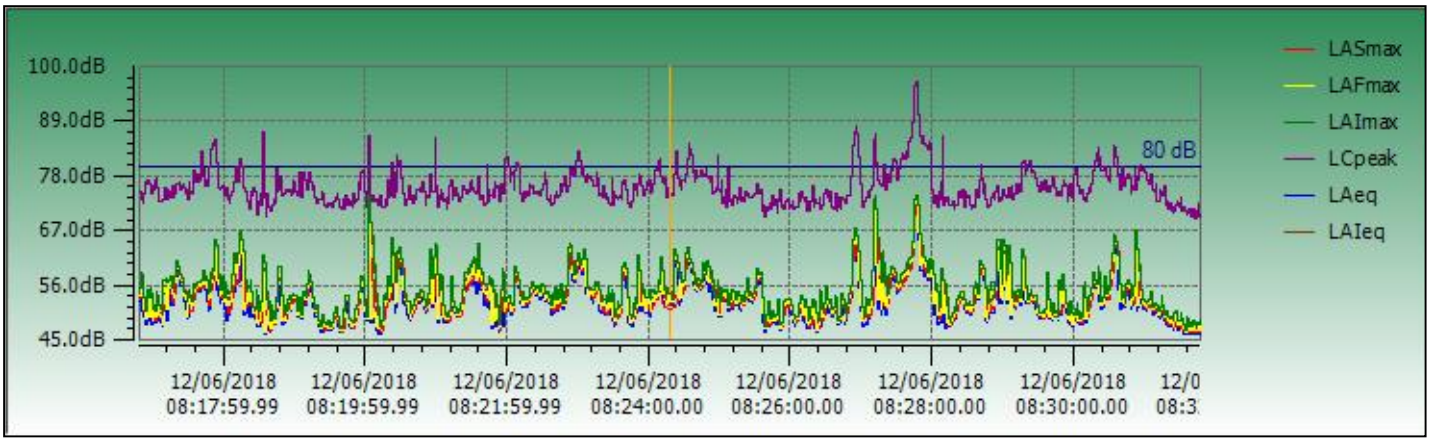
**L(05):** _____ **L(10):** _____ **L(50):** _____ **L(90):** _____ **L(95):** _____

**Response:** Slow ○ Fast ○ Peak ○ Impulse ○

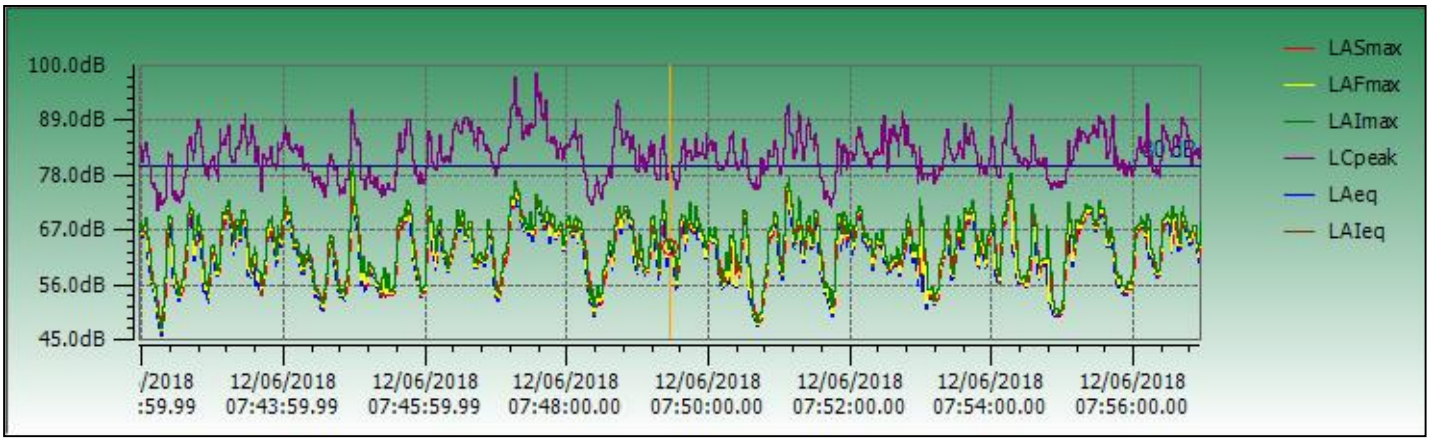
| | |
|---|---|
| **Instrument Model** | **CEL-633C** |
| Battery Low | No |
| End Date & Time | 6/12/2018 8:12:43 AM |
| Overload | No |
| Duration | 00:15:00 HH:MM:SS |
| Pause Duration | 00:00:00 HH:MM:SS |
| Response | Random |
| Run Number | 3 |
| Serial Number | 1739839 |
| Notes | |
| Site | Unallocated |
| Location | Unallocated |
| Person | Unallocated |
| Process | Unallocated |
| Start Date & Time | 6/12/2018 7:57:43 AM |
| Result | Cumulative |




| | |
|---|---|
| **Instrument Model** | **CEL-633C** |
| Battery Low | No |
| End Date & Time | 6/12/2018 8:31:48 AM |
| Overload | No |
| Duration | 00:15:00 HH:MM:SS |
| Pause Duration | 00:00:00 HH:MM:SS |
| Response | Random |
| Run Number | 4 |
| Serial Number | 1739839 |
| Notes | |
| Site | Unallocated |
| Location | Unallocated |
| Person | Unallocated |
| Process | Unallocated |
| Start Date & Time | 6/12/2018 8:16:48 AM |
| Result | Cumulative |




| **Instrument Model** | **CEL-633C** | | |
|---|---|---|---|
| Battery Low | No | Site | Unallocated |
| End Date & Time | 6/12/2018 7:56:57 AM | Location | Unallocated |
| Overload | No | Person | Unallocated |
| Duration | 00:15:00 HH:MM:SS | Process | Unallocated |
| Pause Duration | 00:00:00 HH:MM:SS | Start Date & Time | 6/12/2018 7:41:57 AM |
| Response | Random | Result | Cumulative |
| Run Number | 2 | | |
| Serial Number | 1739839 | | |
| Notes | | | |



# 24-Hour Noise Measurement Avg Leq, CNEL, and Ldn Calculation Spreadsheet

**Instructions**

1. Open meter data in Excel.
2. Copy and paste values for into highlighted cells in spreadsheet.

| Results | |
|---|---|
| 24-hour average Leq | 64.7 |
| CNEL | 69.2 |
| Ldn | 65.0 |

**Duration (seconds)** 240

| No.s | Date Time | Date | Time | dB |
|---|---|---|---|---|
| 1 | 10/2/2019 8:43 | 10/2/2019 | 8:43:58 AM | 52.9 |
| 2 | 10/2/2019 8:47 | 10/2/2019 | 8:47:58 AM | 50.5 |
| 3 | 10/2/2019 8:51 | 10/2/2019 | 8:51:58 AM | 58.1 |
| 4 | 10/2/2019 8:55 | 10/2/2019 | 8:55:58 AM | 51.6 |
| 5 | 10/2/2019 8:59 | 10/2/2019 | 8:59:58 AM | 55.6 |
| 6 | 10/2/2019 9:03 | 10/2/2019 | 9:03:58 AM | 51.5 |
| 7 | 10/2/2019 9:07 | 10/2/2019 | 9:07:58 AM | 55.8 |
| 8 | 10/2/2019 9:11 | 10/2/2019 | 9:11:58 AM | 51.9 |
| 9 | 10/2/2019 9:15 | 10/2/2019 | 9:15:58 AM | 50.3 |
| 10 | 10/2/2019 9:19 | 10/2/2019 | 9:19:58 AM | 49.9 |
| 11 | 10/2/2019 9:23 | 10/2/2019 | 9:23:58 AM | 51.1 |
| 12 | 10/2/2019 9:27 | 10/2/2019 | 9:27:58 AM | 49.5 |
| 13 | 10/2/2019 9:31 | 10/2/2019 | 9:31:58 AM | 51.5 |
| 14 | 10/2/2019 9:35 | 10/2/2019 | 9:35:58 AM | 50.6 |
| 15 | 10/2/2019 9:39 | 10/2/2019 | 9:39:58 AM | 50.4 |
| 16 | 10/2/2019 9:43 | 10/2/2019 | 9:43:58 AM | 52.3 |
| 17 | 10/2/2019 9:47 | 10/2/2019 | 9:47:58 AM | 48.6 |
| 18 | 10/2/2019 9:51 | 10/2/2019 | 9:51:58 AM | 51.9 |
| 19 | 10/2/2019 9:55 | 10/2/2019 | 9:55:58 AM | 54.7 |
| 20 | 10/2/2019 9:59 | 10/2/2019 | 9:59:58 AM | 48.8 |
| 21 | 10/2/2019 10:03 | 10/2/2019 | 10:03:58 AM | 47.5 |
| 22 | 10/2/2019 10:07 | 10/2/2019 | 10:07:58 AM | 52.7 |
| 23 | 10/2/2019 10:11 | 10/2/2019 | 10:11:58 AM | 52 |
| 24 | 10/2/2019 10:15 | 10/2/2019 | 10:15:58 AM | 49 |
| 25 | 10/2/2019 10:19 | 10/2/2019 | 10:19:58 AM | 52 |
| 26 | 10/2/2019 10:23 | 10/2/2019 | 10:23:58 AM | 47 |
| 27 | 10/2/2019 10:27 | 10/2/2019 | 10:27:58 AM | 45.6 |
| 28 | 10/2/2019 10:31 | 10/2/2019 | 10:31:58 AM | 50.1 |
| 29 | 10/2/2019 10:35 | 10/2/2019 | 10:35:58 AM | 50.1 |
| 30 | 10/2/2019 10:39 | 10/2/2019 | 10:39:58 AM | 49.5 |
| 31 | 10/2/2019 10:43 | 10/2/2019 | 10:43:58 AM | 50.5 |

| | | | | |
|---|---|---|---|---|
| 32 | 10/2/2019 10:47 | 10/2/2019 | 10:47:58 AM | 51.8 |
| 33 | 10/2/2019 10:51 | 10/2/2019 | 10:51:58 AM | 49.9 |
| 34 | 10/2/2019 10:55 | 10/2/2019 | 10:55:58 AM | 47.7 |
| 35 | 10/2/2019 10:59 | 10/2/2019 | 10:59:58 AM | 49 |
| 36 | 10/2/2019 11:03 | 10/2/2019 | 11:03:58 AM | 48.1 |
| 37 | 10/2/2019 11:07 | 10/2/2019 | 11:07:58 AM | 50.5 |
| 38 | 10/2/2019 11:11 | 10/2/2019 | 11:11:58 AM | 52.2 |
| 39 | 10/2/2019 11:15 | 10/2/2019 | 11:15:58 AM | 46.9 |
| 40 | 10/2/2019 11:19 | 10/2/2019 | 11:19:58 AM | 57.9 |
| 41 | 10/2/2019 11:23 | 10/2/2019 | 11:23:58 AM | 50 |
| 42 | 10/2/2019 11:27 | 10/2/2019 | 11:27:58 AM | 50.6 |
| 43 | 10/2/2019 11:31 | 10/2/2019 | 11:31:58 AM | 52.6 |
| 44 | 10/2/2019 11:35 | 10/2/2019 | 11:35:58 AM | 50.6 |
| 45 | 10/2/2019 11:39 | 10/2/2019 | 11:39:58 AM | 50.9 |
| 46 | 10/2/2019 11:43 | 10/2/2019 | 11:43:58 AM | 54.2 |
| 47 | 10/2/2019 11:47 | 10/2/2019 | 11:47:58 AM | 49.7 |
| 48 | 10/2/2019 11:51 | 10/2/2019 | 11:51:58 AM | 52.6 |
| 49 | 10/2/2019 11:55 | 10/2/2019 | 11:55:58 AM | 56.8 |
| 50 | 10/2/2019 11:59 | 10/2/2019 | 11:59:58 AM | 51.1 |
| 51 | 10/2/2019 12:03 | 10/2/2019 | 12:03:58 PM | 45.6 |
| 52 | 10/2/2019 12:07 | 10/2/2019 | 12:07:58 PM | 52 |
| 53 | 10/2/2019 12:11 | 10/2/2019 | 12:11:58 PM | 48.8 |
| 54 | 10/2/2019 12:15 | 10/2/2019 | 12:15:58 PM | 55 |
| 55 | 10/2/2019 12:19 | 10/2/2019 | 12:19:58 PM | 52.5 |
| 56 | 10/2/2019 12:23 | 10/2/2019 | 12:23:58 PM | 49.1 |
| 57 | 10/2/2019 12:27 | 10/2/2019 | 12:27:58 PM | 50.2 |
| 58 | 10/2/2019 12:31 | 10/2/2019 | 12:31:58 PM | 56.7 |
| 59 | 10/2/2019 12:35 | 10/2/2019 | 12:35:58 PM | 54.5 |
| 60 | 10/2/2019 12:39 | 10/2/2019 | 12:39:58 PM | 51.2 |
| 61 | 10/2/2019 12:43 | 10/2/2019 | 12:43:58 PM | 49.1 |
| 62 | 10/2/2019 12:47 | 10/2/2019 | 12:47:58 PM | 49.4 |
| 63 | 10/2/2019 12:51 | 10/2/2019 | 12:51:58 PM | 50.2 |
| 64 | 10/2/2019 12:55 | 10/2/2019 | 12:55:58 PM | 54 |
| 65 | 10/2/2019 12:59 | 10/2/2019 | 12:59:58 PM | 53.2 |
| 66 | 10/2/2019 13:03 | 10/2/2019 | 1:03:58 PM | 51.3 |
| 67 | 10/2/2019 13:07 | 10/2/2019 | 1:07:58 PM | 47.2 |
| 68 | 10/2/2019 13:11 | 10/2/2019 | 1:11:58 PM | 49.5 |
| 69 | 10/2/2019 13:15 | 10/2/2019 | 1:15:58 PM | 52.8 |
| 70 | 10/2/2019 13:19 | 10/2/2019 | 1:19:58 PM | 55.9 |
| 71 | 10/2/2019 13:23 | 10/2/2019 | 1:23:58 PM | 55.3 |
| 72 | 10/2/2019 13:27 | 10/2/2019 | 1:27:58 PM | 53.2 |
| 73 | 10/2/2019 13:31 | 10/2/2019 | 1:31:58 PM | 58.8 |
| 74 | 10/2/2019 13:35 | 10/2/2019 | 1:35:58 PM | 53.2 |
| 75 | 10/2/2019 13:39 | 10/2/2019 | 1:39:58 PM | 51.3 |
| 76 | 10/2/2019 13:43 | 10/2/2019 | 1:43:58 PM | 54.4 |
| 77 | 10/2/2019 13:47 | 10/2/2019 | 1:47:58 PM | 50.9 |
| 78 | 10/2/2019 13:51 | 10/2/2019 | 1:51:58 PM | 56.3 |

| | | | | |
|---|---|---|---|---|
| 79 | 10/2/2019 13:55 | 10/2/2019 | 1:55:58 PM | 53.2 |
| 80 | 10/2/2019 13:59 | 10/2/2019 | 1:59:58 PM | 53.8 |
| 81 | 10/2/2019 14:03 | 10/2/2019 | 2:03:58 PM | 52.4 |
| 82 | 10/2/2019 14:07 | 10/2/2019 | 2:07:58 PM | 55 |
| 83 | 10/2/2019 14:11 | 10/2/2019 | 2:11:58 PM | 52.6 |
| 84 | 10/2/2019 14:15 | 10/2/2019 | 2:15:58 PM | 74.4 |
| 85 | 10/2/2019 14:19 | 10/2/2019 | 2:19:58 PM | 50.8 |
| 86 | 10/2/2019 14:23 | 10/2/2019 | 2:23:58 PM | 51.9 |
| 87 | 10/2/2019 14:27 | 10/2/2019 | 2:27:58 PM | 53.9 |
| 88 | 10/2/2019 14:31 | 10/2/2019 | 2:31:58 PM | 52.7 |
| 89 | 10/2/2019 14:35 | 10/2/2019 | 2:35:58 PM | 51.8 |
| 90 | 10/2/2019 14:39 | 10/2/2019 | 2:39:58 PM | 52.5 |
| 91 | 10/2/2019 14:43 | 10/2/2019 | 2:43:58 PM | 54.4 |
| 92 | 10/2/2019 14:47 | 10/2/2019 | 2:47:58 PM | 57.4 |
| 93 | 10/2/2019 14:51 | 10/2/2019 | 2:51:58 PM | 54.6 |
| 94 | 10/2/2019 14:55 | 10/2/2019 | 2:55:58 PM | 51.2 |
| 95 | 10/2/2019 14:59 | 10/2/2019 | 2:59:58 PM | 51.1 |
| 96 | 10/2/2019 15:03 | 10/2/2019 | 3:03:58 PM | 52.9 |
| 97 | 10/2/2019 15:07 | 10/2/2019 | 3:07:58 PM | 53.1 |
| 98 | 10/2/2019 15:11 | 10/2/2019 | 3:11:58 PM | 50.1 |
| 99 | 10/2/2019 15:15 | 10/2/2019 | 3:15:58 PM | 52.5 |
| 100 | 10/2/2019 15:19 | 10/2/2019 | 3:19:58 PM | 50.2 |
| 101 | 10/2/2019 15:23 | 10/2/2019 | 3:23:58 PM | 49.6 |
| 102 | 10/2/2019 15:27 | 10/2/2019 | 3:27:58 PM | 53.9 |
| 103 | 10/2/2019 15:31 | 10/2/2019 | 3:31:58 PM | 53.3 |
| 104 | 10/2/2019 15:35 | 10/2/2019 | 3:35:58 PM | 52.9 |
| 105 | 10/2/2019 15:39 | 10/2/2019 | 3:39:58 PM | 54.1 |
| 106 | 10/2/2019 15:43 | 10/2/2019 | 3:43:58 PM | 51.5 |
| 107 | 10/2/2019 15:47 | 10/2/2019 | 3:47:58 PM | 53.3 |
| 108 | 10/2/2019 15:51 | 10/2/2019 | 3:51:58 PM | 52 |
| 109 | 10/2/2019 15:55 | 10/2/2019 | 3:55:58 PM | 52.6 |
| 110 | 10/2/2019 15:59 | 10/2/2019 | 3:59:58 PM | 50.3 |
| 111 | 10/2/2019 16:03 | 10/2/2019 | 4:03:58 PM | 55.1 |
| 112 | 10/2/2019 16:07 | 10/2/2019 | 4:07:58 PM | 52.4 |
| 113 | 10/2/2019 16:11 | 10/2/2019 | 4:11:58 PM | 51 |
| 114 | 10/2/2019 16:15 | 10/2/2019 | 4:15:58 PM | 47.2 |
| 115 | 10/2/2019 16:19 | 10/2/2019 | 4:19:58 PM | 51.8 |
| 116 | 10/2/2019 16:23 | 10/2/2019 | 4:23:58 PM | 55.2 |
| 117 | 10/2/2019 16:27 | 10/2/2019 | 4:27:58 PM | 52.7 |
| 118 | 10/2/2019 16:31 | 10/2/2019 | 4:31:58 PM | 51.5 |
| 119 | 10/2/2019 16:35 | 10/2/2019 | 4:35:58 PM | 51.7 |
| 120 | 10/2/2019 16:39 | 10/2/2019 | 4:39:58 PM | 51 |
| 121 | 10/2/2019 16:43 | 10/2/2019 | 4:43:58 PM | 54.4 |
| 122 | 10/2/2019 16:47 | 10/2/2019 | 4:47:58 PM | 52.1 |
| 123 | 10/2/2019 16:51 | 10/2/2019 | 4:51:58 PM | 52.6 |
| 124 | 10/2/2019 16:55 | 10/2/2019 | 4:55:58 PM | 51.2 |
| 125 | 10/2/2019 16:59 | 10/2/2019 | 4:59:58 PM | 79.6 |

| | | | | |
|---|---|---|---|---|
| 126 | 10/2/2019 17:03 | 10/2/2019 | 5:03:58 PM | 54.1 |
| 127 | 10/2/2019 17:07 | 10/2/2019 | 5:07:58 PM | 51.4 |
| 128 | 10/2/2019 17:11 | 10/2/2019 | 5:11:58 PM | 50.7 |
| 129 | 10/2/2019 17:15 | 10/2/2019 | 5:15:58 PM | 54 |
| 130 | 10/2/2019 17:19 | 10/2/2019 | 5:19:58 PM | 46.5 |
| 131 | 10/2/2019 17:23 | 10/2/2019 | 5:23:58 PM | 51.9 |
| 132 | 10/2/2019 17:27 | 10/2/2019 | 5:27:58 PM | 48 |
| 133 | 10/2/2019 17:31 | 10/2/2019 | 5:31:58 PM | 49.8 |
| 134 | 10/2/2019 17:35 | 10/2/2019 | 5:35:58 PM | 47.5 |
| 135 | 10/2/2019 17:39 | 10/2/2019 | 5:39:58 PM | 52.3 |
| 136 | 10/2/2019 17:43 | 10/2/2019 | 5:43:58 PM | 49.2 |
| 137 | 10/2/2019 17:47 | 10/2/2019 | 5:47:58 PM | 53.9 |
| 138 | 10/2/2019 17:51 | 10/2/2019 | 5:51:58 PM | 50.8 |
| 139 | 10/2/2019 17:55 | 10/2/2019 | 5:55:58 PM | 56.4 |
| 140 | 10/2/2019 17:59 | 10/2/2019 | 5:59:58 PM | 50.1 |
| 141 | 10/2/2019 18:03 | 10/2/2019 | 6:03:58 PM | 53.2 |
| 142 | 10/2/2019 18:07 | 10/2/2019 | 6:07:58 PM | 49.5 |
| 143 | 10/2/2019 18:11 | 10/2/2019 | 6:11:58 PM | 50 |
| 144 | 10/2/2019 18:15 | 10/2/2019 | 6:15:58 PM | 52.9 |
| 145 | 10/2/2019 18:19 | 10/2/2019 | 6:19:58 PM | 72.8 |
| 146 | 10/2/2019 18:23 | 10/2/2019 | 6:23:58 PM | 51.3 |
| 147 | 10/2/2019 18:27 | 10/2/2019 | 6:27:58 PM | 46.5 |
| 148 | 10/2/2019 18:31 | 10/2/2019 | 6:31:58 PM | 50.9 |
| 149 | 10/2/2019 18:35 | 10/2/2019 | 6:35:58 PM | 52.8 |
| 150 | 10/2/2019 18:39 | 10/2/2019 | 6:39:58 PM | 51.9 |
| 151 | 10/2/2019 18:43 | 10/2/2019 | 6:43:58 PM | 52.2 |
| 152 | 10/2/2019 18:47 | 10/2/2019 | 6:47:58 PM | 49.8 |
| 153 | 10/2/2019 18:51 | 10/2/2019 | 6:51:58 PM | 50.5 |
| 154 | 10/2/2019 18:55 | 10/2/2019 | 6:55:58 PM | 50.3 |
| 155 | 10/2/2019 18:59 | 10/2/2019 | 6:59:58 PM | 51.4 |
| 156 | 10/2/2019 19:03 | 10/2/2019 | 7:03:58 PM | 55.5 |
| 157 | 10/2/2019 19:07 | 10/2/2019 | 7:07:58 PM | 51 |
| 158 | 10/2/2019 19:11 | 10/2/2019 | 7:11:58 PM | 48.6 |
| 159 | 10/2/2019 19:15 | 10/2/2019 | 7:15:58 PM | 48.7 |
| 160 | 10/2/2019 19:19 | 10/2/2019 | 7:19:58 PM | 51.7 |
| 161 | 10/2/2019 19:23 | 10/2/2019 | 7:23:58 PM | 48.1 |
| 162 | 10/2/2019 19:27 | 10/2/2019 | 7:27:58 PM | 89.3 |
| 163 | 10/2/2019 19:31 | 10/2/2019 | 7:31:58 PM | 52.7 |
| 164 | 10/2/2019 19:35 | 10/2/2019 | 7:35:58 PM | 48.6 |
| 165 | 10/2/2019 19:39 | 10/2/2019 | 7:39:58 PM | 51.5 |
| 166 | 10/2/2019 19:43 | 10/2/2019 | 7:43:58 PM | 55.9 |
| 167 | 10/2/2019 19:47 | 10/2/2019 | 7:47:58 PM | 49.1 |
| 168 | 10/2/2019 19:51 | 10/2/2019 | 7:51:58 PM | 50 |
| 169 | 10/2/2019 19:55 | 10/2/2019 | 7:55:58 PM | 51.4 |
| 170 | 10/2/2019 19:59 | 10/2/2019 | 7:59:58 PM | 52.7 |
| 171 | 10/2/2019 20:03 | 10/2/2019 | 8:03:58 PM | 46.4 |
| 172 | 10/2/2019 20:07 | 10/2/2019 | 8:07:58 PM | 48.4 |

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|---|---|---|---|---|
| 173 | 10/2/2019 20:11 | 10/2/2019 | 8:11:58 PM | 46.7 |
| 174 | 10/2/2019 20:15 | 10/2/2019 | 8:15:58 PM | 47 |
| 175 | 10/2/2019 20:19 | 10/2/2019 | 8:19:58 PM | 70.8 |
| 176 | 10/2/2019 20:23 | 10/2/2019 | 8:23:58 PM | 46.6 |
| 177 | 10/2/2019 20:27 | 10/2/2019 | 8:27:58 PM | 46.4 |
| 178 | 10/2/2019 20:31 | 10/2/2019 | 8:31:58 PM | 54.7 |
| 179 | 10/2/2019 20:35 | 10/2/2019 | 8:35:58 PM | 47.5 |
| 180 | 10/2/2019 20:39 | 10/2/2019 | 8:39:58 PM | 49.4 |
| 181 | 10/2/2019 20:43 | 10/2/2019 | 8:43:58 PM | 46.2 |
| 182 | 10/2/2019 20:47 | 10/2/2019 | 8:47:58 PM | 48.9 |
| 183 | 10/2/2019 20:51 | 10/2/2019 | 8:51:58 PM | 51.9 |
| 184 | 10/2/2019 20:55 | 10/2/2019 | 8:55:58 PM | 50.9 |
| 185 | 10/2/2019 20:59 | 10/2/2019 | 8:59:58 PM | 48.7 |
| 186 | 10/2/2019 21:03 | 10/2/2019 | 9:03:58 PM | 46.4 |
| 187 | 10/2/2019 21:07 | 10/2/2019 | 9:07:58 PM | 48.8 |
| 188 | 10/2/2019 21:11 | 10/2/2019 | 9:11:58 PM | 52.3 |
| 189 | 10/2/2019 21:15 | 10/2/2019 | 9:15:58 PM | 45.8 |
| 190 | 10/2/2019 21:19 | 10/2/2019 | 9:19:58 PM | 48 |
| 191 | 10/2/2019 21:23 | 10/2/2019 | 9:23:58 PM | 44.1 |
| 192 | 10/2/2019 21:27 | 10/2/2019 | 9:27:58 PM | 47.3 |
| 193 | 10/2/2019 21:31 | 10/2/2019 | 9:31:58 PM | 44 |
| 194 | 10/2/2019 21:35 | 10/2/2019 | 9:35:58 PM | 49.2 |
| 195 | 10/2/2019 21:39 | 10/2/2019 | 9:39:58 PM | 49.5 |
| 196 | 10/2/2019 21:43 | 10/2/2019 | 9:43:58 PM | 47.6 |
| 197 | 10/2/2019 21:47 | 10/2/2019 | 9:47:58 PM | 46.5 |
| 198 | 10/2/2019 21:51 | 10/2/2019 | 9:51:58 PM | 49.1 |
| 199 | 10/2/2019 21:55 | 10/2/2019 | 9:55:58 PM | 50.5 |
| 200 | 10/2/2019 21:59 | 10/2/2019 | 9:59:58 PM | 42.9 |
| 201 | 10/2/2019 22:03 | 10/2/2019 | 10:03:58 PM | 48.7 |
| 202 | 10/2/2019 22:07 | 10/2/2019 | 10:07:58 PM | 46 |
| 203 | 10/2/2019 22:11 | 10/2/2019 | 10:11:58 PM | 43.1 |
| 204 | 10/2/2019 22:15 | 10/2/2019 | 10:15:58 PM | 49.9 |
| 205 | 10/2/2019 22:19 | 10/2/2019 | 10:19:58 PM | 43.7 |
| 206 | 10/2/2019 22:23 | 10/2/2019 | 10:23:58 PM | 47.6 |
| 207 | 10/2/2019 22:27 | 10/2/2019 | 10:27:58 PM | 48.9 |
| 208 | 10/2/2019 22:31 | 10/2/2019 | 10:31:58 PM | 49.3 |
| 209 | 10/2/2019 22:35 | 10/2/2019 | 10:35:58 PM | 47 |
| 210 | 10/2/2019 22:39 | 10/2/2019 | 10:39:58 PM | 47.3 |
| 211 | 10/2/2019 22:43 | 10/2/2019 | 10:43:58 PM | 43.5 |
| 212 | 10/2/2019 22:47 | 10/2/2019 | 10:47:58 PM | 43.6 |
| 213 | 10/2/2019 22:51 | 10/2/2019 | 10:51:58 PM | 42.1 |
| 214 | 10/2/2019 22:55 | 10/2/2019 | 10:55:58 PM | 47.6 |
| 215 | 10/2/2019 22:59 | 10/2/2019 | 10:59:58 PM | 40.8 |
| 216 | 10/2/2019 23:03 | 10/2/2019 | 11:03:58 PM | 45.4 |
| 217 | 10/2/2019 23:07 | 10/2/2019 | 11:07:58 PM | 46.3 |
| 218 | 10/2/2019 23:11 | 10/2/2019 | 11:11:58 PM | 41.1 |
| 219 | 10/2/2019 23:15 | 10/2/2019 | 11:15:58 PM | 41 |

| | | | | |
|---|---|---|---|---|
| 220 | 10/2/2019 23:19 | 10/2/2019 | 11:19:58 PM | 43.1 |
| 221 | 10/2/2019 23:23 | 10/2/2019 | 11:23:58 PM | 41.2 |
| 222 | 10/2/2019 23:27 | 10/2/2019 | 11:27:58 PM | 39.7 |
| 223 | 10/2/2019 23:31 | 10/2/2019 | 11:31:58 PM | 46.2 |
| 224 | 10/2/2019 23:35 | 10/2/2019 | 11:35:58 PM | 45 |
| 225 | 10/2/2019 23:39 | 10/2/2019 | 11:39:58 PM | 45.6 |
| 226 | 10/2/2019 23:43 | 10/2/2019 | 11:43:58 PM | 48.2 |
| 227 | 10/2/2019 23:47 | 10/2/2019 | 11:47:58 PM | 39.6 |
| 228 | 10/2/2019 23:51 | 10/2/2019 | 11:51:58 PM | 39.8 |
| 229 | 10/2/2019 23:55 | 10/2/2019 | 11:55:58 PM | 39.5 |
| 230 | 10/2/2019 23:59 | 10/2/2019 | 11:59:58 PM | 39.6 |
| 231 | 10/3/2019 0:03 | 10/3/2019 | 12:03:58 AM | 41.5 |
| 232 | 10/3/2019 0:07 | 10/3/2019 | 12:07:58 AM | 47.6 |
| 233 | 10/3/2019 0:11 | 10/3/2019 | 12:11:58 AM | 39.8 |
| 234 | 10/3/2019 0:15 | 10/3/2019 | 12:15:58 AM | 41.3 |
| 235 | 10/3/2019 0:19 | 10/3/2019 | 12:19:58 AM | 49.4 |
| 236 | 10/3/2019 0:23 | 10/3/2019 | 12:23:58 AM | 40.3 |
| 237 | 10/3/2019 0:27 | 10/3/2019 | 12:27:58 AM | 39.6 |
| 238 | 10/3/2019 0:31 | 10/3/2019 | 12:31:58 AM | 40.1 |
| 239 | 10/3/2019 0:35 | 10/3/2019 | 12:35:58 AM | 42.2 |
| 240 | 10/3/2019 0:39 | 10/3/2019 | 12:39:58 AM | 40.4 |
| 241 | 10/3/2019 0:43 | 10/3/2019 | 12:43:58 AM | 39.1 |
| 242 | 10/3/2019 0:47 | 10/3/2019 | 12:47:58 AM | 44.6 |
| 243 | 10/3/2019 0:51 | 10/3/2019 | 12:51:58 AM | 42.4 |
| 244 | 10/3/2019 0:55 | 10/3/2019 | 12:55:58 AM | 42.1 |
| 245 | 10/3/2019 0:59 | 10/3/2019 | 12:59:58 AM | 49.9 |
| 246 | 10/3/2019 1:03 | 10/3/2019 | 1:03:58 AM | 41.9 |
| 247 | 10/3/2019 1:07 | 10/3/2019 | 1:07:58 AM | 45.6 |
| 248 | 10/3/2019 1:11 | 10/3/2019 | 1:11:58 AM | 42 |
| 249 | 10/3/2019 1:15 | 10/3/2019 | 1:15:58 AM | 43.5 |
| 250 | 10/3/2019 1:19 | 10/3/2019 | 1:19:58 AM | 42.9 |
| 251 | 10/3/2019 1:23 | 10/3/2019 | 1:23:58 AM | 40.2 |
| 252 | 10/3/2019 1:27 | 10/3/2019 | 1:27:58 AM | 39.3 |
| 253 | 10/3/2019 1:31 | 10/3/2019 | 1:31:58 AM | 48.2 |
| 254 | 10/3/2019 1:35 | 10/3/2019 | 1:35:58 AM | 37.9 |
| 255 | 10/3/2019 1:39 | 10/3/2019 | 1:39:58 AM | 39.1 |
| 256 | 10/3/2019 1:43 | 10/3/2019 | 1:43:58 AM | 43.8 |
| 257 | 10/3/2019 1:47 | 10/3/2019 | 1:47:58 AM | 39.6 |
| 258 | 10/3/2019 1:51 | 10/3/2019 | 1:51:58 AM | 42 |
| 259 | 10/3/2019 1:55 | 10/3/2019 | 1:55:58 AM | 44.1 |
| 260 | 10/3/2019 1:59 | 10/3/2019 | 1:59:58 AM | 41 |
| 261 | 10/3/2019 2:03 | 10/3/2019 | 2:03:58 AM | 39 |
| 262 | 10/3/2019 2:07 | 10/3/2019 | 2:07:58 AM | 43.2 |
| 263 | 10/3/2019 2:11 | 10/3/2019 | 2:11:58 AM | 38.8 |
| 264 | 10/3/2019 2:15 | 10/3/2019 | 2:15:58 AM | 40.1 |
| 265 | 10/3/2019 2:19 | 10/3/2019 | 2:19:58 AM | 39.9 |
| 266 | 10/3/2019 2:23 | 10/3/2019 | 2:23:58 AM | 41.2 |

| | | | | |
|---|---|---|---|---|
| 267 | 10/3/2019 2:27 | 10/3/2019 | 2:27:58 AM | 40.5 |
| 268 | 10/3/2019 2:31 | 10/3/2019 | 2:31:58 AM | 39 |
| 269 | 10/3/2019 2:35 | 10/3/2019 | 2:35:58 AM | 41.2 |
| 270 | 10/3/2019 2:39 | 10/3/2019 | 2:39:58 AM | 40.9 |
| 271 | 10/3/2019 2:43 | 10/3/2019 | 2:43:58 AM | 41 |
| 272 | 10/3/2019 2:47 | 10/3/2019 | 2:47:58 AM | 41.2 |
| 273 | 10/3/2019 2:51 | 10/3/2019 | 2:51:58 AM | 42.3 |
| 274 | 10/3/2019 2:55 | 10/3/2019 | 2:55:58 AM | 38.9 |
| 275 | 10/3/2019 2:59 | 10/3/2019 | 2:59:58 AM | 41.5 |
| 276 | 10/3/2019 3:03 | 10/3/2019 | 3:03:58 AM | 40.3 |
| 277 | 10/3/2019 3:07 | 10/3/2019 | 3:07:58 AM | 41.6 |
| 278 | 10/3/2019 3:11 | 10/3/2019 | 3:11:58 AM | 42 |
| 279 | 10/3/2019 3:15 | 10/3/2019 | 3:15:58 AM | 43.3 |
| 280 | 10/3/2019 3:19 | 10/3/2019 | 3:19:58 AM | 47.8 |
| 281 | 10/3/2019 3:23 | 10/3/2019 | 3:23:58 AM | 39.9 |
| 282 | 10/3/2019 3:27 | 10/3/2019 | 3:27:58 AM | 42.2 |
| 283 | 10/3/2019 3:31 | 10/3/2019 | 3:31:58 AM | 42.6 |
| 284 | 10/3/2019 3:35 | 10/3/2019 | 3:35:58 AM | 43.7 |
| 285 | 10/3/2019 3:39 | 10/3/2019 | 3:39:58 AM | 48.3 |
| 286 | 10/3/2019 3:43 | 10/3/2019 | 3:43:58 AM | 43.2 |
| 287 | 10/3/2019 3:47 | 10/3/2019 | 3:47:58 AM | 47 |
| 288 | 10/3/2019 3:51 | 10/3/2019 | 3:51:58 AM | 39.9 |
| 289 | 10/3/2019 3:55 | 10/3/2019 | 3:55:58 AM | 48.2 |
| 290 | 10/3/2019 3:59 | 10/3/2019 | 3:59:58 AM | 45.2 |
| 291 | 10/3/2019 4:03 | 10/3/2019 | 4:03:58 AM | 45.1 |
| 292 | 10/3/2019 4:07 | 10/3/2019 | 4:07:58 AM | 41.3 |
| 293 | 10/3/2019 4:11 | 10/3/2019 | 4:11:58 AM | 42.9 |
| 294 | 10/3/2019 4:15 | 10/3/2019 | 4:15:58 AM | 47.5 |
| 295 | 10/3/2019 4:19 | 10/3/2019 | 4:19:58 AM | 43.7 |
| 296 | 10/3/2019 4:23 | 10/3/2019 | 4:23:58 AM | 43.1 |
| 297 | 10/3/2019 4:27 | 10/3/2019 | 4:27:58 AM | 43.7 |
| 298 | 10/3/2019 4:31 | 10/3/2019 | 4:31:58 AM | 43.5 |
| 299 | 10/3/2019 4:35 | 10/3/2019 | 4:35:58 AM | 44.3 |
| 300 | 10/3/2019 4:39 | 10/3/2019 | 4:39:58 AM | 45.3 |
| 301 | 10/3/2019 4:43 | 10/3/2019 | 4:43:58 AM | 48.4 |
| 302 | 10/3/2019 4:47 | 10/3/2019 | 4:47:58 AM | 54.2 |
| 303 | 10/3/2019 4:51 | 10/3/2019 | 4:51:58 AM | 53.8 |
| 304 | 10/3/2019 4:55 | 10/3/2019 | 4:55:58 AM | 51.9 |
| 305 | 10/3/2019 4:59 | 10/3/2019 | 4:59:58 AM | 51.6 |
| 306 | 10/3/2019 5:03 | 10/3/2019 | 5:03:58 AM | 46.4 |
| 307 | 10/3/2019 5:07 | 10/3/2019 | 5:07:58 AM | 48.2 |
| 308 | 10/3/2019 5:11 | 10/3/2019 | 5:11:58 AM | 46.5 |
| 309 | 10/3/2019 5:15 | 10/3/2019 | 5:15:58 AM | 50.9 |
| 310 | 10/3/2019 5:19 | 10/3/2019 | 5:19:58 AM | 46.6 |
| 311 | 10/3/2019 5:23 | 10/3/2019 | 5:23:58 AM | 47.3 |
| 312 | 10/3/2019 5:27 | 10/3/2019 | 5:27:58 AM | 47.3 |
| 313 | 10/3/2019 5:31 | 10/3/2019 | 5:31:58 AM | 50.3 |

| | | | | |
|---|---|---|---|---|
| 314 | 10/3/2019 5:35 | 10/3/2019 | 5:35:58 AM | 49.9 |
| 315 | 10/3/2019 5:39 | 10/3/2019 | 5:39:58 AM | 51 |
| 316 | 10/3/2019 5:43 | 10/3/2019 | 5:43:58 AM | 50.7 |
| 317 | 10/3/2019 5:47 | 10/3/2019 | 5:47:58 AM | 49.8 |
| 318 | 10/3/2019 5:51 | 10/3/2019 | 5:51:58 AM | 51.9 |
| 319 | 10/3/2019 5:55 | 10/3/2019 | 5:55:58 AM | 52.3 |
| 320 | 10/3/2019 5:59 | 10/3/2019 | 5:59:58 AM | 50.3 |
| 321 | 10/3/2019 6:03 | 10/3/2019 | 6:03:58 AM | 49.8 |
| 322 | 10/3/2019 6:07 | 10/3/2019 | 6:07:58 AM | 52.5 |
| 323 | 10/3/2019 6:11 | 10/3/2019 | 6:11:58 AM | 53.3 |
| 324 | 10/3/2019 6:15 | 10/3/2019 | 6:15:58 AM | 51 |
| 325 | 10/3/2019 6:19 | 10/3/2019 | 6:19:58 AM | 50.6 |
| 326 | 10/3/2019 6:23 | 10/3/2019 | 6:23:58 AM | 51.7 |
| 327 | 10/3/2019 6:27 | 10/3/2019 | 6:27:58 AM | 53.7 |
| 328 | 10/3/2019 6:31 | 10/3/2019 | 6:31:58 AM | 56.7 |
| 329 | 10/3/2019 6:35 | 10/3/2019 | 6:35:58 AM | 57.2 |
| 330 | 10/3/2019 6:39 | 10/3/2019 | 6:39:58 AM | 54.7 |
| 331 | 10/3/2019 6:43 | 10/3/2019 | 6:43:58 AM | 55.5 |
| 332 | 10/3/2019 6:47 | 10/3/2019 | 6:47:58 AM | 56.4 |
| 333 | 10/3/2019 6:51 | 10/3/2019 | 6:51:58 AM | 56.3 |
| 334 | 10/3/2019 6:55 | 10/3/2019 | 6:55:58 AM | 60.3 |
| 335 | 10/3/2019 6:59 | 10/3/2019 | 6:59:58 AM | 54.4 |
| 336 | 10/3/2019 7:03 | 10/3/2019 | 7:03:58 AM | 57.9 |
| 337 | 10/3/2019 7:07 | 10/3/2019 | 7:07:58 AM | 54.1 |
| 338 | 10/3/2019 7:11 | 10/3/2019 | 7:11:58 AM | 53 |
| 339 | 10/3/2019 7:15 | 10/3/2019 | 7:15:58 AM | 54.4 |
| 340 | 10/3/2019 7:19 | 10/3/2019 | 7:19:58 AM | 54.2 |
| 341 | 10/3/2019 7:23 | 10/3/2019 | 7:23:58 AM | 53.8 |
| 342 | 10/3/2019 7:27 | 10/3/2019 | 7:27:58 AM | 53.4 |
| 343 | 10/3/2019 7:31 | 10/3/2019 | 7:31:58 AM | 54.9 |
| 344 | 10/3/2019 7:35 | 10/3/2019 | 7:35:58 AM | 58.5 |
| 345 | 10/3/2019 7:39 | 10/3/2019 | 7:39:58 AM | 52.5 |
| 346 | 10/3/2019 7:43 | 10/3/2019 | 7:43:58 AM | 55.8 |
| 347 | 10/3/2019 7:47 | 10/3/2019 | 7:47:58 AM | 54.9 |
| 348 | 10/3/2019 7:51 | 10/3/2019 | 7:51:58 AM | 53.7 |
| 349 | 10/3/2019 7:55 | 10/3/2019 | 7:55:58 AM | 59.1 |
| 350 | 10/3/2019 7:59 | 10/3/2019 | 7:59:58 AM | 68.4 |
| 351 | 10/3/2019 8:03 | 10/3/2019 | 8:03:58 AM | 58.2 |
| 352 | 10/3/2019 8:07 | 10/3/2019 | 8:07:58 AM | 54.9 |
| 353 | 10/3/2019 8:11 | 10/3/2019 | 8:11:58 AM | 57.3 |
| 354 | 10/3/2019 8:15 | 10/3/2019 | 8:15:58 AM | 56.3 |
| 355 | 10/3/2019 8:19 | 10/3/2019 | 8:19:58 AM | 55.5 |
| 356 | 10/3/2019 8:23 | 10/3/2019 | 8:23:58 AM | 58.1 |
| 357 | 10/3/2019 8:27 | 10/3/2019 | 8:27:58 AM | 51.7 |
| 358 | 10/3/2019 8:31 | 10/3/2019 | 8:31:58 AM | 51.8 |
| 359 | 10/3/2019 8:35 | 10/3/2019 | 8:35:58 AM | 51.4 |
| 360 | 10/3/2019 8:39 | 10/3/2019 | 8:39:58 AM | 54.6 |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/11/2019
Case Description: Moorpark Railroad Depot - Demolition

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Concrete Saw | No | 20 | | 89.6 | 105.0 | 0.0 |
| Dozer | No | 40 | | 81.7 | 105.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 105.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 105.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 105.0 | 0.0 |

Results

| Equipment | Calculated (dBA) Lmax | Calculated (dBA) Leq | Day Lmax | Day Leq | Evening Lmax | Evening Leq | Night Lmax | Night Leq | Day Lmax | Day Leq | Evening Lmax | Evening Leq | Night Lmax | Night Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Concrete Saw | 83.1 | 76.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 75.2 | 71.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 71.1 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 71.1 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 71.1 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 83.1 | 78.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Concrete Saw | No | 20 | 89.6 | 75.0 | | 0.0 |
| Dozer | No | 40 | 81.7 | 75.0 | | 0.0 |
| Backhoe | No | 40 | 77.6 | 75.0 | | 0.0 |
| Backhoe | No | 40 | 77.6 | 75.0 | | 0.0 |
| Backhoe | No | 40 | 77.6 | 75.0 | | 0.0 |

Results

| Equipment | Calculated (dBA) Lmax | Calculated (dBA) Leq | Noise Limits (dBA) Day Lmax | Noise Limits (dBA) Day Leq | Noise Limits (dBA) Evening Lmax | Noise Limits (dBA) Evening Leq | Noise Limits (dBA) Night Lmax | Noise Limits (dBA) Night Leq | Noise Limit Exceedance (dBA) Day Lmax | Noise Limit Exceedance (dBA) Day Leq | Noise Limit Exceedance (dBA) Evening Lmax | Noise Limit Exceedance (dBA) Evening Leq | Noise Limit Exceedance (dBA) Night Lmax | Noise Limit Exceedance (dBA) Night Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Concrete Saw | 86.1 | 79.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 78.1 | 74.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 74.0 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 74.0 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 74.0 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 86.1 | 81.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/11/2019
Case Description: Moorpark Railroad Depot - Site Preparation

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Grader | No | 40 | 85.0 | | 105.0 | 0.0 |
| Scraper | No | 40 | | 83.6 | 105.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 105.0 | 0.0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Grader | 78.6 | 74.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Scraper | 77.1 | 73.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 71.1 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 78.6 | 77.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Grader | No | 40 | 85.0 | 75.0 | 0.0 |
| Scraper | No | 40 | 83.6 | 75.0 | 0.0 |
| Backhoe | No | 40 | 77.6 | 75.0 | 0.0 |

Results

| | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calculated (dBA) | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Grader | 81.5 | 77.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Scraper | 80.1 | 76.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 74.0 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 81.5 | 80.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/11/2019
Case Description: Moorpark Railroad Depot - Grading

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Grader | No | 40 | 85.0 | | 105.0 | 0.0 |
| Dozer | No | 40 | | 81.7 | 105.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 105.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 105.0 | 0.0 |

Results

| Equipment | Calculated (dBA) Lmax | Calculated (dBA) Leq | Day Lmax | Day Leq | Evening Lmax | Evening Leq | Night Lmax | Night Leq | Day Lmax | Day Leq | Evening Lmax | Evening Leq | Night Lmax | Night Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grader | 78.6 | 74.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 75.2 | 71.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 71.1 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 71.1 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 78.6 | 77.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Spec | Actual | Receptor | Estimated |
|---|---|---|---|

| Description | Impact Device | Usage (%) | Lmax (dBA) | Lmax (dBA) | Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Grader | No | 40 | 85.0 | | 75.0 | 0.0 |
| Dozer | No | 40 | | 81.7 | 75.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 75.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 75.0 | 0.0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Grader | 81.5 | 77.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 78.1 | 74.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 74.0 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 74.0 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 81.5 | 80.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/11/2019
Case Description: Moorpark Railroad Depot - Building Construction

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Crane | No | 16 | | 80.6 | 105.0 | 0.0 |
| Man Lift | No | 20 | | 74.7 | 105.0 | 0.0 |
| Man Lift | No | 20 | | 74.7 | 105.0 | 0.0 |
| Generator | No | 50 | | 80.6 | 105.0 | 0.0 |
| Backhoe | No | 40 | | 77.6 | 105.0 | 0.0 |
| Welder / Torch | No | 40 | | 74.0 | 105.0 | 0.0 |
| Welder / Torch | No | 40 | | 74.0 | 105.0 | 0.0 |
| Welder / Torch | No | 40 | | 74.0 | 105.0 | 0.0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Crane | 74.1 | 66.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Man Lift | 68.3 | 61.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Man Lift | 68.3 | 61.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Generator | 74.2 | 71.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 71.1 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 67.6 | 63.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 67.6 | 63.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 67.6 | 63.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 74.2 | 75.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

N/A

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Crane | No | 16 | 80.6 | 75.0 | | 0.0 |
| Man Lift | No | 20 | 74.7 | 75.0 | | 0.0 |
| Man Lift | No | 20 | 74.7 | 75.0 | | 0.0 |
| Generator | No | 50 | 80.6 | 75.0 | | 0.0 |
| Backhoe | No | 40 | 77.6 | 75.0 | | 0.0 |
| Welder / Torch | No | 40 | 74.0 | 75.0 | | 0.0 |
| Welder / Torch | No | 40 | 74.0 | 75.0 | | 0.0 |
| Welder / Torch | No | 40 | 74.0 | 75.0 | | 0.0 |

Results

| Equipment | Calculated (dBA) Lmax | Calculated (dBA) Leq | Noise Limits (dBA) Day Lmax | Noise Limits (dBA) Day Leq | Noise Limits (dBA) Evening Lmax | Noise Limits (dBA) Evening Leq | Noise Limits (dBA) Night Lmax | Noise Limits (dBA) Night Leq | Noise Limit Exceedance (dBA) Day Lmax | Noise Limit Exceedance (dBA) Day Leq | Noise Limit Exceedance (dBA) Evening Lmax | Noise Limit Exceedance (dBA) Evening Leq | Noise Limit Exceedance (dBA) Night Lmax | Noise Limit Exceedance (dBA) Night Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crane | 77.0 | 69.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Man Lift | 71.2 | 64.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Man Lift | 71.2 | 64.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Generator | 77.1 | 74.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 74.0 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 70.5 | 66.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 70.5 | 66.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 70.5 | 66.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 77.1 | 78.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/11/2019
Case Description: Moorpark Railroad Depot - Paving

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | 77.2 | 105.0 | | 0.0 |
| Pavement Scarafier | No | 20 | 89.5 | 105.0 | | 0.0 |
| Roller | No | 20 | 80.0 | 105.0 | | 0.0 |
| Roller | No | 20 | 80.0 | 105.0 | | 0.0 |
| Backhoe | No | 40 | 77.6 | 105.0 | | 0.0 |
| Concrete Mixer Truck | No | 40 | 78.8 | 105.0 | | 0.0 |

Results

| | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calculated (dBA) | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | 70.8 | 67.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pavement Scarafier | 83.1 | 76.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 73.6 | 66.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 73.6 | 66.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 71.1 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Concrete Mixer Truck | 72.4 | 68.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 83.1 | 78.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | 77.2 | 75.0 | 0.0 | |
| Pavement Scarafier | No | 20 | 89.5 | 75.0 | 0.0 | |
| Roller | No | 20 | 80.0 | 75.0 | 0.0 | |
| Roller | No | 20 | 80.0 | 75.0 | 0.0 | |
| Backhoe | No | 40 | 77.6 | 75.0 | 0.0 | |
| Concrete Mixer Truck | No | 40 | 78.8 | 75.0 | 0.0 | |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | 73.7 | 70.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pavement Scarafier | 86.0 | 79.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 76.5 | 69.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 76.5 | 69.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 74.0 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Concrete Mixer Truck | 75.3 | 71.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 86.0 | 81.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/11/2019
Case Description: Moorpark Railroad Depot - Architectural Coating

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Compressor (air) | No | 40 | | 77.7 | 105.0 | 0.0 |

Results

| Equipment | Calculated (dBA) Lmax | Calculated (dBA) Leq | Day Lmax | Day Leq | Evening Lmax | Evening Leq | Night Lmax | Night Leq | Exceedance Day Lmax | Exceedance Day Leq | Exceedance Evening Lmax | Exceedance Evening Leq | Exceedance Night Lmax | Exceedance Night Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Compressor (air) | 71.2 | 67.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 71.2 | 67.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Compressor (air) | No | 40 | | 77.7 | 75.0 | 0.0 |

Results

Noise Limits (dBA) | Noise Limit Exceedance (dBA)

| Calculated (dBA) | Day | | Evening | | Night | | Day | | Evening | | Night | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Compressor (air) | 74.1 | 70.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 74.1 | 70.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/09/2019
Case Description: Moorpark Railroad Depot - Demolition (Mitigated)

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Concrete Saw | No | 20 | | 89.6 | 175.0 | 10.0 |
| Dozer | No | 40 | | 81.7 | 175.0 | 15.0 |
| Backhoe | No | 40 | | 77.6 | 175.0 | 15.0 |
| Backhoe | No | 40 | | 77.6 | 175.0 | 15.0 |
| Backhoe | No | 40 | | 77.6 | 175.0 | 15.0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Concrete Saw | 68.7 | 61.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 55.8 | 51.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 68.7 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Concrete Saw | No | 20 | 89.6 | 75.0 | | 15.0 |
| Dozer | No | 40 | 81.7 | 75.0 | | 15.0 |
| Backhoe | No | 40 | 77.6 | 75.0 | | 15.0 |
| Backhoe | No | 40 | 77.6 | 75.0 | | 15.0 |
| Backhoe | No | 40 | 77.6 | 75.0 | | 15.0 |

Results

| Equipment | Calculated (dBA) Lmax | Calculated (dBA) Leq | Noise Limits (dBA) Day Lmax | Noise Limits (dBA) Day Leq | Noise Limits (dBA) Evening Lmax | Noise Limits (dBA) Evening Leq | Noise Limits (dBA) Night Lmax | Noise Limits (dBA) Night Leq | Noise Limit Exceedance (dBA) Day Lmax | Noise Limit Exceedance (dBA) Day Leq | Noise Limit Exceedance (dBA) Evening Lmax | Noise Limit Exceedance (dBA) Evening Leq | Noise Limit Exceedance (dBA) Night Lmax | Noise Limit Exceedance (dBA) Night Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Concrete Saw | 71.1 | 64.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 63.1 | 59.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 59.0 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 59.0 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 59.0 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 71.1 | 66.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/09/2019
Case Description: Moorpark Railroad Depot - Site Preparation (Mitigated)

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Grader | No | 40 | 85.0 | | 175.0 | 15.0 |
| Scraper | No | 40 | | 83.6 | 175.0 | 15.0 |
| Backhoe | No | 40 | | 77.6 | 175.0 | 15.0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Grader | 59.1 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Scraper | 57.7 | 53.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 59.1 | 57.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Grader | No | 40 | 85.0 | | 75.0 | 15.0 |
| Scraper | No | 40 | | 83.6 | 75.0 | 15.0 |
| Backhoe | No | 40 | | 77.6 | 75.0 | 15.0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Grader | 66.5 | 62.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Scraper | 65.1 | 61.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 59.0 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 66.5 | 65.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/09/2019
Case Description: Moorpark Railroad Depot - Grading (Mitigated)

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Grader | No | 40 | 85.0 | | 175.0 | 15.0 |
| Dozer | No | 40 | 81.7 | | 175.0 | 15.0 |
| Backhoe | No | 40 | 77.6 | | 175.0 | 15.0 |
| Backhoe | No | 40 | 77.6 | | 175.0 | 15.0 |

Results

| Equipment | Calculated (dBA) Lmax | Leq | Noise Limits (dBA) Day Lmax | Leq | Evening Lmax | Leq | Night Lmax | Leq | Noise Limit Exceedance (dBA) Day Lmax | Leq | Evening Lmax | Leq | Night Lmax | Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grader | 59.1 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 55.8 | 51.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 59.1 | 57.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Spec | Actual | Receptor | Estimated |
|---|---|---|---|

| Description | Impact Device | Usage (%) | Lmax (dBA) | Lmax (dBA) | Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Grader | No | 40 | 85.0 | | 75.0 | 15.0 |
| Dozer | No | 40 | | 81.7 | 75.0 | 15.0 |
| Backhoe | No | 40 | | 77.6 | 75.0 | 15.0 |
| Backhoe | No | 40 | | 77.6 | 75.0 | 15.0 |

Results

| Equipment | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Grader | 66.5 | 62.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 63.1 | 59.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 59.0 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 59.0 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 66.5 | 65.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/09/2019
Case Description: Moorpark Railroad Depot - Building Construction (Mitigated)

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Crane | No | 16 | 80.6 | 175.0 | 15.0 | |
| Man Lift | No | 20 | 74.7 | 175.0 | 10.0 | |
| Man Lift | No | 20 | 74.7 | 175.0 | 10.0 | |
| Generator | No | 50 | 80.6 | 175.0 | 10.0 | |
| Backhoe | No | 40 | 77.6 | 175.0 | 15.0 | |
| Welder / Torch | No | 40 | 74.0 | 175.0 | 10.0 | |
| Welder / Torch | No | 40 | 74.0 | 175.0 | 10.0 | |
| Welder / Torch | No | 40 | 74.0 | 175.0 | 10.0 | |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Crane | 54.7 | 46.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Man Lift | 53.8 | 46.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Man Lift | 53.8 | 46.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Generator | 59.7 | 56.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 53.1 | 49.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 53.1 | 49.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 53.1 | 49.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 59.7 | 59.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

N/A

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Crane | No | 16 | 80.6 | 75.0 | 15.0 | |
| Man Lift | No | 20 | 74.7 | 75.0 | 10.0 | |
| Man Lift | No | 20 | 74.7 | 75.0 | 10.0 | |
| Generator | No | 50 | 80.6 | 75.0 | 10.0 | |
| Backhoe | No | 40 | 77.6 | 75.0 | 15.0 | |
| Welder / Torch | No | 40 | 74.0 | 75.0 | 10.0 | |
| Welder / Torch | No | 40 | 74.0 | 75.0 | 10.0 | |
| Welder / Torch | No | 40 | 74.0 | 75.0 | 10.0 | |

Results

| Equipment | Calculated (dBA) Lmax | Calculated (dBA) Leq | Noise Limits (dBA) Day Lmax | Noise Limits (dBA) Day Leq | Noise Limits (dBA) Evening Lmax | Noise Limits (dBA) Evening Leq | Noise Limits (dBA) Night Lmax | Noise Limits (dBA) Night Leq | Noise Limit Exceedance (dBA) Day Lmax | Noise Limit Exceedance (dBA) Day Leq | Noise Limit Exceedance (dBA) Evening Lmax | Noise Limit Exceedance (dBA) Evening Leq | Noise Limit Exceedance (dBA) Night Lmax | Noise Limit Exceedance (dBA) Night Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crane | 62.0 | 54.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Man Lift | 61.2 | 54.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Man Lift | 61.2 | 54.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Generator | 67.1 | 64.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 59.0 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 60.5 | 56.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 60.5 | 56.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Welder / Torch | 60.5 | 56.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 67.1 | 67.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/09/2019
Case Description: Moorpark Railroad Depot - Paving (Mitigated)

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | 77.2 | 175.0 | 15.0 | |
| Pavement Scarafier | No | 20 | 89.5 | 175.0 | 10.0 | |
| Roller | No | 20 | 80.0 | 175.0 | 15.0 | |
| Roller | No | 20 | 80.0 | 175.0 | 15.0 | |
| Backhoe | No | 40 | 77.6 | 175.0 | 15.0 | |
| Concrete Mixer Truck | No | 40 | 78.8 | 175.0 | 0.0 | |

Results

| | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calculated (dBA) | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | 51.3 | 48.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pavement Scarafier | 68.6 | 61.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 54.1 | 47.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 54.1 | 47.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Concrete Mixer Truck | 67.9 | 63.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 68.6 | 66.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Spec Usage (%) | Actual Lmax (dBA) | Receptor Lmax (dBA) | Estimated Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | 77.2 | 75.0 | 15.0 | |
| Pavement Scarafier | No | 20 | 89.5 | 75.0 | 15.0 | |
| Roller | No | 20 | 80.0 | 75.0 | 15.0 | |
| Roller | No | 20 | 80.0 | 75.0 | 15.0 | |
| Backhoe | No | 40 | 77.6 | 75.0 | 15.0 | |
| Concrete Mixer Truck | No | 40 | 78.8 | 75.0 | 10.0 | |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | 58.7 | 55.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pavement Scarafier | 71.0 | 64.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 61.5 | 54.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 61.5 | 54.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 59.0 | 55.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Concrete Mixer Truck | 65.3 | 61.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 71.0 | 67.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/09/2019
Case Description: Moorpark Railroad Depot - Architectural Coating

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences | Residential | 55.0 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Compressor (air) | No | 40 | | 77.7 | 175.0 | 10.0 |

Results

| | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calculated (dBA) | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Compressor (air) | 56.8 | 52.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 56.8 | 52.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**** Receptor #2 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Businesses | Commercial | 65.4 | 45.0 | 45.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Compressor (air) | No | 40 | | 77.7 | 75.0 | 10.0 |

Results

| | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Calculated (dBA) | Day | | Evening | | Night | | Day | | Evening | | Night | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Compressor (air) | 64.1 | 60.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 64.1 | 60.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

## Moorpark Railroad Depot Project

### Leq

HVAC Equipment Noise Level at Nearest Commercial Property

| | dB Value | Conversion Value | | |
|---|---|---|---|---|
| HVAC Equipment 1 | 54.4 | 2.75E+05 | Sum = | 62.2 |
| HVAC Equipment 2 | 54.4 | 2.75E+05 | | |
| HVAC Equipment 3 | 54.4 | 2.75E+05 | | |
| HVAC Equipment 4 | 54.4 | 2.75E+05 | | |
| HVAC Equipment 5 | 54.4 | 2.75E+05 | | |
| HVAC Equipment 6 | 54.4 | 2.75E+05 | | |

## Moorpark Railroad Depot Project

### Leq

HVAC Equipment Noise Level at Nearest Commercial Property with Setbacks

| | dB Value | Conversion Value | | |
|---|---|---|---|---|
| HVAC Equipment 1 | 51.9 | 1.55E+05 | Sum = | 59.7 |
| HVAC Equipment 2 | 51.9 | 1.55E+05 | | |
| HVAC Equipment 3 | 51.9 | 1.55E+05 | | |
| HVAC Equipment 4 | 51.9 | 1.55E+05 | | |
| HVAC Equipment 5 | 51.9 | 1.55E+05 | | |
| HVAC Equipment 6 | 51.9 | 1.55E+05 | | |

## Moorpark Railroad Depot Project

### Leq

HVAC Equipment Noise Level at Nearest Commercial Property with Shielding

| | dB Value | Conversion Value | | |
|---|---|---|---|---|
| HVAC Equipment 1 | 51.4 | 1.38E+05 | Sum = | 59.2 |
| HVAC Equipment 2 | 51.4 | 1.38E+05 | | |
| HVAC Equipment 3 | 51.4 | 1.38E+05 | | |
| HVAC Equipment 4 | 51.4 | 1.38E+05 | | |
| HVAC Equipment 5 | 51.4 | 1.38E+05 | | |
| HVAC Equipment 6 | 51.4 | 1.38E+05 | | |

## Moorpark Railroad Depot Project

### Leq

HVAC Equipment Noise Level at Nearest Residence

| | dB Value | Conversion Value | | |
|---|---|---|---|---|
| HVAC Equipment 1 | 47.9 | 6.17E+04 | Sum = | 55.7 |
| HVAC Equipment 2 | 47.9 | 6.17E+04 | | |
| HVAC Equipment 3 | 47.9 | 6.17E+04 | | |
| HVAC Equipment 4 | 47.9 | 6.17E+04 | | |
| HVAC Equipment 5 | 47.9 | 6.17E+04 | | |
| HVAC Equipment 6 | 47.9 | 6.17E+04 | | |

## Moorpark Railroad Depot Project

### Leq

HVAC Equipment Noise Level at Nearest Residence with Setbacks

| | dB Value | Conversion Value | | |
|---|---|---|---|---|
| HVAC Equipment 1 | 46.7 | 4.68E+04 | Sum = | 54.5 |
| HVAC Equipment 2 | 46.7 | 4.68E+04 | | |
| HVAC Equipment 3 | 46.7 | 4.68E+04 | | |
| HVAC Equipment 4 | 46.7 | 4.68E+04 | | |
| HVAC Equipment 5 | 46.7 | 4.68E+04 | | |
| HVAC Equipment 6 | 46.7 | 4.68E+04 | | |

## Moorpark Railroad Depot Project

### Leq

HVAC Equipment Noise Level at Nearest Residence with Shielding

| | dB Value | Conversion Value | | |
|---|---|---|---|---|
| HVAC Equipment 1 | 44.9 | 3.09E+04 | Sum = | 52.7 |
| HVAC Equipment 2 | 44.9 | 3.09E+04 | | |
| HVAC Equipment 3 | 44.9 | 3.09E+04 | | |
| HVAC Equipment 4 | 44.9 | 3.09E+04 | | |
| HVAC Equipment 5 | 44.9 | 3.09E+04 | | |
| HVAC Equipment 6 | 44.9 | 3.09E+04 | | |

# DNL Calculator

**WARNING:** HUD recommends the use of Microsoft Internet Explorer for performing noise calculations. The HUD Noise Calculator has an error when using Google Chrome unless the cache is cleared before each use of the calculator. HUD is aware of the problem and working to fix it in the programming of the calculator.

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

# Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

# DNL Calculator

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

| | |
|---|---|
| **Road # 1 Name:** | **East High St (Moorpark Ave to Spring Rd) - Existing** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 75 | 75 | 75 |
| Distance to Stop Sign | | | |
| Average Speed | 30 | 30 | 30 |
| Average Daily Trips (ADT) | 9031 | 186 | 93 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 59.8845 | 53.0223 | 61.7838 |
| Calculate Road #1 DNL | 64.2551 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Metrolink/Amtrak Passenger Rail** |

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 275 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 68.9631 |
| Calculate Rail #1 DNL | 68.9631 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 275 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 63.7811 |
| Calculate Rail #2 DNL | 63.7811 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **71.1524** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

**Road # 1 Name:** **East High St (Moorpark Ave to Spring Rd) - Existing plus Project**

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 75 | 75 | 75 |
| Distance to Stop Sign | | | |
| Average Speed | 30 | 30 | 30 |
| Average Daily Trips (ADT) | 9564 | 197 | 99 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 60.1336 | 53.2718 | 62.0553 |
| Calculate Road #1 DNL | 64.5177 | Reset | |

**Railroad #1 Track Identifier:** **Metrolink/Amtrak Passenger Rail**

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 275 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 68.9631 |
| Calculate Rail #1 DNL | 68.9631 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 275 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 63.7811 |
| Calculate Rail #2 DNL | 63.7811 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **71.2049** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

| | |
|---|---|
| **Road # 1 Name:** | **East High St (Moorpark Ave to Spring Rd) - Cumulative** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 75 | 75 | 75 |
| Distance to Stop Sign | | | |
| Average Speed | 30 | 30 | 30 |
| Average Daily Trips (ADT) | 10796 | 223 | 111 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 60.6598 | 53.8102 | 62.5522 |
| Calculate Road #1 DNL | 65.0273 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Metrolink/Amtrak Passenger Rail** |

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 275 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 68.9631 |
| Calculate Rail #1 DNL | 68.9631 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 275 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 63.7811 |
| Calculate Rail #2 DNL | 63.7811 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **71.3068** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

| | |
|---|---|
| **Road # 1 Name:** | **East High St (Moorpark Ave to Spring Rd) - Cumulative plus Projec** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 75 | 75 | 75 |
| Distance to Stop Sign | | | |
| Average Speed | 30 | 30 | 30 |
| Average Daily Trips (ADT) | 11330 | 234 | 117 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 60.8695 | 54.0193 | 62.7808 |
| Calculate Road #1 DNL | 65.2483 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Metrolink/Amtrak Passenger Rail** |

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 275 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 68.9631 |
| Calculate Rail #1 DNL | 68.9631 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 275 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 63.7811 |
| Calculate Rail #2 DNL | 63.7811 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **71.3632** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

| | |
|---|---|
| **Road # 1 Name:** | **Moorpark Ave (Poindexter Ave to Los Angeles Ave) - Existing** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 25 | 25 | 25 |
| Distance to Stop Sign | | | |
| Average Speed | 30 | 30 | 30 |
| Average Daily Trips (ADT) | 7585 | 156 | 78 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 66.2836 | 59.4152 | 68.1767 |
| Calculate Road #1 DNL | 70.65 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Metrolink/Amtrak Passenger Rail** |

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 575 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 72.4913 |
| Calculate Rail #1 DNL | 72.4913 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 575 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 67.3092 |
| Calculate Rail #2 DNL | 67.3092 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **75.4534** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

**Road # 1 Name:** **Moorpark Ave (Poindexter Ave to Los Angeles Ave) - Existing plus**

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 25 | 25 | 25 |
| Distance to Stop Sign | | | |
| Average Speed | 30 | 30 | 30 |
| Average Daily Trips (ADT) | 7799 | 161 | 80 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 66.4044 | 59.5523 | 68.2867 |
| Calculate Road #1 DNL | 70.7656 | Reset | |

**Railroad #1 Track Identifier:** **Metrolink/Amtrak Passenger Rail**

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 575 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 72.4913 |
| Calculate Rail #1 DNL | 72.4913 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 575 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 67.3092 |
| Calculate Rail #2 DNL | 67.3092 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **75.4881** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

| | |
|---|---|
| **Road # 1 Name:** | **Moorpark Ave (Poindexter Ave to Los Angeles Ave) - Cumulative** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 25 | 25 | 25 |
| Distance to Stop Sign | | | |
| Average Speed | 30 | 30 | 30 |
| Average Daily Trips (ADT) | 9913 | 204 | 102 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 67.4461 | 60.5803 | 69.3418 |
| Calculate Road #1 DNL | 71.8143 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Metrolink/Amtrak Passenger Rail** |

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 575 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 72.4913 |
| Calculate Rail #1 DNL | 72.4913 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 575 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 67.3092 |
| Calculate Rail #2 DNL | 67.3092 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **75.8186** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

**Road # 1 Name:** **Moorpark Ave (Poindexter Ave to Los Angeles Ave) - Cumulative p**

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 25 | 25 | 25 |
| Distance to Stop Sign | | | |
| Average Speed | 30 | 30 | 30 |
| Average Daily Trips (ADT) | 10127 | 209 | 104 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 67.5388 | 60.6855 | 69.4261 |
| Calculate Road #1 DNL | 71.9029 | Reset | |

**Railroad #1 Track Identifier:** **Metrolink/Amtrak Passenger Rail**

**Rail # 1**

| | | |
|---|---|---|
| **Train Type** | **Electric** ☐ | **Diesel** ☑ |

| | | |
|---|---|---|
| Effective Distance | | 575 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 72.4913 |
| Calculate Rail #1 DNL | 72.4913 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 575 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 67.3092 |
| Calculate Rail #2 DNL | 67.3092 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **75.8541** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

| | |
|---|---|
| **Road # 1 Name:** | **Spring Road (East High Street to Los Angeles Ave) - Existing** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 45 | 45 | 45 |
| Distance to Stop Sign | | | |
| Average Speed | 40 | 40 | 40 |
| Average Daily Trips (ADT) | 17770 | 366 | 183 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 68.6506 | 61.7885 | 68.0512 |
| Calculate Road #1 DNL | 71.8074 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Metrolink/Amtrak Passenger Rail** |

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 160 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 72.4913 |
| Calculate Rail #1 DNL | 72.4913 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 160 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 67.3092 |
| Calculate Rail #2 DNL | 67.3092 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **75.8159** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

# DNL Calculator

**WARNING:** HUD recommends the use of Microsoft Internet Explorer for performing noise calculations. The HUD Noise Calculator has an error when using Google Chrome unless the cache is cleared before each use of the calculator. HUD is aware of the problem and working to fix it in the programming of the calculator.

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

# Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

# DNL Calculator

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

**Road # 1 Name:** **Spring Road (East High Street to Los Angeles Ave) - Existing plus P**

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 45 | 45 | 45 |
| Distance to Stop Sign | | | |
| Average Speed | 40 | 40 | 40 |
| Average Daily Trips (ADT) | 18081 | 373 | 186 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 68.7259 | 61.8708 | 68.1218 |
| Calculate Road #1 DNL | 71.8816 | Reset | |

**Railroad #1 Track Identifier:** **Metrolink/Amtrak Passenger Rail**

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 160 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 72.4913 |
| Calculate Rail #1 DNL | 72.4913 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 160 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 67.3092 |
| Calculate Rail #2 DNL | 67.3092 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **75.8456** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

| | |
|---|---|
| **Road # 1 Name:** | **Spring Road (East High Street to Los Angeles Ave) - Cumulative** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 45 | 45 | 45 |
| Distance to Stop Sign | | | |
| Average Speed | 40 | 40 | 40 |
| Average Daily Trips (ADT) | 21427 | 442 | 221 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 69.4633 | 62.6079 | 68.8706 |
| Calculate Road #1 DNL | 72.6236 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Metrolink/Amtrak Passenger Rail** |

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 160 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 72.4913 |
| Calculate Rail #1 DNL | 72.4913 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 160 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 67.3092 |
| Calculate Rail #2 DNL | 67.3092 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **76.1424** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

| | |
|---|---|
| **Site ID** | High Street Station - Moorpark |
| **Record Date** | 12/12/2019 |
| **User's Name** | Rincon Consultants, Inc. |

**Road # 1 Name:** **Spring Road (East High Street to Los Angeles Ave) - Cumulative plu**

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 45 | 45 | 45 |
| Distance to Stop Sign | | | |
| Average Speed | 40 | 40 | 40 |
| Average Daily Trips (ADT) | 21738 | 448 | 224 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 69.5259 | 62.6665 | 68.9292 |
| Calculate Road #1 DNL | 72.6841 | Reset | |

**Railroad #1 Track Identifier:** **Metrolink/Amtrak Passenger Rail**

**Rail # 1**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|

| | | |
|---|---|---|
| Effective Distance | | 160 |
| Average Train Speed | | 30 |
| Engines per Train | | 1 |
| Railway cars per Train | | 5 |
| Average Train Operations (ATO) | | 27 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 72.4913 |
| Calculate Rail #1 DNL | 72.4913 | Reset |

| | |
|---|---|
| **Railroad #2 Track Identifier:** | **Union Pacific Freight Rail** |

**Rail # 2**

| **Train Type** | **Electric** ☐ | **Diesel** ☑ |
|---|---|---|
| Effective Distance | | 160 |
| Average Train Speed | | 30 |
| Engines per Train | | 2 |
| Railway cars per Train | | 50 |
| Average Train Operations (ATO) | | 4 |
| Night Fraction of ATO | | 15 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |

| | | |
|---|---|---|
| Bolted Trucks: | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| **Train DNL** | | 67.3092 |
| Calculate Rail #2 DNL | 67.3092 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ◯**Yes** ◯**No** |
| Combined DNL for all Road and Rail sources | **76.1695** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses

*(/resource/313/hud-noise-guidebook/)*

- Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

## Tools and Guidance

**Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)**

**Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)**

# Vibration Analysis

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Large Bulldozer

| | | |
|---|---|---|
| PPV{ref} = | 0.089 | in/sec |
| D = | 105 | feet |
| ***PPV at receptor =*** | ***0.010*** | ***in/sec*** |

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

| | | |
|---|---|---|
| ***Therefore estimated RMS velocity =*** | ***0.003*** | ***in/sec*** |
| ***Lv =*** | ***68*** | ***VdB*** |

Source: Chapter 12 Noise and Vibration During Construction in
*Transit Noise and Vibration Assessment, April 1995*
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

**Vibration Source Levels For Construction Equipment**

| Equipment | | PPV at 25 ft (in/sec) | Approximate Lv at 25 feet * |
|---|---|---|---|
| Impact Pile Driver | upper range | 1.518 | 112 |
| | typical | 0.644 | 104 |
| Sonic Pile Driver | upper range | 0.734 | 105 |
| | typical | 0.17 | 93 |
| Clam shovel drop (slurry wall construction) | | 0.202 | 94 |
| Hydromill (slurry wall construction) | in soil | 0.008 | 66 |
| | in rock | 0.017 | 75 |
| Vibratory Roller | | 0.21 | 94 |
| Hoe Ram | | 0.089 | 87 |
| | large | 0.089 | 87 |
| Bulldozer | small | 0.003 | 58 |
| Caisson drilling | | 0.089 | 87 |
| Loaded trucks | | 0.076 | 86 |
| Jackhammer | | 0.035 | 79 |

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~

***Criterion***

| US Bureau of Mines, 1971 | |
|---|---|
| PPV, in/sec | Degree of Damage |
| <2 | Safe |
| 2 - 4 | Plaster Cracking |
| 4 - 7 | Minor Damage |
| >7 | Major Damage |

| Canmet, Bauer, and Calder, 1977 | | |
|---|---|---|
| Equipment | PPV Threshold, in/sec | Type of Damage |
| Rigid Mercury Switches | 0.5 | Trip Out |
| House | 2 | Cracked Plaster |
| Concrete Block | 8 | Crack in Block |
| Cased Drill Holes | 15 | Horizontol Offset |
| Pumps, Compressors | 40 | Shaft Misalignment |

**Human Response Criteria**

| Level, Lv in VdB | Equivalent Noise Level, dBA | | Human Response |
|---|---|---|---|
| | Low freq (30Hz) | Hi Freq (60 Hz) | |
| 65 | 25 | 40 | Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping |
| 75 | 35 | 50 | Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas. |
| 85 | 45 | 60 | Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches. |
| 90 | 50 | 65 | Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses. |

**Impact Criteria**

| Land Use | Lv in VdB | | |
|---|---|---|---|
| | Frequent Events (70+/day) | Occasional Events (30-70) | Infrequent (<30 events/day) |
| Category 1: Vibration | 65 | 65 | 65 |
| Concert Halls | 65 | 65 | 65 |
| TV Studios | 65 | 65 | 65 |
| Recording Studios | 65 | 65 | 65 |
| Category 2: Residences, hotels, sleeping areas | 72 | 75 | 80 |
| Auditoriums | 72 | 80 | 80 |
| Theaters | 72 | 80 | 80 |
| Category 3: Institutional with primarily daytime use only | 75 | 78 | 83 |

# Vibration Analysis

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Loaded Truck

| | | |
|---|---|---|
| PPV{ref} = | 0.076 | in/sec |
| D = | 105 | feet |
| ***PPV at receptor =*** | ***0.009*** | ***in/sec*** |

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

| | | |
|---|---|---|
| ***Therefore estimated RMS velocity =*** | ***0.002*** | ***in/sec*** |
| ***Lv =*** | ***67*** | ***VdB*** |

Source: Chapter 12 Noise and Vibration During Construction in
*Transit Noise and Vibration Assessment, April 1995*
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

**Vibration Source Levels For Construction Equipment**

| Equipment | | PPV at 25 ft (in/sec) | Approximate Lv at 25 feet * |
|---|---|---|---|
| Impact Pile Driver | upper range | 1.518 | 112 |
| | typical | 0.644 | 104 |
| Sonic Pile Driver | upper range | 0.734 | 105 |
| | typical | 0.17 | 93 |
| Clam shovel drop (slurry wall construction) | | 0.202 | 94 |
| Hydromill (slurry wall construction) | in soil | 0.008 | 66 |
| | in rock | 0.017 | 75 |
| Vibratory Roller | | 0.21 | 94 |
| Hoe Ram | | 0.089 | 87 |
| | large | 0.089 | 87 |
| Bulldozer | small | 0.003 | 58 |
| Caisson drilling | | 0.089 | 87 |
| Loaded trucks | | 0.076 | 86 |
| Jackhammer | | 0.035 | 79 |

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~

***Criterion***

| US Bureau of Mines, 1971 | |
|---|---|
| PPV, in/sec | Degree of Damage |
| <2 | Safe |
| 2 - 4 | Plaster Cracking |
| 4 - 7 | Minor Damage |
| >7 | Major Damage |

| Canmet, Bauer, and Calder, 1977 | | |
|---|---|---|
| Equipment | PPV Threshold, in/sec | Type of Damage |
| Rigid Mercury Switches | 0.5 | Trip Out |
| House | 2 | Cracked Plaster |
| Concrete Block | 8 | Crack in Block |
| Cased Drill Holes | 15 | Horizontol Offset |
| Pumps, Compressors | 40 | Shaft Misalignment |

**Human Response Criteria**

| Level, Lv in VdB | Equivalent Noise Level, dBA | | Human Response |
|---|---|---|---|
| | Low freq (30Hz) | Hi Freq (60 Hz) | |
| 65 | 25 | 40 | Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping |
| 75 | 35 | 50 | Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas. |
| 85 | 45 | 60 | Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches. |
| 90 | 50 | 65 | Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses. |

**Impact Criteria**

| Land Use | Lv in VdB | | |
|---|---|---|---|
| | Frequent Events (70+/day) | Occasional Events (30-70) | Infrequent (<30 events/day) |
| Category 1: Vibration | 65 | 65 | 65 |
| Concert Halls | 65 | 65 | 65 |
| TV Studios | 65 | 65 | 65 |
| Recording Studios | 65 | 65 | 65 |
| Category 2: Residences, hotels, sleeping areas | 72 | 75 | 80 |
| Auditoriums | 72 | 80 | 80 |
| Theaters | 72 | 80 | 80 |
| Category 3: Institutional with primarily daytime use only | 75 | 78 | 83 |

# Vibration Analysis

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Roller

| | | |
|---|---|---|
| PPV{ref} = | 0.21 | in/sec |
| D = | 105 | feet |
| ***PPV at receptor =*** | ***0.024*** | ***in/sec*** |

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

| | | |
|---|---|---|
| ***Therefore estimated RMS velocity =*** | ***0.006*** | ***in/sec*** |
| ***Lv =*** | ***76*** | ***VdB*** |

Source: Chapter 12 Noise and Vibration During Construction in
*Transit Noise and Vibration Assessment, April 1995*
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

**Vibration Source Levels For Construction Equipment**

| Equipment | | PPV at 25 ft (in/sec) | Approximate Lv at 25 feet * |
|---|---|---|---|
| Impact Pile Driver | upper range | 1.518 | 112 |
| | typical | 0.644 | 104 |
| Sonic Pile Driver | upper range | 0.734 | 105 |
| | typical | 0.17 | 93 |
| Clam shovel drop (slurry wall construction) | | 0.202 | 94 |
| Hydromill (slurry wall construction) | in soil | 0.008 | 66 |
| | in rock | 0.017 | 75 |
| Vibratory Roller | | 0.21 | 94 |
| Hoe Ram | | 0.089 | 87 |
| | large | 0.089 | 87 |
| Bulldozer | small | 0.003 | 58 |
| Caisson drilling | | 0.089 | 87 |
| Loaded trucks | | 0.076 | 86 |
| Jackhammer | | 0.035 | 79 |

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~

***Criterion***

| US Bureau of Mines, 1971 | |
|---|---|
| PPV, in/sec | Degree of Damage |
| <2 | Safe |
| 2 - 4 | Plaster Cracking |
| 4 - 7 | Minor Damage |
| >7 | Major Damage |

| Canmet, Bauer, and Calder, 1977 | | |
|---|---|---|
| Equipment | PPV Threshold, in/sec | Type of Damage |
| Rigid Mercury Switches | 0.5 | Trip Out |
| House | 2 | Cracked Plaster |
| Concrete Block | 8 | Crack in Block |
| Cased Drill Holes | 15 | Horizontol Offset |
| Pumps, Compressors | 40 | Shaft Misalignment |

**Human Response Criteria**

| Level, Lv in VdB | Equivalent Noise Level, dBA | | Human Response |
|---|---|---|---|
| | Low freq (30Hz) | Hi Freq (60 Hz) | |
| 65 | 25 | 40 | Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping |
| 75 | 35 | 50 | Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas. |
| 85 | 45 | 60 | Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches. |
| 90 | 50 | 65 | Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses. |

**Impact Criteria**

| Land Use | Lv in VdB | | |
|---|---|---|---|
| | Frequent Events (70+/day) | Occasional Events (30-70) | Infrequent (<30 events/day) |
| Category 1: Vibration | 65 | 65 | 65 |
| Concert Halls | 65 | 65 | 65 |
| TV Studios | 65 | 65 | 65 |
| Recording Studios | 65 | 65 | 65 |
| Category 2: Residences, hotels, sleeping areas | 72 | 75 | 80 |
| Auditoriums | 72 | 80 | 80 |
| Theaters | 72 | 80 | 80 |
| Category 3: Institutional with primarily daytime use only | 75 | 78 | 83 |

# Appendix J

Will-Serve Letters

# county of ventura

PUBLIC WORKS
VENTURA COUNTY

**Jeff Pratt**
Agency Director

Central Services
**Joan Araujo**, Director

Engineering Services
**Christopher Cooper**, Director

Transportation
**David Fleisch**, Director

Water & Sanitation
**Michaela Brown**, Director

Watershed Protection
**Glenn Shephard**, Director

April 15th, 2019

County of Ventura
Resource Management Agency
Building & Safety
3855-F Alamo Street, Room 2019-A
Simi Valley, CA 93063

Subject: High Street Depot
APN: 512-0-090-110
**Sewer Availability Letter**

The subject property is within the boundaries of Ventura County Waterworks District No. 1 (District) for sewer service. Applicant is proposing to construct 91 multi-family dwelling and approximately 14,000 square feet of commercial retail for which sanitary sewer treatment will be available from the District.

Applicant shall be required to comply with the District's Rules and Regulations. Applicant shall pay applicable fees and construct the needed improvements prior to receiving water service. Any requirements by Ventura County Fire Protection District greater than the District's existing facilities are the responsibility of the applicant.

This is not to be construed as a "will serve" letter.

Respectfully,

Susan Pan

Susan Pan, P.E.
Deputy Director
Water and Sanitation Department

# county of ventura

PUBLIC WORKS
VENTURA COUNTY

**Jeff Pratt**
Agency Director

Central Services
**Joan Araujo**, Director

Engineering Services
**Christopher Cooper**, Director

Transportation
**David Fleisch**, Director

Water & Sanitation
**Michaela Brown**, Director

Watershed Protection
**Glenn Shephard**, Director

April 15th, 2019

County of Ventura
Resource Management Agency
Building & Safety
3855-F Alamo Street, Room 2019-A
Simi Valley, CA 93063

Subject: High Street Depot
APN: 512-0-090-110
**Water Availability Letter**

The subject property is within the boundaries of Ventura County Waterworks District No. 1 (District) for water service. Applicant is proposing to construct 91 multi-family dwelling and approximately 14,000 square feet of commercial retail for which water will be available from the District.

Applicant shall be required to comply with the District's Rules and Regulations. Applicant shall pay applicable fees and construct the needed improvements prior to receiving water service. Any requirements by Ventura County Fire Protection District greater than the District's existing facilities are the responsibility of the applicant.

This is not to be construed as a "will serve" letter.

Respectfully,

Susan Pan

Susan Pan, P.E.
Deputy Director
Water and Sanitation Department

# Appendix K

Mitigation Monitoring and Reporting Program

# Mitigation Monitoring and Reporting Program

## Introduction

This document is the Mitigation Monitoring and Reporting Program (MMRP) for the High Street Station Mixed Use Development Project (proposed project), located along the south site of High Street in Moorpark, California. Public Resources Code Section 21081.6(a) requires that a Lead Agency adopt an MMRP before approving a project in order to mitigate or avoid significant impacts that have been identified in an Initial Study – Mitigated Negative Declaration (IS-MND). The purpose of the MMRP is to ensure that the required mitigation measures identified in the IS-MND are implemented as part of overall project implementation. In addition to ensuring implementation of mitigation measures, the MMRP provides feedback to agency staff and decision-makers during project implementation, and identifies the need for enforcement action before irreversible environmental damage occurs.

The following table summarizes the mitigation measures for each issue area identified in the IS-MND for the proposed project. The table identifies each mitigation measure; the action required for the measure to be implemented; the time at which the monitoring is to occur; the monitoring frequency; and the agency or party responsible for ensuring that the monitoring is performed. In addition, the table includes columns for compliance verification. Where an impact was identified to be less than significant, no mitigation measures were required.

This MMRP will be used by the City of Moorpark Community Development Department to determine compliance with mitigation measures included in the IS-MND.

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Initial | Date | Comments |
| **Biological Resources** | | | | | | | | |
| Have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species | **BIO-1 Habitat Modification (Nesting Birds, Non-Hillside or Urban Areas)**<br>Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).<br>Because construction may occur during the bird breeding season (February 1 to August 31), the project is subject to bird survey requirements. Pre-construction nesting bird surveys shall be conducted to determine the locations of nesting birds. Bird surveys shall include a minimum of three nesting bird surveys to be conducted by a qualified biologist, over a two-week period with the third survey occurring no more than three days prior to the start of vegetation clearing. The nesting bird survey area shall include a buffer around the grading limits and land clearing limits of 500 feet to accommodate potential raptors that could be affected. If an active bird nest is found prior to land clearing activities, a maximum 300-foot buffer (depending on the species and noise and site conditions) shall be established surrounding the nest(s) and shall be flagged for avoidance. If any active raptor nests are found, a buffer area of 250 to 500 feet from the nest shall be established until after the young have fledged (i.e., the birds are no longer reliant on the nest). The avoidance buffer area for nesting birds may be reduced upon the approval of the monitoring biologist as determined by the species nesting and the activity being conducted. If an active nest of a special-status bird species is found, a suitable buffer area of 200 to 500 feet from the nest (depending on the status of the species) shall be established until the nest becomes inactive. | If initial ground disturbing activities occur during the breeding bird nesting season, verify that a qualified biologist has performed nesting bird surveys | City of Moorpark | Within 2 weeks prior to construction, with the third survey occurring no more than three days and prior to the start of vegetation clearing | Three surveys prior to construction<br>If active nests are present, during land clearing activities and/or construction activities | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| | If no active nests are identified during pre-construction nesting bird surveys, land clearing activities may commence with no limitation. If active bird nests are found and avoidance buffers are established prior to or during construction, a biologist shall monitor the active nest(s) during land clearing activities and/or construction activities to determine whether the recommended avoidance buffers are adequate to ensure that nesting activities are not being stressed or jeopardized. Land disturbance may occur within the avoidance buffer area(s) only after the young have fledged (i.e., the birds are no longer reliant on the nest) as determined by the monitoring biologist.<br>The methods and results of the nesting bird survey(s), any nesting bird avoidance efforts as a result of those surveys, and the success of the avoidance buffers shall be documented in a letter report (Nesting Bird Survey and Active Nest Monitoring Report) and shall be submitted to the City no later than three weeks following the completion of active nest monitoring activities. | | | | | | | |
| **Cultural Resources** | | | | | | | | |
| Cause a substantial adverse change in the significance of an archaeological resource | **CUL-1 Cultural Resources**<br>During ground-disturbing activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall monitor excavation and ground-disturbing activities within native soils that have not been previously disturbed. If cultural resources are encountered during excavation and/or ground-disturbing activities, work in the immediate area must halt, and a Native American representative who is ancestrally related to the project area must be contacted immediately to evaluate the find and consult with the City of Moorpark and the archaeologist. If the discovery proves to be significant under the National Historic Preservation Act, additional work such as data recovery excavation may be warranted. | Field verification to confirm that if archaeological resources are encountered, appropriate measures are implemented | City of Moorpark | During construction | As needed | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| | **CUL-2 Archaeological Resources**<br>The discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the state of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. In the event of an unanticipated discovery of human remains, the County coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the NAHC, which will determine and notify an MLD. The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. | Field verification to confirm that if paleontological resources are encountered, appropriate measures are implemented | City of Moorpark | During construction | As needed | | | |
| Disturb any human remains, including those interred outside of formal cemeteries | **CUL-3 Human Remains**<br>If human remains are encountered unexpectedly during construction demolition and/or grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code (PRC) Section 5097.98. In the event that human remains are discovered during excavation activities, the following procedure shall be observed:<br>▪ Stop immediately and contact the Ventura County Coroner/Medical Examiner.<br>▪ If the remains are determined to be of Native American descent, the Coroner has 24 hours to notify the Native American Heritage Commission (NAHC).<br>▪ The NAHC will immediately notify the person it believes to be the Most Likely Descendent (MLD) of the deceased Native American.<br>▪ The MLD has 48 hours to make recommendations to the project applicant, or representative, for the | Field verification to confirm that if human remains are encountered, appropriate measures are implemented | City of Moorpark | During construction | As needed | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| | treatment or disposition, with proper dignity, of the human remains and grave goods.<br>If the project applicant does not accept the descendant's recommendations, the project applicant or the descendent may request mediation by the NAHC. | | | | | | | |
| **Geology and Soils** | | | | | | | | |
| Expose people or structures to seismic-related ground failure, including liquefaction<br>Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse | **GEO-1 Ground Improvement**<br>In accordance with recommendations made by the geohazard report, the applicant shall complete ground improvement activities to reduce the potential for liquefaction and dry seismic settlement on-site to near two inches of total settlement and one inch of differential settlement. The ground improvement options are as follows:<br>▪ Vibro Replacement (VR, also referred to as "stone columns") consists of advancing a vibroflot to the selected depth (approximately 50 feet for the project site) using a combination of the weight of the vibroflot assembly and vibration; or<br>▪ Deep Soil Mixing (DSM) utilizes a large diameter auger mounted to a large drill rig or crane to advance the auger to the target depth. Cement is mixed into the soil at a regulated rate of around 10 percent and mixed by the auger using several up and down passes of the auger. The amount of cement added to the soil is determined by laboratory testing and/or previous experience to optimize the soil strength versus amount of cement utilized.<br>A specialty ground improvement contractor shall prepare a site-specific ground improvement plan (GIP) that indicates the method and depth of treatment, size and spacing of the ground improvement columns, quality control procedures, and post-treatment CPT testing program (assuming VR method) to document ground improvement has densified the soils to reduce settlement during a seismic event to acceptable levels. | Verification of compliance with requirements during grading plan review | City of Moorpark | Prior to issuance of grading permit | Once | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| | The GIP shall be reviewed and approved by the City of Moorpark's geotechnical reviewer prior to issuance of grading permits. | | | | | | | |
| | **GEO-2 Stormwater Infiltration**<br>In accordance with recommendations made by the geohazard report, the applicant shall locate any on-site concentrated stormwater infiltration basins at least 100 feet away from project structural elements and off-site improvements (i.e., buried utilities) that could be impacted by settlement. Alternatively, the applicant may instead use a diffuse infiltration system that does not concentrate infiltration in a specific location. | Verification of compliance with requirements during building plan review | City of Moorpark | Prior to issuance of building permit | Once | | | |
| Would the project result in substantial soil erosion or the loss of topsoil? | **GEO-3 Erosion/Grading/Short-Term Construction Impacts**<br>▪ The applicant shall provide staked signage at the site with a minimum of three-inch lettering containing contact information for the City Engineer (Department of Public Works) and the hauling or general contractor.<br>▪ Excavation and grading activities shall be scheduled during dry weather periods, if possible. If grading occurs during the rainy season (October 15 through April 1), diversion dikes shall be constructed to channel runoff around the site. Channels shall be lined with grass or roughened pavement to reduce runoff velocity.<br>▪ Stockpiles, excavated, and exposed soil shall be covered with secured tarps, plastic sheeting, erosion control fabrics, or treated with a bio-degradable soil stabilizer. | Verification of compliance with requirements prior to and during construction | City of Moorpark | Prior to excavation and ground disturbance<br>Verification during construction | Once, verification as needed | | | |
| **Hazards and Hazardous Materials** | | | | | | | | |
| Be located on a site included on a list of hazardous material sites and create a significant | **HAZ-1 Soil Sampling and Soil Vapor Assessment**<br>Within 30 days of the project applicant acquiring the project site from the City of Moorpark and prior to issuance of a grading permit, a shallow soil sampling assessment shall be conducted on the southern portion of the site as close to the railroad tracks as | Submittal of letter report to the City of Moorpark summarizing results of soil sampling and soil vapor | City of Moorpark | Prior to issuance of grading and building permits | Once, prior to construction | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| hazard to the public or the environment | possible, but not within the railroad right-of-way (i.e., within 30 feet of the railroad tracks), to evaluate the adjacent railroad tracks and determine if hydrocarbons, metals, herbicides, and semi volatile organic compounds from the railroad activities are present in the shallow soil near the railroad tracks. Contaminated soil identified during sampling activities shall be removed and stored in appropriate waste containers, which shall be stored in a secure location such that no person will come into contact with contaminated materials. Any contaminated soil shall be stored in a roll-off bin or similarly-covered container. The handling and transport of waste shall be conducted in accordance with applicable local, state and federal regulations, including the USEPA Resource Conversation and Recovery Act (40 CFR Part 262), Federal and State Occupational Safety and Health Administrations, Federal and State Departments of Transportation, and DTSC (CFR Title 22). Any contaminated soils determined to be hazardous or non-hazardous waste must adequately profiled (sampled) prior to acceptable re-use or disposal at an appropriate off-site facility. Complete sampling and handling and transport procedures for reuse or disposal shall be completed in accordance with applicable local, state, and federal laws and policies.<br>In addition, a shallow vapor sampling assessment shall be conducted on the western portion of the site adjacent to the former gasoline station (now the Chamber of Commerce building) to determine if there is VOC-impacted soil vapor migrating beneath the site from the adjacent property. The soil vapor survey shall be performed according to the applicable standards of the DTSC and CalEPA. If the investigations indicate that any soil exceeds federal, state, or local regulatory action levels, then the soil shall be remediated to applicable agency standards through soil removal and disposal efforts. | assessment | | | | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| **Noise** | | | | | | | | |
| Result generation of a substantial temporary or permanent increase in ambient noise levels | **N-1 Construction Noise**<br>▪ Operate all diesel equipment with closed engine doors and equip all diesel equipment with mufflers that reduce construction equipment noise by at least 5 dBA.<br>▪ For stationary equipment, designate equipment areas with appropriate acoustic shielding on building and grading plans and locate these areas to maximize the distance between the activity and the existing commercial uses. Equipment and shielding will be installed prior to construction and remain in designated location throughout construction activities. Appropriate acoustic shielding shall completely obscure the noise source from sensitive receptors along the north side of High Street. The shielding shall be non-reflective and shall composed of sound absorbing materials like vinyl, polyester, wool, woven fiberglass, or wood.<br>▪ Electrical power shall be used to run to run air compressors and similar power tools and to power any temporary structures, such as construction trailers.<br>▪ Require all contractors, as a condition of contract, to maintain and tune-up all construction equipment to minimize noise emissions and provide monthly reports documenting equipment maintenance activities.<br>▪ Erect temporary sound barriers along the northern boundary of the project site between active on-site construction work using heavy equipment and adjacent receivers (commercial properties). Such barriers will be of sufficient height to break the line-of-sight between noise-generating equipment and the noise-sensitive receiver, and will be continuous with no gaps or holes between panels or the ground. Temporary sound barriers may include noise curtains, sound blankets, or solid temporary barriers. | Field verification and noise surveys to determine whether the noise control measures are achieving necessary noise reductions | Project applicant/City of Moorpark | During construction activities | Periodically throughout construction | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| | ▪ The applicant shall retain a City-approved noise consultant to conduct a noise survey at the beginning of each phase of construction (i.e., demolition, site preparation, grading, building construction, paving, and architectural coating) and when the equipment mix changes significantly (e.g., heavy-duty pieces of equipment begin to be utilized during a certain phase that differ from those utilized during the start of that phase). Noise monitoring shall occur over the course of the first full day of construction activities and shall commence at the start of daily construction activities (including equipment warm-up) and end when all heavy-duty equipment has been shut down for the day. If the noise survey measures construction noise levels that are within 3 dBA of the limits specified in Moorpark Municipal Code Section 17.53.070, Tables 1, 2, and 2A, the noise consultant shall conduct continuous monitoring during construction activities over the course of three consecutive days to verify noise levels. If the noise limits specified in Moorpark Municipal Code Section 17.53.070, Tables 1, 2, and 2A are exceeded, significant noise-generating construction activities shall halt, and the applicant shall develop a noise control plan that includes additional noise reduction measures, including but not limited to installing sound barriers of greater height and scheduling construction activities such that fewer pieces of construction equipment are in operation at any given time. Upon completion of the noise control plan, construction activities shall recommence with implementation of the additional noise control measures, at which time the noise consultant shall perform an additional noise survey to evaluate the effectiveness of the additional measures. The noise consultant shall prepare a brief memorandum summarizing the results of the noise survey conducted for each | | | | | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| | phase of construction, for any times when the equipment mix changes significantly, and for times at which implementation of a noise control plan is required. The memorandum shall be submitted to the City within five working days of the noise survey. | | | | | | | |
| | **N-2 HVAC Equipment Noise**<br>A noise barrier (such as a screen or parapet) shall be installed around HVAC equipment. To be an effective noise barrier, the screen or parapet should extend at least one foot above the tallest rooftop piece of HVAC equipment and be of sufficient length to block line of sight between the HVAC units and the nearest commercial and residential properties. The screen or parapet shall achieve at least a 6 dBA reduction in HVAC equipment noise. | Verification of compliance with requirements | City of Moorpark | Prior to issuance of building permit | Once | | | |
| **Transportation** | | | | | | | | |
| Conflict with a program plan, ordinance or policy addressing the circulation system | **TRA-1 Area of Contribution (AOC) Fees**<br>The project would be required to pay the applicable AOC and Citywide Traffic Impact Mitigation fees based upon the level of traffic added within the Los Angeles Avenue and Moorpark Avenue corridor. The project's monetary contribution shall be based on its percent contribution to traffic at the impacted intersections, which is 1.79 percent for the Moorpark Avenue/High Street intersection, 0.35 percent for the Spring Road/High Street intersection, and 0.61 percent for the Los Angeles Avenue/Spring Road intersection. As part of the City's plan to mitigate cumulative traffic impacts, the City has identified and programmed the following additional improvements for the Los Angeles Avenue/Spring Road and Moorpark Avenue/High Street intersections that would mitigate cumulative impacts:<br>▪ Los Angeles Avenue/Spring Road Intersection: Add an additional through lane on the eastbound and westbound approaches.<br>▪ Moorpark Avenue/High Street Intersection: Add | Payment of the AOC fee | City of Moorpark | Prior to issuance of a certificate of occupancy for the first residential building | Once | | | |

| Impact | Mitigation Measure | Action | Responsible Agency or Party | When Monitoring to Occur | Monitoring Frequency | Compliance Verification | | |
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| | an additional through lane on the southbound approach and provide a left-turn lane, through lane, and right-turn lane on the northbound approach.<br>The project applicant shall pay the AOC and Citywide Traffic Impact Mitigation fees prior to issuance of a certificate of occupancy for the first residential building. | | | | | | | |
| **Tribal Cultural Resources** | | | | | | | | |
| Cause a substantial adverse change in the significance of a tribal cultural resource | **TCR-1 Unanticipated Discovery of Tribal Cultural Resources**<br>During ground-disturbing activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall monitor excavation and ground-disturbing activities within native soils that have not been previously disturbed. If cultural resources are encountered during excavation and/or ground-disturbing activities, work in the immediate area must halt and a Native American representative who is ancestrally related to the project area must be contacted immediately to evaluate the find and consult with the City of Moorpark and the archaeologist as to the treatment of the find which may determine additional measures to avoid or reduce impacts to the resource are required. These additional measures to avoid or reduce impacts shall be determined on a case by case basis and approved by the City's Community Development Director. | Field verification to confirm that if tribal cultural resources are encountered, appropriate measures are implemented | City of Moorpark | During construction | As needed | | | |

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# Appendix L

Response to Comments on the First Public Review Draft

# Responses to Comments on the First Public Review Draft IS-MND

This section includes comments received during the first circulation of the Draft IS-MND prepared for the High Street Station Mixed Use Development Project (Project).

The first Draft EIR was circulated for a 30-day public review period that began on February 20, 2019 and ended on March 12, 2019. The City of Moorpark received six comment letters on the first Draft IS-MND. The commenters and the page number on which each commenter's letter appear are listed below.


| Letter No. | and Commenter | Page No. |
|---|---|---|
| 1 | Ashley Cook, Cultural Heritage Board Staff, Ventura County Cultural Heritage Board | |
| 2 | Nicole Collazo, Ventura County Air Pollution Control District | |
| 3 | Nathanial Summerville, Engineer III-Advanced Planning Section, Ventura County Watershed Protection District | |
| 4 | Anitha Balan, Engineering Manager II, County of Ventura Public Works Agency Transportation Department | |
| 5 | Rebecca Lustig, Ventura County Environmental Health Division | |
| 6 | Dean Wallraff, Attorney at Law, Advocates for the Environment | |


The comment letters and responses follow. The comment letters have been numbered sequentially and each separate issue raised by the commenter, if more than one, has been assigned a number. The responses to each comment identify first the number of the comment letter, and then the number assigned to each issue (Response 1.1, for example, indicates that the response is for the first issue raised in comment Letter 1).

**Letter 1**

# Ventura County Cultural Heritage Board Memorandum

County of Ventura • Resource Management Agency • Planning Division
*800 S. Victoria Avenue, Ventura, CA 93009-1740 • (805) 654-5042 • https://vcrma.org/divisions/planning*

**DATE:** March 11, 2019

**TO:** City of Moorpark

**FROM:** Ashley Cook, Cultural Heritage Board Staff
**THROUGH:** Denice Thomas, Planning Programs Manager

**SUBJECT:** **Review of Notice of Intent to Adopt a Mitigated Negative Declaration**
**High Street Mixed Use Development**
**City of Moorpark, RMA Project Ref. No. 19-003**

The Notice of Intent to Adopt a Mitigated Negative Declaration for the High Street Mixed Use Development Project has been reviewed. Specifically, the Section 5 - Cultural Resources discussion:

> *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5:*
>
> *Discussion: "Although the project site is not considered a historical resource in accordance with CEQA, the proposed project site is bound to the north by a segment of Ventura County Landmark # 72, which consists of a row of pepper trees planted by early Moorpark settlers John Nubee and John Barrett in 1904. Although the proposed project would not impact these trees, due to their proximity to the project area, City of Moorpark's Tree Preservation Guidelines (Moorpark Municipal Code 12.12.060) would be enforced to ensure they are not impacted by nearby construction. During construction, a physical barrier (flagging or safety fencing) would be installed around any adjacent pepper trees that are situated near mechanized equipment. Therefore, impacts to Ventura County Landmark # 72 would be avoided and impacts to historical resources would be less than significant"*

Cultural Heritage Board (CHB) Staff provides the following comments:

- Robust tree preservation measures should be enforced to ensure the Pepper trees (Landmark #72) are protected throughout the entire construction process. A certified arborist should be consulted to ensure that the preservation measures are adequate. 1

- Although the Historic Resource Report listed in Appendix D reports the existing buildings on the site were found to be ineligible for listing on the national, state or local level, the site itself seems to have some local significance. The site is the location of the area's first railroad and that the railroad helped to shape the region's growth according to the report as listed below: 2

"*The presence of the railroad allowed the largely agricultural community of Moorpark to transport both people and goods at rates not possible prior, enabling substantial economic and population growth. A fire destroyed Moorpark's original railroad depot in 1909 and Southern Pacific constructed a replacement in 1910. The second generation depot spanned two current-day parcels, which include the subject parcel and the one to its immediate west (currently occupied by the Chamber of Commerce). By the 1950s, popularity of the commuter trains waned and the Moorpark Depot became a flag stop. In 1958, Southern Pacific announced the depot's closure (Press Courier 1958). The Moorpark Depot was deconstructed by the Railroad in the mid-1960s."*

CHB Staff recommends the inclusion of some type of interpretive display with photos and information that highlight the history of the site and the railroad be incorporated into the project's mitigation measures.

2 (cont.)

Please contact Ashley Cook at 805-654-5042 or ashley.cook@ventura.org if you have any questions.

# Letter 1

**COMMENTER:** Ashley Cook, Cultural Heritage Board Staff, Ventura County Cultural Heritage Board

**DATE:** March 11, 2019

## Response 1.1

The commenter states that proposed project should implement robust tree preservation measures to ensure that the pepper tress (Ventura County Landmark #72) are protected during project construction. The commenter recommends consulting with a certified arborist to determine whether the tree preservation measures are adequate.

As discussed in Section 5, *Cultural Resources*, of the Draft IS-MND the project contractor(s) would be required to comply with the City of Moorpark's Tree Preservation Guidelines (Moorpark Municipal Code 12.12.060) during project construction. These guidelines include installing a physical barrier (flagging or safety fencing) around any adjacent pepper trees that are situated near mechanized equipment. The inclusion of additional tree preservation measures as suggested by the commenter is not needed to mitigate impacts to trees under CEQA but will be forwarded to City decision makers for their consideration.

## Response 1.2

The commenter states that regardless of the determination that existing buildings on-site are ineligible for listing on the national, state, and local levels, the project site has local historical significance because it is the location of the area's first railroad, which helped to foster the region's growth. The commenter recommends adding a mitigation measure to the IS-MND that requires the project to include an interpretive display with photos and information on the site's history and the railroad.

As discussed in Section 5, *Cultural Resources,* the project would have no impact to historical resources. However, to address the commenter's concerns regarding the historical significance of the project site, the following condition of approval has been added to Section 5, *Cultural Resources*:

### *CR-1 Interpretive Display*

The applicant shall coordinate with the Moorpark Historical Society to develop an interpretive display discussing the history of the project site, its significance, and its important details and features, which shall be installed at the site. The display shall be installed on a publicly-accessible building or in a publicly-accessible outdoor location on the project site. The display shall include images and information from collected research pertaining to the project site. The content shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History (NPS 1983). Installation of the display shall be completed within one year of the date of completion of construction of the proposed project.

Ventura County
Air Pollution
Control District

669 County Square Dr
Ventura, California 93003

tel 805/645-1400
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Michael Villegas
Air Pollution Control Officer

# VENTURA COUNTY
# AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Joseph Fiss, City of Moorpark DATE: March 11, 2019

FROM: Nicole Collazo

SUBJECT: Request for Review of Notice of Intent to Adopt a Mitigated Negative Declaration for City of Moorpark High Street Mixed-Use Development (RMA 19-003)

Air Pollution Control District (APCD) staff has reviewed the subject Notice of Intent to Adopt a Mitigated Negative Declaration (MND), which has identified potential environmental impacts for a mixed-use project proposed in the City of Moorpark. The project includes 91 multi-family residential units with 7,038 sq. ft. of ground-floor commercial retail and office space. In addition, a stand-alone 6,618 sq. ft. commercia space in three separate buildings surrounding a village area that will be open to the public and used as a special events venue. The project will also include demolishing the existing buildings and structures on-site. The Project Location is along the south side of High Street, roughly between Walnut Street and Magnolia Street. The Lead Agency for the project is the City of Moorpark.

## GENERAL COMMENTS

*Air Quality Section*

Item 1- Section 3, Page 17. The South Central Coast Air Basin's jurisdiction also includes San Luis Obispo County Air Pollution Control District (SLOAPCD). Please include this in the statement. 1

Item 2- Construction Emissions, Page 21. We'd like to request to edit the first bullet point under recommended construction measure 1 (equipment idling) to clarify it is a state law requirement and idling is limited to five minutes:

"All commercial on-road and off-road diesel vehicles are subject to the idling limits of Title 13, CCR §2485, §2449(d)(3), respectively. Construction equipment shall not idle for more than five (5) consecutive minutes. The idling limit does not apply to: (1) idling when queuing; (2) idling to verify that the vehicle is in safe operating condition; (3) 2

idling for testing, servicing, repairing or diagnostic purposes; (4) idling necessary to accomplish work for which the vehicle was designed (such as operating a crane); (5) idling required to bring the machine system to operating temperature, and (6) idling necessary to ensure safe operation of the vehicle."

2 (cont.)

Item 3- Construction Emissions, Table 3. Although the construction emissions calculated were less than 25 lbs./day for ROC and NOx, using cleaner diesel on-road and off-road equipment (Tier 3 and Tier 4 engines) will reduce the amount of NOx generated as a result of construction operations. Using low-VOC to zero-VOC paint (0-25 g/L ROC) will also further reduce the construction ROC emissions estimation.

3

Item 4- Operational Emissions, Page 23. Typographical error; should say "would not contribute": "Project operational emissions would not exceed VCAPCD thresholds for ROC or NOx; therefore, the project would contribute substantially to an existing or projected air quality violation."

4

Item 5- Item c, Page 24. This section references the VCAPCD *Air Quality Assessment Guidelines* (AQAG, 2003) for carbon monoxide (CO) analyses, specifically that a CO hotspot screening analysis should be conducted when the project's indirect emissions exceed the ozone precursor significance thresholds. The project's indirect emissions are below the 25 lbs./day significance thresholds and therefore a CO hotspots analysis is not needed. The AQAG defines "indirect emissions" as those emission resulting from mobile sources in a residential, commercial and/or institutional land use (AQAG, Section 5.1, Page 5-1). Please use the indirect emissions estimate from Table 4 to conclude the indirect emissions do not exceed the ozone precursor significance thresholds.

5

Item 6- Item c, Page 24. The proposed residential units would be located approximately 70 feet north of the Moorpark Metrolink Station. Although the CARB *Air Quality and Land Use Handbook* (2005) states that the highest air quality impact for locomotives is within 1,000 ft. of a rail yard, the handbook also states that "the highest concentration of diesel particulate matter (DPM) emissions is due to idling locomotives". DPM is a toxic air contaminant that encompasses 70% of the known potential cancer risk from air toxics in California (*Air Quality and Land Use Handbook*). The Moorpark Metrolink Station is used by both Metrolink and Amtrak locomotives, which emit DPM and idle when they pick-up and drop-off passengers. However, as of 2017, Metrolink began using Tier 4 locomotives that service the Moorpark Metrolink Station (article here), which are equipped with the cleanest diesel engine technology. Tier 4 locomotives have an 85% reduction in DPM and NOx emissions. In addition, in 2018, Caltrans funded the Amtrak's Pacific Surfliner trains to also be replaced with Tier 4 engines, which will reduce its locomotive emissions by 90% (article here). Because of these upgrades to the lines running near the proposed project, and due to reasons stated in the MND, exposure of pollutants to sensitive receptors will be less than significant. Although not required for this project, similar projects located near a large emission source (freeway intersections,

6

etc.) incorporated further exposure reduction measures such as locating the air intakes away from the emission source, disabling window opening capability nearest the emission source, and/or installing a vegetative barrier.

6 (cont.)

Thank you for the opportunity to review this project and MND. If you have any questions, please call me at 645-1426 or email me at nicole@vcapcd.org.

# Letter 2

**COMMENTER:** Nicole Collazo, Ventura County Air Pollution Control District

**DATE:** March 11, 2019

## Response 2.1

The commenter requests that Section 3, *Air Quality*, of the Draft IS-MND include the statements that the South Central Coast Air Basin also encompasses the San Luis Obispo County Air Pollution Control District.

To address this request, Section 3, *Air Quality*, has been revised as follows:

> The project site lies within the South Central Coast Air Basin (the Basin), which is under the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD), ~~and~~ the Santa Barbara County Air Pollution Control District (SBCAPCD), and the San Luis Obispo Air Pollution Control District (SLOACPD).

## Response 2.2

The commenter requests that Section 3, *Air Quality*, of the Draft IS-MND be revised to clarify that State law requires that idling of construction vehicles is limited to five minutes.

To address this request, Section 3, *Air Quality*, has been revised as follows:

> Although construction-related impacts would be less than significant because of their temporary nature, the VCAPCD recommends the following measures to minimize construction-related emissions. Implementation of the recommended measures below would also ensure that *Coccidioides immitis* spores are controlled to the maximum extent feasible.
>
> 1. In order to reduce impacts associated with $NO_X$ emissions (a precursor to ozone), the following measures shall be implemented:
>    - ~~Equipment idling time should be minimized.~~
>    - All commercial on-road and off-road diesel vehicles are subject to the idling limits of California Code of Regulations Title 13, Sections 2485 and 2449(d)(3), respectively. Construction equipment shall not idle for more than five consecutive minutes. The idling limit does not apply to: 1) idling when queuing; 2) idling to verify that the vehicle is in safe operating condition; (3), idling for testing, servicing, repairing, or diagnostic purposes; 4) idling necessary to accomplish work for which the vehicle was designed (such as operating a crane); 5) idling required to bring the machine system to operating temperature, and 6) idling necessary to ensure safe operation of the vehicle.
>    - Equipment engines should be maintained in good condition and in proper tune, as per manufacturer's specifications.
>    - During the smog season (May through October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time.

- Alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, should be used if feasible.

## Response 2.3

The commenter states that although project construction emissions of reactive organic compounds (ROC)[1] and nitrogen oxides ($NO_X$) were calculated to be less than 25 pounds per day, additional emission control measures, such as the use of Tier 3 and Tier 4 engines and low-VOC to zero-VOC paint, would further reduce $NO_X$ and ROC emissions.

The use of Tier 3 and Tier 4 engines and low-VOC to zero-VOC paint as suggested by the commenter is not needed to address a significant environmental impact, but could be included as conditions of approval for the proposed project; therefore, this comment will be forwarded to City decision makers for their consideration.

## Response 2.4

The commenter notes a typographical error in Section 3, *Air Quality*, of the Draft IS-MND.

To address this typographical error, Section 3, *Air Quality*, has been revised as follows:

> Project operational emissions would not exceed VCAPCD thresholds for ROC or $NO_X$; therefore, the project would <u>not</u> contribute substantially to an existing or projected air quality violation.

## Response 2.5

The commenter summarizes VCAPCD guidance for evaluating whether a CO hotspot screening analysis is needed. The commenter states that the VCAPCD *Air Quality Assessment Guidelines* (2003) considers indirect emissions to be those generated by mobile sources. The commenter requests that Section 3, *Air Quality*, of the Draft IS-MND be revised to be consistent with this guidance.

To address this request, Section 3, *Air Quality*, has been revised as follows:

> According to the VCAPCD *Ventura County Air Quality Assessment Guidelines* (2003), a CO hotspot screening analysis should be performed for any project with indirect emissions greater than the ozone project significance threshold of 25 pounds per day that may significantly impact roadway intersections that are currently operating at Levels of Service (LOS) E or F. A CO hotspot is a localized concentration of CO that exceeds the federal one-hour standard of 35.0 parts per million (ppm) or the federal and State eight-hour standard of 9.0 ppm (CARB 2016). The proposed project would generate maximum daily <u>indirect</u> CO emissions of ~~35.9~~ <u>24.2</u> pounds per day, which would <u>not</u> exceed the ozone significance threshold <u>of 25 pounds per day</u>. ~~However, the Traffic and Parking Study determined that none of the intersections in the project area currently operate at LOS E or F and that the project would not significantly impact any intersections.~~ Therefore, a CO hotspot screening analysis is not required.

[1] ROCs are also referred to as volatile organic compounds (VOC).

## Response 2.6

The commenter states that the project is proximate to the Moorpark Metrolink Station, which is a source of diesel particulate matter (DPM), which is a toxic air contaminant. The commenter states that, in addition to the analysis contained in Section 3, *Air Quality*, of the Draft IS-MND, the project would have a less than significant impact related to the exposure of sensitive receptors to substantial concentrations of pollutants because Metrolink and Amtrak's Pacific Surfliner locomotives are or will be equipped with Tier 4 engines, which reduce DPM and $NO_X$ emissions by at least 85 percent. The commenter states that although it would not be required for the proposed project, similar projects located near large emission source have incorporated exposure reduction measures, such as locating air intakes away from the emission source, disabling window opening capability near the emission source, and/or installing a vegetative barrier.

The use of exposure reduction measures as suggested by the commenter is not needed to address a significant environmental impact under CEQA, but could be included as a condition of approval for the proposed project; therefore, this comment will be forwarded to City decision makers for their consideration.

**VENTURA COUNTY WATERSHED PROTECTION DISTRICT**
WATERSHED PLANNING AND PERMITS DIVISION
800 South Victoria Avenue, Ventura, California 93009
Sergio Vargas, Deputy Director – (805) 650-4077

**M E M O R A N D U M**

DATE: March 12, 2019

TO: Joseph Fiss, Community Development Department
City of Moorpark

FROM: Nathaniel Summerville, Engineer III-Advanced Planning Section

SUBJECT: MND High Street Station
APN(s): 5120090115
Zone 3
Watershed Protection District Project Number: WC2019-0017
INCOMPLETE

Pursuant to your request dated February 19, 2019, this office has reviewed the submitted materials and provides the following comments.

**PROJECT LOCATION:**

Along the south side of High Street, roughly in between Walnut Street and Magnolia Street, Moorpark, CA

**PROJECT DESCRIPTION:**

The project would be located on a 2.15-acre site along the south side of High Street, roughly in between Walnut Street and Magnolia Street, in the City of Moorpark in Ventura County, CA. The project involves a mixed-use development consisting of 91 multi-family residential units (including 18 studios, 26 one-bedroom units, 39 two-bedroom units and 8 three-bedroom units) and 13,656 sf of commercial development. The residential units would be constructed within four individual buildings, each with a maximum of three floors. The proposed project includes approximately 7,038 sf of ground-floor commercial retail and office space in the four residential buildings. In addition, the project includes 6,618 sf of standalone commercial space in three separate buildings surrounding an outdoor village green that would be open to the public and used as a special event venue. Project design and architectural features would be consistent with the design guidelines contained in the Moorpark Downtown Specific Plan. The project includes 139 on-site parking spaces in addition to off-site parking spaces. The proposed project would also demolish the existing non-operational commercial and industrial buildings on-site. The site currently contains 17 mature trees that include palm, cypress, ash, and pepper trees. Some of the mature trees on-site would be removed over the course of construction activities, but the project would preserve the existing pepper trees along High Street (Ventura County Landmark #72), and the existing large ash trees along the southern

portion of the property. On-site grading in the form of removal and recompaction would occur across the entire site along with geologic hazard remediation. Construction is estimated to begin in 2019 and is estimated to take approximately one year to complete.

**APPLICATION COMPLETENESS:**

**INCOMPLETE -** from our area of concern.

**WATERSHED PROTECTION DISTRICT COMMENTS:**

The proposed project will convert approximately 2.15 acres of light residential development into a mixed-use development of higher density. This planned development would result in a significant increase of impervious area within the subject property. The initial study indicated that MS4 regulations would be met but did not specify the specific stormwater measured that would be applied. No mitigation measures were indicated in the documents provided for review that would address the proposed increase in peak storm runoff due to increases in impervious area. This will result in impacts to Moorpark Storm Drain No.1 and Walnut Canyon, which are District jurisdictional redline channels with limited capacity. The project proponent is hereby informed that it is the District's standard that a project cannot impair, divert, impede, or alter the characteristics of the flow of water running in any District jurisdictional redline channel. 1

Please be aware Walnut Canyon has been identified as having limited flood carrying capacity and no increases in flow will be allowed. Furthermore, Walnut Canyon is aging and slowly deteriorating. Please reference the "Gabbert & Walnut Canyon Channels Flood Control Deficiency Study" prepared in 1997, updated in 2005, and adopted by the City of Moorpark, which identifies needed improvements to update the aging flood control infrastructure in the Gabbert/Walnut watershed. The deficiency study also identifies more stringent detention requirements for future development and requires post-development peak flowrates to be mitigated to at or below 90% of the pre-development flow. The Project must provide adequate mitigation measures to comply with this mitigation standard. 2

Project findings should verify compliance with the Ventura County Watershed Protection District hydrology data and the 2017 Hydrology Manual and follow the Watershed Protection District "Guide for Hydrology and Hydraulic Study Report" found at the following website:
http://onestop.vcpublicworks.org/watershed-protection-district-guidelines-standards 3

Please submit a complete Drainage Report that, at a minimum, includes the following items:

- Sign and Seal from Licensed Engineer
- Figures/Hydrology Maps
- Hydrologic and Hydraulic Calculations
- Stormwater Calculations
- Mitigation Measures

4

- Offsite Flows
- Hydrology Maps
- Stormwater Quality Treatment Devices
- FEMA Maps
- Storm Drainage Plan (showing outlets and complete storm drain network)

4 (cont.)

**WATERSHED PROTECTION DISTRICT CONDITIONS:**

1. Prior to approval of zone clearance for use inauguration, the applicant shall work with the City and District to determine the required contribution towards regional infrastructure consistent with regional infrastructure improvements as identified in the Gabbert/Walnut Canyon Channel Deficiency Study updated in 2005, adopted by the City of Moorpark, and District requirements.

2. The proposed development shall incorporate mitigation measures to address cumulative impacts due to the proposed increase in imperviousness. Project shall mitigate post-development peak flowrates to at or below 90% of the pre-development flow for each frequency of storm event consistent with Ventura County Watershed Protection District policy and WP-2 Ordinance or, alternatively apply the city standard whichever is most strict shall apply.

5

**END OF TEXT**

# Letter 3

**COMMENTER:** Nathaniel Summerville, Engineer III-Advanced Planning Section, Ventura County Watershed Protection District

**DATE:** March 12, 2019

## Response 3.1

The commenter states that the Draft IS-MND did not state the specific stormwater measures that the proposed project would implement to meet the requirements of the MS4 permit and did not impose mitigation measures to address the proposed increase in peak stormwater runoff that would occur due to the increase in impervious area on the project site. The commenter states that the proposed project would impact Moorpark Storm Drain No.1 and Walnut Canyon, which are jurisdictional redline channels with limited capacity. The commenter states that the Ventura County Watershed Protection District's (VCWPD) standard is that a project cannot impair, divert, impede, or alter the characteristics of the flow of water running in any VCWPD jurisdictional redline channel.

Item 9, *Description of Project*, has been revised as follows to include additional information on the specific stormwater measures proposed by the project:

### Stormwater Control Measures

Storm drain inlets will be integrated into parking areas and new Low Impact Development (LID) Best Management Practices (BMPs) would be integrated into the building, landscaping, streetscape, and parking lot areas. Storm drain inlets would be collected by a new on-site storm drain system, which would discharge into the existing storm drain within High Street and ultimately drain to Moorpark Storm Drain No. 1. As described in the Preliminary Hydrologic and Hydraulic/Stormwater Quality Report (Hydrology Report), site-specific LID BMPs would be integrated into the project in compliance with the 2011 Ventura County Technical Guidance Manual (2011 TGM) (Appendix B). The design of grading and drainage plans for the proposed project were based on the following hydrologic and water quality impact reduction strategies:

- **Site Planning**: The project has been designed in a manner that would effectively disconnect impervious surfaces such that five percent Effective Impervious Area is achieved;
- **Protect and Restore Natural Areas**: Natural areas were proposed to the maximum extent feasible by the inclusion of a pervious village green and pervious paving/landscaping within the streetscape;
- **Source Control Measures**: Storm drain signage would be added to all drain inlets along with the design of outdoor trash storage areas in compliance with MMC standards;
- **Treatment Control BMPs**: Stormwater treatment would be divided into three areas, including the treatment of roof areas, treatment of parking/drive-aisle areas, and treatment of street frontage areas. The treatment of building roof runoff would be accomplished through the inclusion of flow-through planter boxes adjacent to proposed buildings. The planter boxes will be sized to treat the full stormwater quality design volume specified in the 2011 TGM. The treatment of parking/drive-aisle runoff would be accomplished through the inclusion of bio-retention areas with underdrains and pervious paving within the southern portion of the site. The treatment of street frontage areas would be accomplished by integrating a biofiltration basin into the proposed pedestrian "bulb-out" near the intersection of High Street and Bard

Street and by integrating "StormTreat" linear stormwater filtration devices into the proposed High Street streetscape landscaping plans.

- **Flood Control Detention**: The project would reduce the post-development flow rate by 0.92 cubic feet per second (cfs) by including 175 feet of oversized 48-inch drain pipe in the western drainage area and 65 feet of 36-inch pipe within the eastern drainage area.

Section 10, *Hydrology and Water Quality*, has been revised as follows to address the proposed increase in peak stormwater runoff and project impacts to Moorpark Storm Drain No. 1 and Walnut Canyon. No mitigation measures are necessary because the project would reduce post-development peak flow rates to at or below 90 percent of pre-development flow through implementation of stormwater control measures:

> A Hydrology Report was completed for the project site by CCE Design Associates, Inc. in June 2019 and is included in full as Appendix B. The purpose of the report was to validate the grading and drainage design for the proposed project. Overall, drainage patterns on the project site will remain largely unchanged. However, as described under *Project Description*, storm drain inlets will be integrated into parking areas, and new LID BMPs would be integrated into the building, landscaping, streetscape, and parking lot areas. Storm drain inlets would be collected by a new on-site storm drain system, which would discharge into the existing storm drain within High Street and ultimately drain to Moorpark Storm Drain No. 1.
>
> The project would be subject to the requirements of a Ventura County Municipal Separate Storm Sewer Systems (MS4) permit, which requires the use of site specific BMPs. As described under *Project Description*, site-specific LID BMPs would be integrated into the project in compliance with the 2011 TGM. These measures include site planning to achieve five percent Effective Impervious Area, use of pervious paving/landscaping, and installation of storm drain signage. Furthermore, treatment control BMPs such as planter boxes, bio-retention areas, biofiltration basins, and "StormTreat" linear stormwater filtration devices would be installed to treat runoff from roof areas, parking/drive-aisle areas, and street frontage areas would be installed.
>
> Per the findings within the Gabbert & Walnut Canyon Channels Flood Control Deficiency Study (County of Ventura 2005), the Ventura County Watershed Protection District has established an allowable peak discharge flow rate of 90 percent or less of the pre-development flow rate. The "pre-development" flow rate for the project site is 4.62 cfs using the 100-year peak event runoff flow rate. Therefore, an acceptable peak discharge flow rate for the project is 4.16 cfs (0.90 * 4.62 cfs). The maximum "post-development" flow rate for the developed project site would be 5.08 cfs. However, the project would reduce the post-development flow rate by 0.92 cfs by including 175 feet of oversized 48-inch drain pipe in the western drainage area and 65 feet of 36-inch pipe within the eastern drainage area (Appendix B). These drain pipes would detain and accumulate stormwater runoff, then release runoff at various metered rates that meet City and County criteria for detained flow release depending on the size of the storm event.
>
> Therefore, operation of the project would not be expected to violate any water quality standards or waste discharge requirements. The project would have less than significant impacts with respect to water quality standards and discharge requirements.

## Response 3.2

The commenter states that Walnut Canyon has limited flood carrying capacity and that no increases in flow would be allowed. The commenter states that Walnut Canyon is aging and deteriorating and references the "Gabbert & Walnut Canyon Channels Flood Control Deficiency Study" (2005), which requires that post-development peak flow rates be mitigated to at or below 90 percent of pre-development flow. The commenter states that the IS-MND should include mitigation measures to comply with this requirement.

See Response 3.1. Section 10, *Hydrology and Water Quality*, has been revised to address impacts to Walnut Canyon and to demonstrate compliance with VCWPD requirements. No mitigation measures are necessary because the project would reduce post-development peak flow rates to at or below 90 percent of pre-development flow through implementation of stormwater control measures.

## Response 3.3

The commenter states that the findings of the IS-MND should comply with the VCWPD hydrology data and the 2017 Hydrology Manual and follow the VCWPD "Guide for Hydrology and Hydraulic Study Report."

A Preliminary Hydrologic and Hydraulic/Stormwater Quality Report has been prepared in support of the analysis in Section 10, *Hydrology/Water Quality*, and is included in full as Appendix B.

## Response 3.4

The commenter requests that the project applicant submit a complete Drainage Report.

A Preliminary Hydrologic and Hydraulic/Stormwater Quality Report has been prepared in support of the analysis in Section 10, *Hydrology/Water Quality*, and is included in full as Appendix B.

## Response 3.5

The commenter states the following conditions that will be required by VCWPD for the proposed project:

1. The applicant shall work with the City of Moorpark and the VCWPD to determine that required contribution towards regional infrastructure improvements as identified in the "Gabbert/Walnut Canyon Channel Deficiency Study" (2005) and VCWPD requirements.
2. The project shall mitigation post-development peak flow rates to at or below 90 percent of the pre-development flow for each frequency of storm event.

This comment is noted. As discussed under Response 3.2, the project would reduce post-development peak flow rates to at or below 90 percent of pre-development flow through implementation of stormwater control measures.

# Letter 4

**County of Ventura**
PUBLIC WORKS AGENCY
TRANSPORTATION DEPARTMENT
Traffic, Advance Planning & Permits Division
**MEMORANDUM**

**DATE:** 3/11/2019

**TO:** RMA Planning Division
Attention: Anthony Ciuffetelli

**FROM:** Anitha Balan, Engineering Manager II

**SUBJECT:** **REVIEW OF DOCUMENT 19-003** Initial Study - MND
Project: **High Street Station Mixed Use Development**
Lead Agency: **City of Moorpark**
The High Street Station Mixed Use Development (proposed project) involves development of 91 multi-family residential units, 13,656 sf of commercial development, and associated surface parking spaces. The project site is approximately 2.15 acres.
APN# 5120090115

Pursuant to your request, the Public Works Agency - Transportation Department has reviewed the Initial Study - MND for the High Street Station Mixed Use Development.

The High Street Station Mixed Use Development (proposed project) involves development of 91 multi-family residential units,approximately 69,834 gross sf., 13,656 sf of commercial development, and associated surface parking spaces. The project site is approximately 2.15 acres and is within the Moorpark Downtown Specific Plan Area.

Commercial/retail space includes 6,618 sf would be standalone commercial space in three separate buildings, a brewery, winery or similar use to occupy the 3,824-sf; a restaurant to occupy the 1,386-sf; and a coffee or ice-cream shop to occupy 1,408-sf . In addition, the proposed project includes approximately 7,038 sf of commercial space for retail and office uses.

An outdoor village green is proposed in the central portion of the site, south of the High Street/Bard Street intersection. The village green would be open to the public and would be used daily by on-site residents and patrons of the commercial uses. The space is also programmed for use by the City as a special event venue. Streetscape landscaping is proposed along the project frontage and additional areas of landscaping are proposed in the western portion of the site near the intersection of High Street and Walnut Street, around each building, and along the southern boundary of the property.

We offer the following comment(s):

1. PWATD strongly recommends the City of Moorpark to have the Traffic Study revised with accurate land use codes, correct calculation methods, and properly evaluate the impact the project will have on the City of Moorpark's roadways and County of Ventura's Regional Road Networks.

   The methodology used in the Traffic Study (TS) produced by Associated Transportation Engineers (ATE) to calculate the Average Daily Trips (ADT) and Peak Hour Trips (PHT) are not in conformance with the Institute of Transportation Engineers (ITE) Trip Generation Manual and Handbook. The land use codes used in the TS and the method of calculating the ADT and PHT are not consistent with the process described in the ITE Manual. The TS should properly follow the ITE Trip Generation Handbook especial chapter 4 and 9, and figure 4.2 when establishing the trip generation of the project.

   Apartments:
   The ADT and PHT for apartments in accordance with the ITE manual, should be calculated using the Fitted Curve Equation. The use of fitted curve will produce different values than what is used in the TS.

   Brewery/Winery:
   TS used land use code High Turnover Restaurant (932) for the Brewery/Winery. The ITE Manual has a Winery as a land use code 970, which has different ADT and PHT. Since the Winery land use has a small sample size, and the standard deviation is greater than 55% of the average rate, the TS should collect local traffic count data to produce an accurate ADT and PHT for the proposed Winery or Brewery. The traffic counts must be collect in a way to account for the higher counts on Friday, Saturday, and Sunday for Wineries/Breweries. Per the ITE Manual (low sample size) the Saturday and Sunday average count is four times greater than a weekday count. 1

   Coffee or Ice Cream Shop:
   In Environmental Checklist chapter 3, Air Quality, Table 2 it has the Coffee or Ice Cream Shop as a "Fast Food without Drive-Thru". The TS used the land use code for High Turnover Restaurant (932). A better match of land use would be a Coffee/Donut Shop without Drive-Thru Window (936). For example, the AM PHT that in the TS is 14 PHT with Land use code 932. Using the better match of land use code 936, the AM PHT would be 142 PHT, a significantly higher number and 2 times higher than the total project's AM PHT stated in the TS. The TS should evaluate and mitigate these impacts.

   Other Restaurant (1,386-sf commercial building):
   The TS correctly used the land use code for High Turnover Restaurant ( 932) commercial use, however the TS used the average rate when calculating the ADT

and PHT. The standard deviation for sample size is too high for the data collected in the ITE Manual. In accordance with the ITE manual, to evaluate the ADT and PHT, the engineer should be collecting local data to accurately establish these values.

Office/Retail (Commercial Space)
The project specifies that the intended uses for these units are for retail and office. PWATD recommends the applicant define which units will be used as office and which units will be used for retail. The trip generation for retail and office space is significantly different. For example 7,038 sf of shopping center will generate 989 ADT using the fitted curve, while 7,038 sf of general office space will generate 81 ADT. The TS should be revised to accurately calculate the ADT and PHT based on office space or retail use.

1 (cont.)

Village Green:
There is no mention of trips being generated by this usage in the TS. The project description states that the space would be open to the public and as a venue for special events. The TS should be revised to include the trips generated by the Village Green including the number and size of the events.

2. The cumulative impacts of the development of this project, when considered with the cumulative impact of all other approved (or anticipated) development projects in the County, will be potentially significant. To address the cumulative adverse impacts of traffic on the County of Ventura Regional Road Network, the appropriate Traffic Impact Mitigation Fee (TIMF) should be paid to the County when the development occurs. The TIMF may be adjusted for inflation at the time of deposit in accordance with the latest version of the Engineering News Record Construction Cost Index.

Based on the information provided in the Initial Study - Mitigated Negative Declaration for the High Street Station Mixed Use Development and the reciprocal agreement between the City of Moorpark and the County of Ventura, the reciprocal fee due to the County of Ventura is:

2

1,703 ADT x $20.85/ADT = $35,507.55

The above is an estimate based on information provided in the Initial Study - Mitigated Negative Declaration for the High Street Station Mixed Use Development Project. PWATD strongly recommends the City of Moorpark have the TS revised to accurately re-calculate the trip generation and evaluate that traffic impacts as stated in the traffic study. The TIMF due will be based on the revised traffic study.

Our review is limited to the impacts this project may have on the County's Regional Road Network.

# Letter 4

**COMMENTER:** Anitha Balan, Engineering Manager II, County of Ventura Public Works Agency Transportation Department

**DATE:** March 11, 2019

## Response 4.1

The commenter states that the methodology used in the Traffic and Circulation Study (Appendix C of the Draft IS-MND) is not in conformance with the Institute of Transportation Engineers (ITE) Trip Generation Manual and Handbook due to the methodology and land use types selected to estimate Average Daily Trips (ADT) and Peak Hour Trips (PHT). The commenter states that the Average Daily Trips and Peak Hour Trips for the proposed apartments should be calculated using the Fitted Curve Equation. The commenter states that the Traffic and Circulation Study should collect local traffic count data to calculate ADT and PHT for the proposed brewery/winery and restaurant. The commenter states that the Traffic and Circulation Study should use the Coffee/Donut Shop without Drive-Thru Window land use for the proposed coffee/ice cream shop. The commenter states that the Traffic and Circulation Study should specify how much of the proposed commercial space would be allocated to retail and office uses. The commenter states that the Traffic and Circulation Study should include trips generated by special events held on the proposed village green.

Using the Institute of Transportation Engineers (ITE) Trip Generation Manual and Handbook to estimate trips associated with the proposed apartments, brewery/winery, and restaurant is consistent with the City of Moorpark's, "Guidelines for Preparing Traffic and Circulation Studies."

The amount of square footage that would be associated with a restaurant and a coffee or ice cream shop were combined because it has been shown that coffee/donut shop square footage trip generation rates yield widely varied results from actual count data.[2] Also, the analysis is conservative because some restaurant users are expected to walk to the coffee or ice cream shop before and/or after attending the restaurant and consequently, resulting in less generation of trips.

The amount of retail and office use that would be included in the commercial space would be determined as the spaces are rented out. Therefore, the traffic analysis calculates the amount of trips that would occur if the entire ground floor was used as retail space, which is a conservative estimate because retail uses generate a higher amount of trips compared to office uses.

The type of special events and when these events would occur on or around the village green is unknown. These events would be based on the needs/preference of the community and consequently, would change over time. Therefore, any estimates regarding events and future community needs would be speculative. Future special events would require the issuance of a Temporary Use Permit, which would regulate and minimize potential traffic impacts associated with special events.

## Response 4.2

The commenter states that the project would have a cumulatively considerable contribution to the cumulative traffic impact on the County of Ventura Regional Road Network, which is consistent with

[2] https://www.cedengineering.com/userfiles/Trip%20Generation%20Study%20of%20Coffee%20Shops.pdf

the findings of Section 17, *Transportation*. The commenter states that the project applicant would be required to pay a Traffic Impact Mitigation Fee to the County of Ventura to address this impact, which would be due at the time development occurs.

As discussed in Section 17, *Transportation,* the project would be subject to paying the Citywide Traffic Mitigation Fee and would be required to pay an Area of Contribution (AOC) Fee. Therefore, the commenter is correct in stating that the project applicant would be required to pay the Traffic Impact Mitigation Fee to the County of Ventura.

# Letter 5

Resource Management Agency

ENVIRONMENTAL HEALTH DIVISION

**MEMORANDUM**

**DATE:** March 11, 2019

**TO:** Joseph Fiss, Community Development Department, City of Moorpark

**FROM:** Rebecca Lustig, Ventura County Environmental Health Division

**SUBJECT:** **RMA Ref# 18-004; High Street Station Mixed Use Development; RPD2018-0 and ZC2018-01; APN 512-0-090-115**

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Environmental Health Division (Division) staff reviewed the information submitted for this project.

Proposed project includes the construction and operation of commercial food facilities, including a restaurant, ice cream or coffee shop, and brewery or winery. Food facilities are subject to plan review and permitting by this Division. The applicant/food facility operator must submit three sets of plans to the Ventura County Environmental Health Division, Community Services Section and obtain plan approval prior to beginning any construction of the food facility. A Permit to Operate is required prior to beginning any retail food operations.

If you have any questions, please contact Rebecca Lustig at (805) 654-2830 or Rebecca.Lustig@ventura.org.

# Letter 5

**COMMENTER:** Rebecca Lustig, Ventura County Environmental Health Division

**DATE:** March 11, 2019

The commenter states that the food facilities proposed by the project would be subject to plan review and permitting by the Ventura County Environmental Health Division prior to beginning construction of the food facilities. The commenter states that a Permit to Operate would be required prior to beginning retail food operations.

The commenter is correct in stating that the proposed project would be subject to these requirements of the Ventura County Environmental Health Division. This permit requirement does not relate to an environmental impact under CEQA and all required permits for food facilities would be obtained prior to issuance of a certificate of occupancy.

**Letter 6**

April 12, 2019

**Advocates for the Environment**

A non-profit public-interest law firm
and environmental advocacy organization

Daly Group Inc.
31255 Cedar Valley Drive, Suite 323
Westlake Village, CA 91362

re: Moorpark High Street Station Mixed Use Development

Dear Daly Group:

I reviewed the Mitigated Negative Declaration for the High Street Station Mixed Use Development (the **MND**) on behalf of our client, the Committee to Preserve Historic High Street. I write to point out a few ways the Project is inconsistent with the relevant legal requirements.

The MND anticipates that, in connection with its approval of the Project, the City of Moorpark will enact a change to the zoning regulations for the C-OT zoning, to allow mixed-use developments. The MND doesn't state exactly how the C-OT zoning will be changed, and doesn't analyze any potential environmental impacts of the zone change, other than the construction of the Project. The lack of information in the MND concerning the most significant and far-reaching Project entitlement makes the MND's description of the Project inadequate; it violates CEQA. And the zone change would presumably open up the C-OT zone to other mixed-use development, which may have significant impacts that should be analyzed in the MND. 1

The Downtown Specific Plan (**SP** or **Specific Plan**) requirements for Mixed Use Developments in areas designated Old Town Commercial (SP § 2.2.5 5) require the entire ground floor to be used exclusively for retail and other commercial uses. "The intent of allowing for mixed use projects in the Old Town Commercial District is to provide continuous frontage of retail shops and commercial business establishments at the street level.... No dwelling shall be permitted to be located in whole or in part on the ground floor or street level." The Project violates this SP provision by allowing 18 residential studios on the ground floor of the Project. (MND p. 4.) 2

SP 2.2.5 5.d requires all parking spaces needed for the residential use to be provided on-site and for the exclusive use of the residents. Thus, parking spaces for the residential uses cannot be "shared." Table 11 on page 19 of the Traffic and Circulation Study attached as Appendix C to the MND, shows that 201 parking spaces are 3

required by the Moorpark Municipal Code (MMC) for the Project's residential uses, and 45 spaces are required for the commercial uses. SP 2.2.5 5.d therefore requires that all 201 residential parking spaces be provided on-site (in additional to some of the spaces for the commercial uses). But the MND states that that only 139 parking spaces will be provided on-site, a violation of the Specific Plan. 3 (cont.)

The MND's Cultural Resources section does not disclose whether any of the Native American tribes who requested notice of projects proposed within the City of Moorpark requested to enter into consultation when they were informed about this project. That information should have been included in the MND. 4

Mitigation measure TCR-1 requires that consultation with Native American tribes will begin if resources of Native American origin are discovered during project construction, but that measure is inconsistent with Public Resources Code § 21080.3.1, which governs Native American consultation, and which does not provide for consultation during grading. The record also contains no substantial evidence showing that MM TCR-1 will, via the consultation process, reduce any impacts on Native American cultural resources to a level where they are not significant. 5

The MND's decision to use the latest, informal and unadopted SCAQMD GHG CEQA Guidance to set the GHG significance threshold for this Project is not supported by any analysis or evidence. The MND just assumes that it is applicable and appropriate. CEQA requires that an agency's choice of significance threshold be supported with substantial evidence in the record. 6

There is no reason that Phase II sampling for soil and soil-gas contamination cannot be done now, and the results incorporated in the MND. Mitigation Measure HAZ-1 is improperly deferred because it is feasible to do the sampling now, instead of waiting until just before the start of grading. Doing the Phase II sampling now would allow a better MND analysis of soil contamination. Railroad corridors are often contaminated with a variety of toxic chemicals. (See, e.g. https://www.railstotrails.org/build-trails/trail-building-toolbox/acquisition/environmental-contaminants/.) So there is ample reason to be concerned that Hazardous Materials impacts—stirring up contaminated dust during grading—may occur 7

There is also reason to be concerned about noise from the Project. The MND fails to analyze the impact on High Street of replacing the existing buildings, which provide a barrier between High Street and the Metro rail tracks, with the Project buildings, which may provide a lower level of noise screening. 8

The MND states that the ambient noise on High Street is now 69 dBa, 4 db above the City's exterior daytime noise standard of 65 dBa. The Project will add noise, through HVAC, 9

additional traffic, and noise generated by residents and customers of the retail establishments. For a cumulative impact where the standards are already exceeded, any increase will be cumulatively considerable, and thus significant, under CEQA. The MND should have mitigated types of operational noise other than just the HVAC noise.

9 (cont.)

Our clients object to the Project primarily because (1) it contains too many residential units for the site; (2) the ground floor is not exclusively commercial, as required under the Specific Plan; (3) it doesn't provide sufficient parking for the uses envisioned, and will therefore reduce the available parking for businesses in the area; and (4) it will result in more train noise and noise from the Project on High Street. Our clients would like to negotiate a reduction in scope for the Project with you. If you fail to appropriately modify the Project before the City issues entitlements, they may take action to challenge the entitlements in court.

10

Sincerely,

Dean Wallraff, Attorney at Law

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# Letter 6

**COMMENTER:** Dean Wallraff, Attorney at Law, Advocates for the Environment

**DATE:** April 12, 2019

## Response 6.1

The commenter states that the Draft IS-MND does not state how the C-OT zoning regulations would be changed and does not analyze the potential environmental impacts of the zone change other than the proposed project. The commenter states that the project description is therefore inadequate. The commenter also states that the proposed zoning regulations change would allow other mixed-use development in the C-OT zone, which may have significant impacts that should be analyzed in the IS-MND.

The City of Moorpark has determined that the proposed project will include the adoption of a "Mixed-Use" (MU) overlay district to allow the proposed mixed-use development within the underlying C-OT zoning district. This overlay zone would be added on top of the existing commercial zone and would preserve the underlying intent and set of allowable uses of the C-OT zone and would add allowable residential uses as part of a mixed-use project. The MU Overlay would contain applicable mixed-use development standards that would supersede the development standards of the underlying commercial zone but would only be applicable to mixed-use projects. The proposed zoning district overlay is proposed to only be applied to the project parcels and therefore no additional impacts from development beyond those already analyzed in the IS-MND would occur.

## Response 6.2

The commenter states that the proposed project violates Section 2.2.5.5 of the Downtown Specific Plan, which requires that the entire ground floor of mixed use development be used exclusively for retail and other commercial uses, because the project would allow 18 residential studios on the ground level of the project.

The project proposes to include 18 "live-work" units on the ground floor along with 13,656 square feet of commercial uses on the ground floor and in three stand-alone commercial buildings. This proposed mix of live-work and commercial uses at the ground level of the project is consistent with the Downtown Specific Plan's SP-D land use designation for the project site, which states that the purpose of this Specific Plan land use designation is to increase the attraction level of the core area and create jobs for community residents. It is also consistent with the goals and core vision of the DTSP, which included a mixed-use analysis finding that "mixed use is appropriate in the Old Town Commercial Zone along the High Street Corridor. Furthermore, DTSP Section 1.4.7 (Table 3) determined that mixed-use development would be appropriate in the Commercial Old Town zone along the High Street corridor and that "increasing residential and office activities in downtown can foster a healthy, diverse environment."

Economic realities also support the City's decision to consider residential uses within the C-OT zone via the proposed project. The City commissioned a review of the commercial market in Moorpark and according to the analysis prepared by Keyser Marston Associates dated August 26, 2016, Moorpark has excess commercial tenant space resulting in high vacancy rates. Leakage of retail spending to neighboring cities and the trending rise of on-line purchasing continue to contribute to the softening of the commercial/retail marking in Moorpark. Allowing mixed-use development

within downtown Moorpark and the C-OT zone in proximity to public transit would provide a built-in customer base to help support the existing nearby local businesses.

The proposed mixed-use project would be consistent with current state and regional initiatives to place high-density residential uses near services and transit. Transit Oriented Development (TOD), Priority Development Areas, and other similar designations are intended to focus residential development near public transportation in order to reduce traffic congestion and help achieve greenhouse gas emission targets. Allowing mixed-use development within downtown Moorpark and the C-OT zone in proximity to public transit would create compact, walkable, pedestrian-oriented development centered upon high quality public transportation.

The proposed mixed-use project would help the City of Moorpark address the critical need for housing as described in the City's 2014-2021 Housing Element. The City's regional housing needs allocation (RHNA) required the development of 1,164 housing units spread across various affordability levels. As of 2018, the City saw only 579 units built with 641 units still remaining to meet the RHNA. The City will receive its RHNA for the next cycle (2021-2029) and is expecting a significant allocation in addition to the units still to be constructed within the current cycle. Therefore, the proposed MU overlay district will allow the construction of new housing units in fulfillment of the City's requirements.

## Response 6.3

The commenter states that the proposed project does not include the required number of residential parking spaces on-site per Section 2.2.5.5 of the Downtown Specific Plan.

As discussed in the Traffic and Circulation Study (Appendix C of the Draft IS-MND), Section 17.32.020 of the Moorpark Municipal Code states that parking in the High Street area (High Street from Moorpark Avenue to Spring Road) must meet 50 percent of the parking requirements. In consideration for providing fewer parking spaces than required, a percentage of the parking spaces provided must be open to and available to the general public at all times. Furthermore, in lieu of meeting the required parking, the project applicant may pay a fee to reduce the required on-site parking by an additional 10 to 40 percent of the required parking. The project is required to provide 246 parking spaces on-site. However, the project proposes to provide 56 percent of the on-site parking spaces required (139 on-site parking spaces) and will designate 75% of this on-site parking as shared parking open to the public. This is consistent with the City's High Street parking reduction program. The project has also completed a shared parking study (Nelson/Nygaard, 2019), which identified 226 additional unused parking spaces available for use within a ½ mile radius of the project site. Approximately 106 spaces are available the Metrolink Station's south lot; 89 spaces are available within 1,000 ft. walk along High Street ,Walnut Street, and Bard Street; and 31 spaces within the auxiliary Metrolink parking lot located east of the project site. These available additional parking spaces sufficiently support the anticipated overall parking demands of the project site.

## Response 6.4

The commenter states that the Draft IS-MND does not disclose whether any of the Native American tribes requested consultation with the City of Moorpark regarding the proposed project.

The Barbareno/Venureno Band of Mission Indians has requested consultation with the City. The following language has been added to Section 18, *Tribal Cultural Resources:*

> The City of Moorpark received a request for consultation from one Tribe, the Barbareno/Venureno Band of Mission Indians. *During this consultant, they requested that a Native American monitor be present during excavation and grading activities. See Mitigation Measure TCR-XX.*

## Response 6.5

The commenter states that Mitigation Measure TCR-1 is inconsistent with Public Resources Code (PRC) Section 21080.3.1 because PRC Section 21080.3.1 does not provide for Native American consultation during grading. The commenter states that there is not substantial evidence that Mitigation Measure TCR-1 would reduce any impacts on tribal cultural resources to a less than significant level.

PRC Section 21080.3.1 outlines the requirements for a lead agency to conduct consultation with California Native American tribes prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report, pursuant to AB 52. Therefore, Mitigation Measure TCR-1 is not intended to demonstrate compliance with PRC Section 21080.3.1 but rather to provide a course of action for mitigating impacts to tribal cultural resources that may be encountered during project construction. Nonetheless, the project will involve a tribal monitor during the grading period as required by Mitigation Measure TCR-XX.

## Response 6.6

The commenter states that Section 8, *Greenhouse Gas Emissions*, of the Draft IS-MND does not provide substantial evidence as to why the City of Moorpark chose to use the South Coast Air Quality Management District (SCAAQMD) greenhouse gas (GHG) emissions significance threshold of 3,000 MT of $CO_2e$ per year.

Because the project would be constructed post-2020, the threshold discussion in Section 8, *Greenhouse Gas Emissions*, has been revised to include a threshold consistent with the State's 2030 target of a 40 percent reduction in 1990 levels.

## Response 6.7

The commenter states that Mitigation Measures HAZ-1 is deferred mitigation because it is feasible to perform soil and soil-gas contamination sampling now rather than prior to the start of grading. The commenter states that concerns that contaminated dust would be stirred up during grading of the project site.

The applicant does not currently own the project site so is unable to perform sampling at this time. As stated in Section 9 *Hazards and Hazardous Materials,* there are no Recognized Environmental Conditions (RECs) in connection with the project site. However, testing will be done by the project applicant upon obtaining title to the property and prior to excavation and grading because two potential RECs were identified on adjacent properties, including (1) existing railroad tracks adjacent to south of the site, and (2) the presence of a former gasoline service station located adjacent to the western property boundary. If the investigations indicate that soil exceeds regulatory action levels, then the soil shall be remediated to local agency standards through soil removal and disposal efforts.

Mitigation Measure HAZ-1 has been revised as follows to specify the timing requirements of this mitigation measure:

### Mitigation Measure

*HAZ-1 Soil Sampling and Soil Vapor Assessment*

Within 30 days of the project applicant acquiring the project site from the City of Moorpark and prior to issuance of a grading permit, a shallow soil sampling assessment shall be conducted on the southern portion of the site as close to the railroad tracks as possible, but not within the railroad right-of-way (i.e., within 30 feet of the railroad tracks), to evaluate the adjacent railroad tracks and determine if hydrocarbons, metals, herbicides, and semi volatile organic compounds from the railroad activities are present in the shallow soil near the railroad tracks.

## Response 6.8

The commenter states that the Draft IS-MND does not adequately analyze whether the proposed buildings would provide a lower level of screening from railroad noise than the existing buildings.

Section 13, *Noise*, of the Draft IS-MND addresses railway noise impacts related to the demolition and construction of buildings on the project site. The five existing structures on the project site provide some attenuation of railway noise because they block the line of sight between the railway and adjacent commercial development across High Street. A single row of intervening structures between a noise source and a receptor provides an approximately 5 dBA reduction in noise levels (FTA 2018). The proposed project would construct a new row of structures that would break the line of sight between the railway and the adjacent commercial properties, thereby reducing railway noise by at least 5 dBA (FTA 2018). In addition, most of the buildings constructed as part of the proposed project would be approximately three stories in height, which would be taller than existing development. The increase in building height would serve to further attenuate railway noise along High Street because increased barrier height decreases noise transmission (FTA 2018). Furthermore, the proposed project would be constructed of materials such as metal, wood, and brick, which would be of similar or greater thickness than the materials from which the existing buildings are constructed (i.e., wood and metal). Denser wall materials provide greater noise attenuation (Federal Highway Administration 1974).[3] For these reasons, the proposed project would provide a higher level of screening from railroad noise than the existing buildings.

## Response 6.9

The commenter states that ambient noise on High Street is 4 dB above the City's exterior daytime noise standard of 65 dBA. The commenter states that the Draft IS-MND should include mitigation of the project's operational noise sources other than heating, ventilation, and air conditioning (HVAC) equipment (e.g., additional traffic, noise generated by future residents and patrons).

The commenter is incorrect. The City's exterior noise standard of 65 dBA applies only to residential land uses. As shown in Table 1 of the City of Moorpark General Plan Noise Element, the City considers exterior noise levels up to 70 CNEL to be "clearly compatible" with commercial land uses (including commercial retail, restaurants, banks, and movie theaters). In addition, the City considers exterior noise levels up to 80 CNEL to be "normally compatible" with commercial land uses. "Clearly

[3] Federal Highway Administration. 1974. The Audible Landscape: A Manual for Highway Noise and Land Use. November 1094. https://www.fhwa.dot.gov/ENVIRonment/noise/noise_compatible_planning/federal_approach/audible_landscape/al04.cfm (accessed April 2019).

compatible" indicates that the specified land use of satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements, and "normally compatible" indicates that new construction or development should be undertaken only after a detailed analysis of noise reduction requirements are made and needed noise insultation features are included in the design. The ambient noise on High Street is approximately 69 CNEL, which is within the "clearly compatible" range for commercial land uses. Therefore, ambient noise on High Street does not exceed the City's exterior noise standard for adjacent commercial uses.

Section 13, *Noise*, evaluates the project's on-site operational noise impacts related to outdoor recreational uses, delivery and trash hauling trucks, and parking lots as well as the project's off-site roadway noise impacts. As discussed therein, the project would have less than significant operational noise impacts related to these noise sources. Therefore, additional mitigation beyond that required for HVAC noise (Mitigation Measure N-2) is not required.

## Response 6.10

The commenter states opposition to the proposed project for the following reasons:

- Quantity of residential units is too high;
- The ground floor is not exclusively commercial use;
- Sufficient parking is not provided; and
- The project would result in increased noise levels along High Street due to increased train noise and noise from the proposed project

The commenter requests a reduction in the scope of the proposed project.

Comments on the size and scope of the project are noted, but do not directly pertain to the IS-MND. City decision makers will consider the commenter's opposition and suggestion for reduced scope as they review the project. See Responses 6.8 and 6.9 for discussion on the project's noise impacts.