County of San Diego

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Department of Parks and Recreation
5500 OVERLAND AVENUE, SUITE 410, SAN DIEGO, CA 92123

July 2021

CEQA Initial Study – Environmental Checklist Form (Based on the State CEQA Guidelines, Appendix G)

1. Project Title:	Fallbrook Local Park Project
2. Lead Agency Name and Address:	County of San Diego Department of Parks and Recreation 5500 Overland Avenue, Suite 410 San Diego, CA 92123
3. Contact Person and Phone Number:	Nicole Ornelas Environmental Planner 858-243-7185
4. Project Location:	The project site is located in the unincorporated community of Fallbrook in north San Diego County, CA. The project site is situated on Assessor Parcel Number (APN) 105-841-35-00. The project site is located along East Fallbrook Street, between Golden Road and Morro Road.
5. Project Sponsor's Name and Address:	County of San Diego Department of Parks and Recreation 5500 Overland Avenue, Suite 410 San Diego, CA 92123
6. General Plan Designation(s):	Fallbrook Community Plan Village Residential (VR-7.3)
7. Zoning:	Residential-Single

8. Description of Project:

The Fallbrook Local Park Project (proposed project) would construct a 6.8-acre local park in the community of Fallbrook, located in unincorporated San Diego County. Implementation of the proposed project would provide new active and passive recreational opportunities for residents of all ages, interests, and abilities. Regionally, Fallbrook is located in northern San Diego County, situated northeast of the United States Marine Corps (USMC) Camp Pendleton Base, as shown on **Figure 1**. Regional access to the project site is provided via Interstate-15 (I-15), which is located approximately four miles to the east of the project site. The project site is located on Assessor Parcel Number 105-841-35-00, located along East Fallbrook Street, between Golden Road and Morro Road, as shown on **Figure 2**. The project site is bound by single-family residential development to the north, east, and south. To the west of the project site is an operating commercial succulent nursery. The project site, which gently slopes to the south, previously operated as a nursery before being purchased by the County of San Diego (County) in March 2020.

Project Components

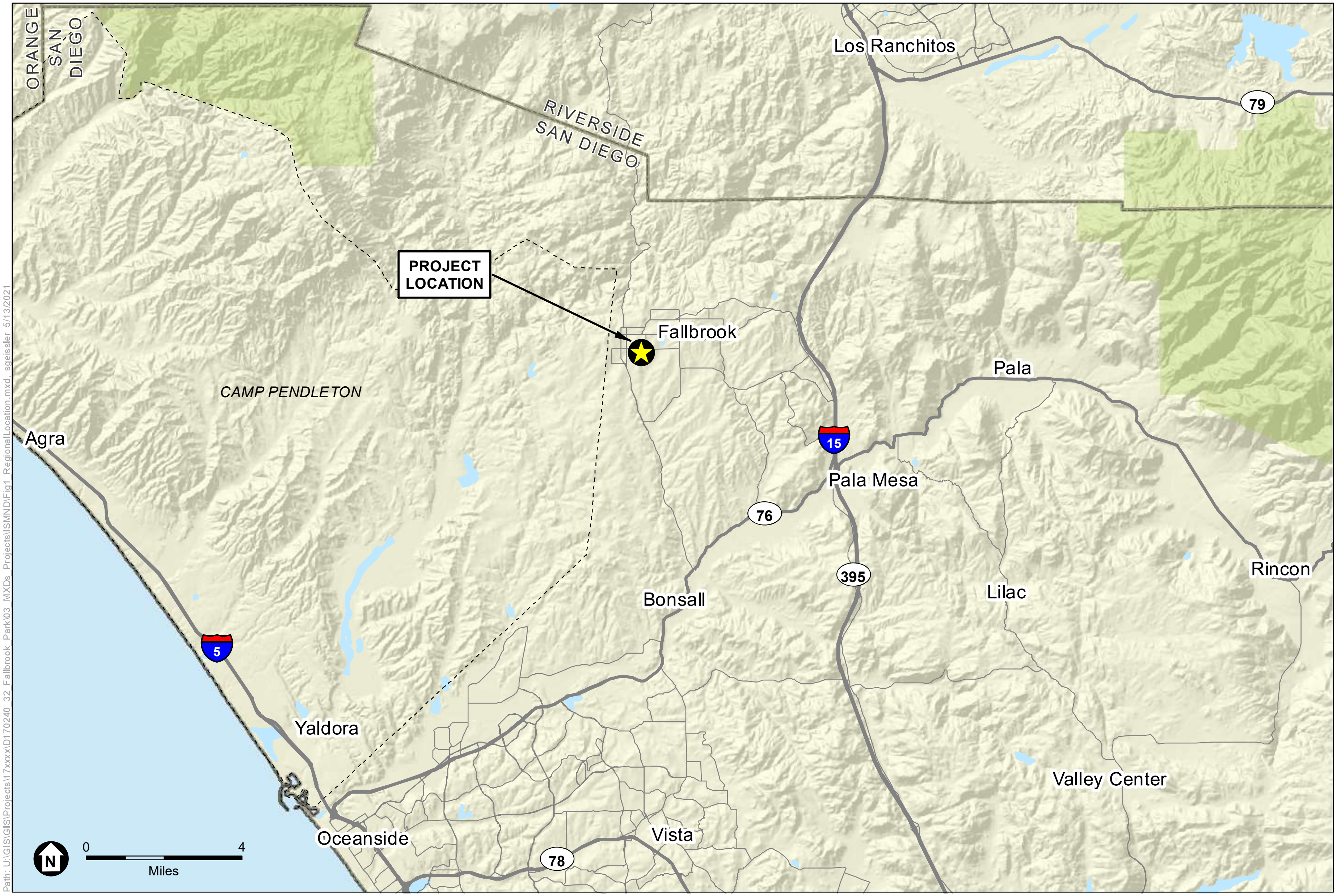
The proposed project would expand recreation resources in the community of Fallbrook and would be operated and maintained by the County of San Diego Department of Parks and Recreation (DPR). As shown in **Figure 3**, the project site is separated into various components dedicated to different recreational activities, including a play area, open lawn area, off-leash dog zone, soft surface trails and native gardens, multiuse path, skate elements, a passive recreation area, and other associated amenities, including parking. These primary project components are described in further detail below and in **Table 1.**

TABLE 1
PROJECT COMPONENTS

Amenity	Approximate Linear Feet[1]	Approximate Total Area (Square Feet)
Play area	-	33,748
Open lawn area	-	53,822
Off-leash dog zone	-	22,040
Soft surface trails and native gardens	594	-
Multiuse path	2,430	-
Skate elements	-	20,160
Passive recreation area	-	8,960
Other[2]		157,478
Total		**296,208 square feet (6.8 acres)**

1 Provided for recreational elements with trail components.

2 Components that are within this category include circulation and parking, the areas surrounding the soft surface trails and native gardens, multiuse path, ancillary facilities, and green infrastructure.



SOURCE: ESA, 2020; SanGIS

Fallbrook Local Park

Figure 1
Regional Vicinity

ESA

SOURCE: ESA, 2020;ESRI, 2020

Fallbrook Local Park

Figure 2
Project Boundaries

ESA

FINAL CONCEPT PLAN

NEW LOCAL PARK IN FALLBROOK

LEGEND

P PARKING: 68 STALLS
one-way circulation, ingress + egress off E. Fallbrook St.
pervious surface for stalls, bioretention swale

1 ADA PARKING: 3 STALLS

2 BIKE PARKING: 5 SPOTS

3 SHADED PICNIC AREA

4 COMFORT STATION
restrooms + drinking fountains and bottle filler

5 GREEN INFRASTRUCTURE
bioretention swale -> rain garden -> infiltration basin

6 PLAY
33,748 square feet | ~ .8 acre
2-5 + 5-12 shaded, traditional play
nature play integrated into adjacent field/ basin

7 OPEN FIELD
53,822 square feet | ~ 1.2 acres

8 OFF-LEASH DOG ZONE
22,040 square feet | ~ .5 acre

9 SOFT SURFACE TRAILS + NATIVE GARDENS x 3
594 linear feet of trail

10 MULTIUSE PATH
2,430 linear feet | ~ .5 mile loop

11 SKATE ELEMENTS
20,160 square feet | ~ .5 acre

12 PLANTERS | BENCH SEATING

13 PASSIVE RECREATION AREA
soft surface trail, interpretive signage, native garden, seating

14 TRASH ENCLOSURE

+ EXISTING TREES: 11
PROPOSED TREES: 111

SOURCE: County of San Diego Parks and Recreation, 2021

Figure 3
Conceptual Site Plan

Access, Circulation, and Parking

Vehicular access to the project site would be from a single entry-point at the northern boundary along East Fallbrook Street across from Shady Glen Drive, as shown on Figure 3. This driveway would be constructed as the south leg of the existing intersection of Shady Glen Road and East Fallbrook Street and would allow for full-access with one inbound lane and one outbound lane. To address potential pedestrian safety issues, a Rectangular Rapid-Flashing Beacons (RRFB) and high visibility crosswalk would be installed at the East Fallbrook Street and Shady Glen Road/project driveway intersection. The RRFB and high visibility crosswalk would be required to be designed to the County of San Diego standards. . As part of the project, the existing terrain surrounding the project driveway entrance would be properly graded per County standards in order to increase line of sight distance as well as prohibit/remove any other objects in the line of sight prior to project operation. Additionally, vegetation would be trimmed and/or removed to achieve the required sight distances.

The entrance driveway would lead to a proposed parking lot within the center of the property. The parking lot would include a one-way drive aisle, with parking stalls around the east and west peripheries and inner portion of the parking lot. The parking lot would provide a total of 68 parking stalls, including three ADA accessible stalls and five bicycle parking spots. The project would incorporate pervious surfaces for the parking stalls, as well as additional green infrastructure in the center of the parking lot, including a bioretention swale, rain garden, and infiltration basin.

The proposed project would construct new sidewalks along the south side of East Fallbrook Street between Golden Road and Morro Road, as well as the west side of Morro Road between East Fallbrook Street and the project's southern limit. These new facilities would fill in gaps in the existing pedestrian sidewalk network.

Play area

The play area would be located in the southeast portion of the project site, located southeast of the proposed parking lot and west of Morro Road. The play area would be approximately 0.8 acres (33,748 square feet [sf]) in size and would contain two separate play elements for children ages 2-5 and children ages 5-12. In addition, there would be additional amenities for multiple ages, including swings, climbing boulders, and stepping logs. The play area would provide traditional play elements within landscaping features to provide for recreation experiences that are integrated with nature. Outdoor seating would be provided around the periphery of the play area.

Open Lawn Area

The open lawn area would be located directly west of the proposed parking lot and east of Golden Road. The open lawn area would be approximately 1.2 acres (53,822 sf) in size, and could accommodate small scale pick-up soccer or practice, along with a variety of other passive uses. For conservative worst-case modeling purposes, it is anticipated that a total of 18 players would be on the field at one time, with capacity for up to 40 additional spectators. The proposed open lawn area would be used primarily for localized practices or other passive uses and is not anticipated to be used for large regional tournaments. No stadium lighting would be provided at the open lawn area.

Off-Leash Dog Zone

The off-leash dog zone would be approximately 0.5-acre (22,040 sf) in size and would be surrounded by galvanized or vinyl coated chain-link fencing at a minimum of six feet above finished grade. The off-leash dog zone would have separate areas for small and large dogs, which would be segmented by fencing. The surface of the off-leash dog zone would be decomposed granite. Seating, trash cans, water fountains, and shade structures would be constructed at various areas to accommodate dogs and owners.

Multi-use Path, Soft Surface Trails, and Native Gardens

The project would incorporate 2,430 linear feet of a class I multi-use path, which would line the perimeter of the project site. The approximately half-mile loop around the site would include opportunities for pedestrians, cyclists, and other users. The multi-use path would be partially shaded with a variety of shade trees and other landscaping elements. Pedestrian access to the multi-use path would be provided via Morro Road and East Fallbrook Street.

Soft surface trails and native gardens would extend from the proposed multi-use path in three different locations and would provide an additional 594 linear feet of recreation opportunities. The soft surface trails would be stabilized decomposed granite. The first location would be along the northern portion of the project site, west of the proposed parking lot entrance. The proposed native gardens would surround the soft surface trails and contain native, drought-resistant plant species. The second proposed soft surface trail is directly north of the proposed play area, east of the proposed parking lot. An additional soft surface trail and native garden would be located at the southwestern most boundary of the project site, directly west of the off-leash dog zone.

Skate Elements

The proposed skate elements would be located in the northwestern portion of the project site and would be partially surrounded by the proposed multi-use path. The skate elements would be paved and would be approximately 0.5-acre (20,160 sf) in size. The proposed skate elements would be designed for users of all ages and skill levels. Bench seating and planters would be located within the southeastern portion. Additionally, shaded seating areas would be incorporated around the perimeter of the skate elements. The skate elements would be fenced from the rest of the park and would be accessed by its own entry gate. No lighting would be provided at the skate elements

Passive Recreation Area

The project includes a passive recreation area located at the northeastern portion of the project site. The passive recreation area would be 8,960 square feet in size and include a soft surface trail that would connect to the multi-use path and soft surface trails. The passive recreation area would also include interpretive signage, native gardens, and seating areas for visitors.

Ancillary Facilities and Green Infrastructure

The proposed project would include a shaded picnic area that would be located directly east of the open lawn area and west of the parking lot. The shaded picnic area would include concrete pavement, picnic tables, multiple barbeque grills, and a shade structure. Several smaller picnic tables and seating areas consisting of one or more tables would be situated at various locations within the park.

The project would include the construction of a comfort station, which would be located southwest of the parking lot and would contain a restroom facility, drinking fountains, and a bottle filler. The comfort station would be an estimated 20 feet by 20 feet in size and would include nighttime security lighting. The comfort station would be located directly west of the parking lot and would contain lighting that would be directional and shielded to reduce off-site light and glare to the extent practicable, in compliance with the County Code of Regulatory Ordinances. Other strategic night lighting may be integrated in other locations on the project site for security and safety purposes based on the recommendations of the local Sheriff's Department. Any additional lighting would also be directional and shielded downward. The project would construct a trash enclosure located in the northern portion of the parking lot. In addition, waste receptacles would be installed in proximity to public use areas throughout the project site.

As detailed above, the proposed parking lot would be designed with pervious surfaces for each parking stall. The project would also incorporate a bioretention swale, rain garden, and infiltration basin within the center of the parking lot, which would drain and filter stormwater for percolation into local soils.

There are currently nine existing oak trees located on the project site. In addition, there are multiple nut trees, palms, and ornamental trees, which may be removed based on final project design. In addition, the project would plant additional native and hardy adapted/drought tolerant trees, which would be located throughout the project site.

Construction

Construction of the project is anticipated to occur over a 7-month period, beginning in Fall 2021, and ending in Summer 2022. Construction activities would consist of site preparation and clearing, grading and excavation, paving, landscaping, trail construction and ancillary facility construction, and architectural coating. Portions of the proposed open lawn area would be graded to a level surface (with the use of retaining walls), while other recreation components would utilize the existing slope, including, but not limited to, the proposed skate elements and off-leash dog-zone. Construction equipment used would include, but not be limited to, rubber-tired dozers, tractors/loaders/backhoes, excavators, graders, loaders, pavers, rollers, and cement and mortar mixers. It is anticipated that approximately 3,753 cubic yards (cy) of topsoil would be imported for the Project. All other cut and fill soils would be balanced onsite.

The County of San Diego DPR has developed standard operating procedures and BMPs for construction. **Table 2** lists these procedures, which are considered project design features of the proposed project.

TABLE 2
PROJECT DESIGN FEATURES

Project Design Features (PDFs)	Responsible Party
PDF-CUL-1 (Retention of a Qualified Archaeologist): Prior to the start of ground-disturbing activities, DPR shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior 2012) to implement PDF-CUL-2 and PDF-CUL-3.	County of San Diego
PDF-CUL-2 (Construction Worker Cultural Resources Sensitivity Training): Prior to the start of ground-disturbing activities, construction personnel shall be trained in the identification of cultural resources. Prior to earth moving activities, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures be to enacted in the event of an inadvertent discovery of archaeological resources or human remains. DPR shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.	County of San Diego
PDF-CUL-3 (Inadvertent Discoveries of Archaeological Resources): In the event of the unanticipated discovery of archaeological materials, the contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by a qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with DPR on the significance of the resource. If it is determined that the discovered archaeological resource constitutes a historical resource under CEQA, avoidance and preservation in place is the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Cultural Resources Treatment Plan shall be prepared and implemented by a qualified archaeologist in consultation with DPR that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource. DPR shall consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered	County of San Diego
PDF-CUL-4 (Inadvertent Discoveries of Human Remains): If human remains are encountered, the contractor shall halt work in the vicinity (within 100 feet) of the find and contact the San Diego County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the California Native American Heritage Commission (NAHC) will be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98 (as amended by Assembly Bill 2641). The NAHC will designate a Most Likely Descendent (MLD) for the remains per PRC Section 5097.98. Until the landowner has conferred with the MLD, the contractor shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials.	County of San Diego

Facility Management and Operations

The proposed project would operate from sunrise (6:00 a.m.) to sunset (6:00 p.m. pacific standard time or 9:00 p.m. pacific daylight time), seven days per week consistent with County policies. The project is anticipated to serve the surrounding local neighborhood and is not anticipated to draw a substantial number of park users from outside of the community. The proposed project would include lockable, gated pedestrian and vehicular entrances to the project site to restrict entry after hours of operation. County staff would be on site daily to open and close the facility and perform daily park maintenance to ensure that all recreational amenities are safe and usable for the public. DPR staff would also provide customer service and uphold DPR codes, policies, and procedures.

Approvals Required by the County of San Diego

- Adoption of Final IS/MND
- Authorization to Advertise and Award a Construction Contract

9. Surrounding Land Uses and Setting.

The project site is located in the community of Fallbrook within unincorporated San Diego County. Regionally, Fallbrook is located in northern San Diego County, situated northeast of the USMC Camp Pendleton Base. The project site is located along East Fallbrook Street, between Golden Road and Morro Road. Surrounding land uses include residential uses to the north, east, and south, and a commercial nursery to the west. I-15 is located approximately four miles to the east of the project site.

10. Other public agencies whose approval is required

The project would require a General Construction Stormwater Permit from the San Diego Regional Water Quality Control Board (RWQCB). In addition, a Building Permit issued by the San Diego County Department of Planning and Development Services would be required prior to construction of the project.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

In accordance with Assembly Bill (AB) 52, the County of San Diego mailed out tribal consultation letters to tribes traditionally and culturally affiliated with the project area on February 26,2021. Requests for formal consultation were received by Pechanga Band of Luiseño Indians (Pechanga) and Rincon Band of Luiseño Indians (Rincon). Consultation was conducted with Pechanga on July 12, 2021 and consultation was conducted with Rincon on July 15, 2021.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “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: (To be completed by the Lead Agency)

On the basis of this initial study:

☐ 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 in 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 “potentially significant unless mitigated” 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 potentially 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.

Signature	Date
Nicole Ornelas	Land Use/Environmental Planner
Printed Name	Title

Environmental Checklist

Aesthetics

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. **AESTHETICS —** 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) 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 which would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

Discussion

Less than Significant Impact. The project site is located within an urbanized area within the community of Fallbrook, located in the County of San Diego. While the project site itself is vacant, surrounding land uses are built up and consist of single-family residential homes to the north, east, and south, and a commercial nursery to the west.

As described in the County of San Diego General Plan Update Environmental Impact Report (EIR) (County of San Diego 2011a; 2011b), the County contains visual resources affording opportunities for scenic vistas in every community. Resource Conservation Areas (RCAs) are identified within the General Plan EIR and are the closest that the County comes to specifically designating scenic vistas. Many public roads in the County currently have views of RCAs or expanses of natural resources that would have the potential to be considered scenic vistas. According to the Fallbrook Community Plan, there are several RCAs in the Fallbrook Community Planning Area (Fallbrook 2011). However, Turtle Creek, which is the closest RCA to the project site, is located approximately one mile away and does not afford views to or from the project site due visual obstructions to elevation differences and intervening structures/vegetation. While the proposed project would include construction near public rights-of-way that would be visible to the public, construction and proposed park improvements would not change the current views to and from Turtle Creek's scenic vista. As a result, adverse effects on scenic vistas would be less than significant.

b) **Less than Significant Impact.** There are no officially designated state scenic highways in the vicinity of the proposed project (Caltrans 2020). According to the Fallbrook Community Plan, the nearest scenic roadway is Reche Road, approximately 0.6 miles southeast of the project site (Fallbrook 2011). Given the intervening structures and topography, the project site is not visible from this scenic roadway and implementation of the project would not affect the scenic resources of this roadway. Therefore, the proposed project would not substantially damage scenic resources along a state scenic highway or local roadway, and impacts would be less than significant.

c) **Less than Significant Impact.** The visual character of the project site consists of a vacant site comprised of gently sloping hills and low-lying vegetation with a number of trees, likely remnants from the site's prior use as a nursery. Public views of the project site are visible from Golden Road, Fallbrook Road and from Morro Road. Views from private residences are not considered protected views under CEQA, and therefore are not further discussed.

The visual character of the project site would be temporarily degraded during construction of the project due to the introduction of construction equipment, including large trucks, bulldozers, and a construction staging area. However, construction is temporary in nature, and all construction equipment would be removed once construction is complete.

Once completed, the proposed project would be entirely visible from the above listed public roadways, and views would be modified from an existing vacant site to a landscaped community park. Views from Golden Road would consist of the proposed open lawn area as well as the multi-use path and additional landscaping. Improvements along Fallbrook Road would introduce a new entrance driveway to the project site, along with landscaping, which would generally screen views to the proposed skate elements and passive recreation area. Views along Morro Road would be primarily landscaped, which would provide screening to the proposed play elements and off-leash dog zone.

Despite public view changes along these roadways, the proposed project would add to the existing visual character of the existing residential setting of the project area. Moreover, the proposed project would replace a vacant and dilapidated parcel with landscaping, shade trees, and public use areas, and therefore would aim to improve the visual quality of public views of the project site. Therefore, the project would not substantially degrade the character or quality of the project site or its surroundings, and impacts related to visual quality of the project site would be less than significant.

d) **Less than Significant Impact.** The proposed project is located within Zone B as identified by the San Diego County Light Pollution Code. Zone B is in an area that is more than 15 miles from an observatory. As detailed in the Project Description, the project would install outdoor security lighting as needed, however, the lighting would be minimal and would be directional and shielded to reduce off-site light and glare. The project would conform to the County's Light Pollution Code (Section 51.201-51.209), including the Zone B lamp type and shielding requirements per fixture and hours of operation limitations for outdoor lighting. Compliance with the Code is required prior to issuance of a building permit. Therefore, the project would not create a significant new source of substantial light or glare, which would adversely affect daytime or nighttime views in the area, and impacts would be less than significant.

References

California Department of Transportation (Caltrans), 2020. *Officially Designated and Eligible Scenic Highway List.*

Fallbrook, 2011. Fallbrook Community Plan. August 11, 2011.

County of San Diego, 2011a. *San Diego County General Plan.* August.

_____ 2011b. General Plan EIR: *Aesthetics*.

_____, 2020. *San Diego County Code of Regulatory Ordinances, Chapter 2. Light Pollution*.

Agriculture and Forestry Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
II. AGRICULTURE AND FORESTRY RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the 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?	☐	☐	☐	☒

Discussion

a) **Less than Significant Impact.** The project site was previously used as a nursery; however, no active agricultural uses are currently taking place on the project site. According to the United States Department of Agriculture (USDA) Web Soil Survey, and as shown on **Figure 4,** approximately 1.28 acres of the project site contains Fallbrook sandy loam (FaB and FaC). According to the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), Fallbrook sandy loam is categorized as soils that qualify as "Prime Farmland" within San Diego County (DOC 1973). The rest of the project site is mapped as Fallbrook-Vista sandy loams (FvD), which is not considered as a soil candidate for Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.

Per the County of San Diego Guidelines for Determining Significance for Agricultural Resources, the County evaluates agricultural resources based on the Local Agricultural Resource Assessment (LARA) model, which takes into account local factors that define the importance of San Diego County agricultural resources, including soil quality, water, and climate (County of San Diego 2015). As previously detailed, 1.28 acres of the 6.8-acre project site (approximately 18 percent of the project site) is categorized as Prime

Farmland. According to the County's Soil Quality Matrix calculations shown in **Table 3**, the soil at the project site is calculated to have a Soil Quality Matrix score of 0.1882. According to the County's Soil Quality Matrix Interpretation (as shown in **Table 4**), the soil at the project site would have a low soil quality rating, as the site's score is less than 0.33 and does not have 10 acres or more of contiguous Prime Farmland.

TABLE 3
SOIL QUALITY MATRIX

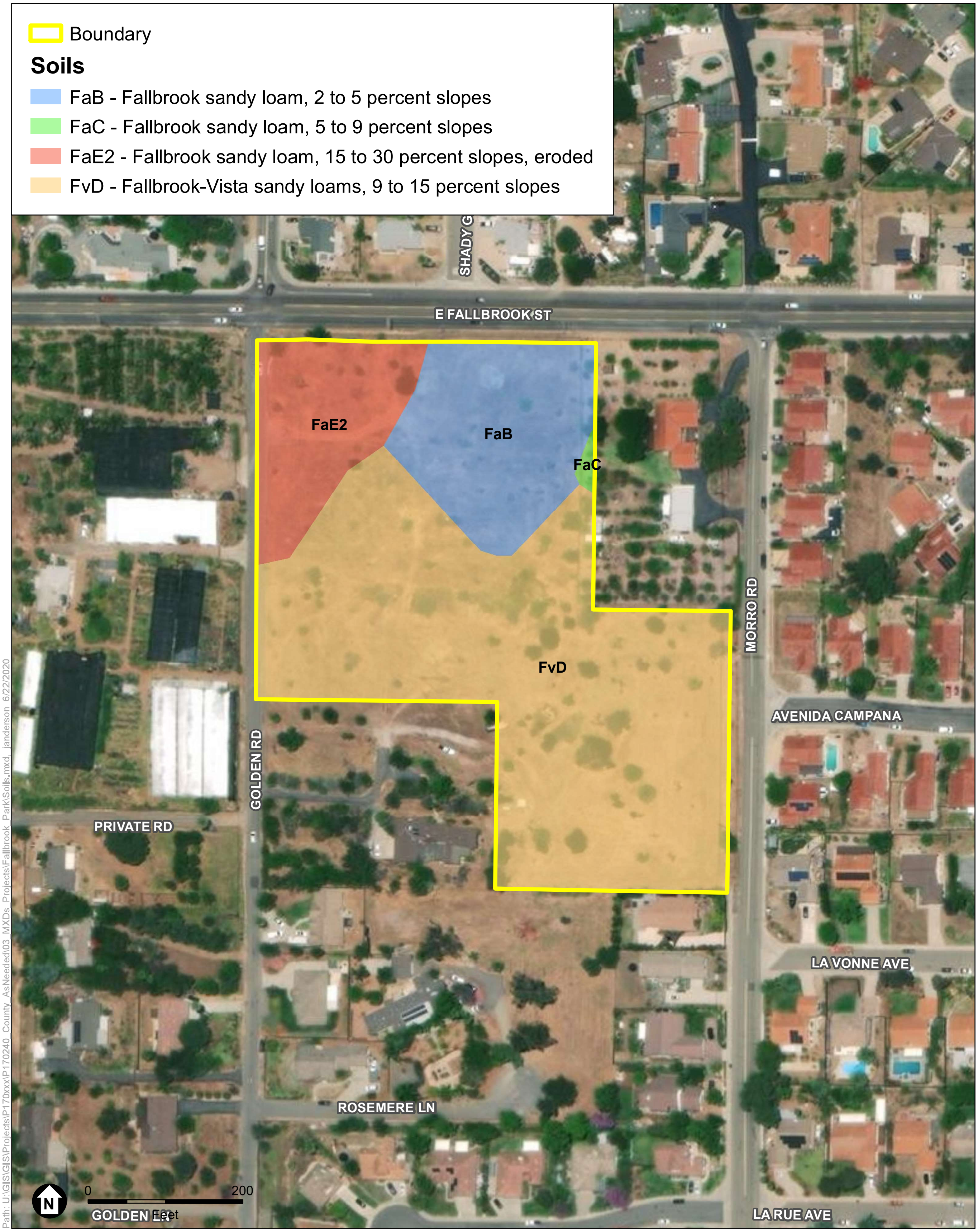
	Column A	Column B	Column C	Column D	Column E	Column F	Column G
	Soil Type	Size of Project Site (Acres)	Unavailable for Agricultural Use (Acres)	Available for Agricultural Use (Acres)	Proportion of the Project Site	Is soil candidate for Prime Farmland or Farmland of Statewide Significance? (Yes = 1, No = 0)	Multiply Column E x Column F
Row 1	FaB (Prime Farmland)	1.25	0	1.25	0.1838	1	0.1838
Row 2	FaC (Prime Farmland)	0.03	0	0.03	0.0044	1	0.0044
Row 3	FaE2	0.93	0	0.93	0.1367	0	0
Row 4	FvD	4.60	0	4.60	0.6764	0	0
Total							**0.1882 = Low Quality Soil** (see Table 4)

SOURCE: ESA 2020, per calculations in the County of San Diego Guidelines for Determining Significance for Agricultural Resources (County of San Diego 2015).

TABLE 4
SOIL QUALITY MATRIX INTERPRETATION

Soil Quality Matrix Score	Soil Quality Rating
The site has a Soil Quality Matrix score ranging from 0.66 t0 1.0 and has a minimum of 10 acres of contiguous Prime Farmland or Statewide Importance Soils	High
The site has a Soil Quality Matrix score ranging from 0.66 to 1.0 and has a minimum of 10 acres of contiguous Prime Farmland or Statewide Importance Soils	Moderate
The site has a Soil Quality Matrix score less than 0.33 and does not have 10 acres or more of contiguous Prime Farmland or Statewide Importance Soils	Low

SOURCE: County of San Diego 2015



SOURCE: ESRI; SanGIS

Fallbrook Local Park

Figure 4
Soils

ESA

As shown in **Table 5** below, in order for a site to be considered an important agricultural resource, all three required LARA model factors (soil quality, water, and climate) must receive either a high or moderate score. A low score in any of these categories would mean that the site is not an important agricultural resource, pursuant to County Guidelines. As the soil quality of the project site received a low importance rating, the project site would not meet the County's definition of a significant agricultural resource. Therefore, the conversion of the project site to a non-agricultural use would be considered less than significant.

TABLE 5
INTERPRETATION OF LARA MODEL RESULTS

LARA Model Results			LARA Model Interpretation
Possible Scenarios	**Required Factors**	**Complementary Factors**	
Scenario 1	All three factors rated high	At least one factor related high or moderate	The site is an important agricultural resource
Scenario 2	Two factors rated high, one factor rated moderate	At least two factors rated high or moderate	
Scenario 3	One factor rated high, two factors rated moderate	At least two factors rated high	
Scenario 4	All factors rated moderate	All factors rated high	
Scenario 5	At least one factor rated low importance	N/A	The site is *not* an important agricultural resource
Scenario 6	All other model results		

SOURCE: County of San Diego 2015

b-e) **No Impact.** The project site is zoned as Residential – Single, and, while agricultural uses are permissible on the project site, it is not zoned only for agricultural use. The project site is not within a Williamson Act Contract, and, as detailed above in Section II(a), the project site would not result in a conversion for important agricultural land to a non-agricultural use. According to the California Department of Fish and Wildlife (CDFW), the project site is not located within or near lands classified as private timberlands or public lands zoned for timberland production (CDFW 2015). As such, the project would not result in a loss or agricultural or timber resources, nor would the project conflict with agricultural or timberland zoning or conflict with an existing Williamson Act Contract; there would be no impact.

References

California Department of Conservation (DOC), 1973. *Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, San Diego County.* December, 1973.

California Department of Fish and Wildlife (CDFW), 2015. California Forests and Timberlands. September, 2015.

County of San Diego, 2015. County of San Diego Guidelines for Determining Significance and Report and Format and Content Requirements: *Agricultural Resources*. Revised June 23, 2015.

Air Quality

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. 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?	☐	☐	☒	☐

Discussion

a) **Less than Significant Impact.** The project site is located in the San Diego Air Basin (SDAB), within the jurisdiction of the San Diego Air Pollution Control District (SDAPCD). SDAPCD is required, pursuant to the federal and state Clean Air Acts, to reduce emissions of criteria air pollutants for which the SDAB is currently in nonattainment of ambient air quality standards. The SDAB is currently classified as a federal nonattainment area for the 8-hour ozone (O_3) standard. Note, O_3 is not directly emitted, but rather formed by the combination of O_3 precursors of nitrogen oxides (NO_X) and volatile organic compounds (VOC) in the atmosphere in the presence of sunlight. In addition, the SDAB is classified as a state nonattainment area for the California standards for O_3, particulate matter less than 2.5 microns (PM2.5), and particulate matter less than 10 microns (PM10) (USEPA, 2020; CARB, 2019).

All areas designated as nonattainment are required to prepare plans showing how the area would meet the state and federal air quality standards by its designated attainment deadline. The San Diego Regional Air Quality Strategy (RAQS) is the region's applicable air quality plan for improving air quality in the SDAB and attaining federal and state air quality standards. The RAQS relies on information from the California Air Resources Board (CARB) and the San Diego Association of Governments (SANDAG), including projected population growth in the County, which is based in part on local general plans. A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds estimates used to develop applicable air quality plans, which, in turn, would generate emissions not accounted for in the regional emissions budgets.

The purpose of the proposed project is to construct a local park that would expand recreation resources in the community of Fallbrook. The park is intended to serve the surrounding community, which is reflective in the scale of the project, and as such, is not anticipated to draw a substantial number of park users from outside of the community.

The proposed project would not permanently change the existing or planned transportation network or traffic patterns in the area nor would it add any additional capacity to existing roadways. The project site is currently vacant but previously operated as a nursery before being bought by the County. The proposed project would generate emissions during construction and operations (discussed below), but these emissions would be short term and are not expected to obstruct implementation of the RAQS. Therefore, the impact would be less than significant.

b) **Less than Significant Impact.** As stated above, the project site is within the SDAB, which is classified as a nonattainment area for certain federally and state-designated criteria pollutants, including O_3, PM10, and PM2.5. Project construction would use on- and off-road construction equipment and would occur over a six-month period, beginning in Fall 2021 and ending in Summer 2022. Construction emissions would vary from day-to-day and would result from construction activities, including site preparation and clearing, grading, paving, hauling construction supplies, construction workers traveling, building construction of the comfort station, and landscaping and trail construction. Portions of the proposed open lawn area, play area, and parking lot would be graded to a level surface, while other recreation components would utilize the existing slope, including, the proposed skate elements and off-leash dog zone. Short-term emissions generated by construction of the project would be primarily associated with earthmoving activities. Project construction would comply with SDAPCD Rules and Regulations, including Rules 50, 51, and 55, which prohibit visible emissions, nuisance activities, and require fugitive dust control measures, respectively. Off-road construction emissions for the proposed project were modeled using the California Emissions Estimator Model (CalEEMod) software (version 2016.3.2) and on-road mobile construction emissions were modeled using the CARB's on-road vehicle Emissions FACtor 2017 (EMFAC2017) model. As shown in **Table 6** below, the maximum daily emissions that would be generated during peak construction would not exceed the SDAPCD regional thresholds, and therefore, the emissions from construction activities would be less than significant. Also, construction emissions would be temporary and localized, and the proposed project would comply with all required aforementioned SDAPCD emissions and fugitive dust measures, which would ensure that the cumulative contribution of criteria pollutants during project construction would be less than significant.

TABLE 6
MAXIMUM REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY)

Source	VOC	NOx	CO	SO_2	PM10[a]	PM2.5[a]
Project Individual Construction Phases						
Site Preparation – 2021	3	28	15	<1	4	3
Grading/Excavation – 2021	3	51	27	<1	3	2
Grading/Excavation - 2022	3	44	26	<1	3	1
Paving – 2022	1	6	8	<1	1	<1
Ancillary Facilities/Landscaping/Trail Construction – 2022	1	11	9	<1	1	1
Architectural Coating – 2022	4	1	2	<1	<1	<1
Project Overlapping Construction Phases						
Landscaping/Trail Construction/Ancillary Facilities - 2022 + Architectural Coating - 2022	5	12	11	<1	1	1
Maximum Daily Emissions	**5**	**51**	**27**	**<1**	**4**	**3**
SDAPCD Regional Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No

NOTES:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A, Air Quality/Energy/Greenhouse Gas Emissions Calculations.

[a] Emissions include fugitive dust control measures consistent with SDAPCD Rule XXX.

SOURCE: Appendix A, Air Quality/Energy/Greenhouse Gas Emissions Calculations, ESA, 2020.

Operation of the project would generate greater operational emissions of O_3 precursors of VOC and NO_X, PM10, and PM2.5 than the site currently generates under existing conditions since the project site is currently vacant. The project would convert the site into a community park with various components dedicated to recreational activities, including a play area, open lawn area, off-leash dog zone, soft surface trails and native gardens, multi-use paths, skate elements, passive recreation area, and other associated amenities, including parking. The proposed park is intended to serve the surrounding local neighborhood, which is reflective in the scale of the project, and as such, is not anticipated to draw a substantial number of new park users to the site from outside of the community. As discussed in Section XVII, *Transportation*, the project would not substantially increase operational vehicle trips or vehicle miles traveled (VMT). Additionally, the proposed project would create additional bikeways and pathways as a way of reducing VMT. The project would include a development of Class I bike paths for shared use with bicyclists and pedestrians within the project site, which would connect to the Fallbrook Community Center and La Paloma Elementary school by way of the Class IV bikeway constructed as part of the Fallbrook Community Bike Plan development. The connectivity of these paths leading to the park will provide safe, multi-modal access and, ultimately, reduce the number of vehicle trips to access the facility. Emissions associated with operation of the proposed project were modeled assuming a buildout year of 2022 and using CalEEMod for onsite emissions sources and EMFAC2017 for motor vehicles. Although the project operational-related emissions will be greater than the baseline, the maximum daily peak-operation emissions would not exceed the SDAPCD regional thresholds as demonstrated in **Table 7**, and therefore, the emissions from operation activities would be less than significant.

TABLE 7
MAXIMUM NET REGIONAL OPERATIONAL EMISSIONS (POUNDS PER DAY)

Operational Activity	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project Emissions						
Area (Consumer Products, Landscaping, Natural Gas Fireplaces)	2	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Motor Vehicles	<1	<1	2	<1	1	<1
Proposed Project Total	2	1	2	<1	1	<1
Proposed Project Maximum Net Daily Emissions						
SDAPCD Regional Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No

NOTES:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A, Air Quality/Greenhouse Gas Emissions Calculations.
SOURCE: Appendix A, Air Quality/Energy/Greenhouse Gas Emissions Calculations, ESA, 2020.

Furthermore, SDAPCD significance thresholds were developed to ensure emissions in the air basin can meet or will maintain compliance with the state and federal ambient air quality standards. The standards were established at levels that provide public health protection and allow an adequate margin of safety, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. As project-related construction and operational emissions would not exceed any regulatory thresholds, off-site receptors would not be exposed to emission levels in excess of the health-based ambient air quality standards. As such, construction and operation activities related to the implementation of the proposed project would not contribute to health effects related to these pollutants, and impacts would be less than significant.

c) **Less than Significant Impact.** Project construction emissions could potentially expose sensitive air quality receptors to air pollutant concentrations in the project area. Sensitive air quality receptors are facilities and structures where people, particularly, children, the elderly, and those with respiratory illnesses (e.g., asthma), live or spend considerable amounts of time, such as retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities. The proposed project site is bound by single-family residential development to the north, east, and south which would be considered sensitive receptors.

As stated above, project construction would use on- and off-road construction equipment and would occur over a seven-month period, where the amount of emissions generated during construction would be relatively minimal and would not have the potential to exceed SDAPCD thresholds. Construction emissions would vary from day-to-day and where construction activities would include clearing, grubbing, grading, paving, hauling construction supplies, building construction of the comfort station, and landscaping operations. As explained above, due to these limited construction activities over a short duration, construction of the proposed project would generate minimal emissions of criteria air pollutants and toxic air contaminants. Also, construction emissions would be temporary and localized, and the proposed project would comply with all required SDAPCD emissions and fugitive dust control measures, including applicable provisions of SDAPCD Rules 50, 51, and 55, which prohibit visible emissions, nuisance activities, and require fugitive dust control measures, respectively. Construction trucks would also be required to comply with the CARB Air Toxics Control Measure that limits idling to five minutes or less at any location to reduce public exposure to diesel particulate matter and other toxic air contaminants (Title 13 California Code of Regulations [CCR], Section 2485). Compliance with these control measures would ensure that sensitive receptors would not be exposed to substantial levels of pollutant concentration during project construction. Therefore, construction of the project would not expose sensitive receptors to substantial pollutant concentrations.

Once the proposed project is operational, criteria pollutant and toxic air contaminant emissions would not substantially increase compared to existing conditions. Although the project would change the site's current land use from vacant to a recreational park, there would be no new significant sources of criteria air pollutants and toxic air contaminants as demonstrated by Table 7. As discussed in Section XVII, the project would not substantially increase operational vehicle trips or VMT as the park is intended to serve the local surrounding neighborhood and not draw a substantial number of park users from outside the community. Therefore, emissions would be minimal, and compliance with applicable SDAPCD and CARB rules, regulations, and control measures would ensure that nearby sensitive receptors would not be exposed to substantial pollutant concentrations. Impacts would be less than significant.

d) **Less than Significant Impact.** Project-related odor emissions would be minimal and would not affect a substantial number of people. During construction activities, short-term emissions from construction equipment may be evident in the immediate area on a temporary basis. Additionally, material deliveries and hauling heavy-duty truck trips could create an occasional "whiff" of diesel exhaust for nearby receptors. However, diesel odors would not be concentrated in a single location and would dissipate rapidly from the project site. Furthermore, the project would require asphalt paving and architectural coating for the access and circulation driveways as well as the parking lots within the center of the property. Although these activities may generate some nuisance odors, they would also dissipate rapidly from the project site. These odors would not affect a substantial number of people because the scale of construction would be relatively small. Operation of the new park would not produce objectionable odors, and there would be no new permanent sources of odors at the project site. Therefore, the proposed project would result in less than significant impacts related to odors.

References

California Air Resources Board (CARB). 2019. *Area Designations Maps/State and National*. Available: https://www.arb.ca.gov/desig/adm/adm.htm, accessed December 22, 2020.

U.S. Environmental Protection Agency (USEPA). 2020. *Criteria Pollutant Nonattainment Summary Report.* Accessed December 22, 2020. Available: https://www3.epa.gov/airquality/greenbook/ancl3.html

Biological Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
IV. BIOLOGICAL RESOURCES — 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 Game 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, regulations, or by the California Department of Fish and Game 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?	☐	☐	☒	☐

Discussion

a) **Less than Significant with Mitigation Incorporated.** A records review and biological resources survey was completed for the proposed project to determine the presence or potential presence of special-status species within the project site. The results are documented in the Biological Resources Letter Report prepared May 14, 2021, (Appendix B) and summarized below.

The Biological Resources Letter Report determined the project may result in direct impacts to migratory and nesting birds, including tree-nesting raptors (e.g., red-shouldered hawk) and western bluebird, from the accidental destruction of nests through removal of disturbed habitat, if construction were to occur during the general bird breeding season (January 15 and September 15). Implementation of Mitigation Measure **MM-BIO-1** would require nest season avoidance or pre-construction surveys to ensure that impacts to migratory and nesting birds would be reduced to a less than significant level.

MM-BIO-1: Nesting Season Avoidance or Pre-Construction Survey. If construction initiation occurs between January 15 and September 15, a pre-construction nesting bird and raptor survey of the project area and an appropriate buffer of up to 500 feet shall be completed by a qualified biologist prior to vegetation removal. The pre-construction survey shall be conducted within three calendar days prior to the start of construction activities (including removal of vegetation). If any active nests are detected, the area shall be flagged and mapped on construction plans, along with a buffer, as recommended by the qualified biologist. The buffer area(s) established by the qualified biologist shall be avoided until the nesting cycle is complete or it is determined that the nest is no longer active. The qualified biologist shall be a person familiar with bird breeding behavior and capable of identifying the bird species of San Diego County by sight and sound and determining alterations of behavior as a result of human interaction. Buffers shall be based local topography and line of sight, species behavior and tolerance to disturbance, and existing disturbance levels, as determined appropriate by the qualified biologist.

b) **No Impact.** The Biological Resources Letter Report (Appendix B) identified a total of 6.8 acres of potential impacts to disturbed habitat. This land cover type is not considered sensitive and do not require mitigation per the County's *Biological Resources Guidelines for Determining Significance and Report Format and Content Requirements* (County of San Diego 2010). Additionally, these land cover types are not considered sensitive by CDFW and USFWS. Thus, no impacts to any riparian habitat or other sensitive natural community would occur.

c) **No Impact.** The Biological Resources Letter Report (Appendix B) included an evaluation of potential wetlands and waters under the jurisdiction of the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act; the San Diego Regional Water Quality Control Board under CWA Section 401; and CDFW under California Fish and Game Code Section 1600. No potential jurisdictional wetlands or waters were observed within the project site. Thus, no impacts to federally or state protected wetlands and waters would occur.

d) **Less than Significant Impact.** The Biological Resources Letter Report (Appendix B) determined the project's site location is surrounded by residential and agricultural development. Though localized wildlife movements may occur within the project site, the project site would not be considered a wildlife corridor or linkage, core wildlife area, or stepping-stone due to its lack of connectivity with off-site areas of open space. Thus, the project is not anticipated to interfere with wildlife movement and impacts are considered less significant.

e) **Less than Significant with Mitigation Incorporated.** The proposed project is consistent with local policies and ordinances relevant to biological resources. The project would be consistent with the DPR's Heritage Tree Preservation Program, which is a program developed by DPR and focused on County parkland to evaluate the health of existing trees, diversity tree species and ensure no net loss of trees. The project design would avoid impacts to the coast live oak trees onsite to the maximum extent practicable. Though not considered mitigation, should any coast live oak trees require removal, they would be replaced in a manner consistent with the Heritage Tree Program. Additionally, the project would not result in any impacts to sensitive habitats or wetlands, including coastal sage scrub. Furthermore, the project would not preclude connectivity between areas of high habitat values or result in any impacts to existing movement corridors or habitat linkages. The project is also not expected to result in take of any listed species or narrow endemics, including any eagles, or reduce their likelihood of survival and recovery in the wild. Potential impacts to migratory and nesting birds, would be mitigated to a level that is less than significant through implementation of Mitigation Measure **MM-BIO-1.** Therefore, impacts are considered less than significant with mitigation incorporated.

f) **Less than Significant Impact**. The project site is located within the proposed County of San Diego North County MSCP. The North County MSCP will contribute to the conservation of sensitive species and habitats while providing a streamlined permitting process in the unincorporated regions of northwestern San Diego County. Planning efforts for the North County MSCP are currently underway; however, the project site is not considered important to future preserve design efforts for the North County MSCP due to its location in an urbanized area of Fallbrook, lack of native or naturalized habitats, and isolation from other habitat patches or conserved lands. Thus, project impacts are considered less than significant.

References

San Diego, County of. 2010. Biological Resources Guidelines for Determining Significance and Report Format and Content Requirements.

Cultural Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES — 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 pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion

The following impact analysis for cultural resources is based on the Cultural Resources Assessment for the Fallbrook Local Park memorandum prepared by ESA for the proposed project in December 2020. The analysis included a records search conducted by staff at the California Historical Resources Inventory System (CHRIS) South Coastal Information Center) SCIC on October 30, 2020, a cultural resources survey conducted on December 1, 2020, and archival research. Archival research included a review of historic topographic maps and aerial photographs, as well as a subsurface archaeological sensitivity assessment. This memorandum is included in Appendix C.

a) **Less Than Significant Impact.** Based on a records search conducted by staff at the South Coastal Information Center (SCIC) at San Diego State University on October 30, 2020, one historic address (462 Golden Road) was identified as being located within the northwestern portion of the project site. As part of the cultural resources survey conducted for the project, two prehistoric isolates (ESA-Fallbrook-ISO-001P and -002P) were within the southeastern portion of the project site. In addition, one residenital building at 707 Morro Road was identified within 100 feet of the project site's northeastern boundary as a result of the historic map and aerial review.

The historic address identified by the SCIC at 462 Golden Road is associated with the Mrs. Erle Stanley Gardner House built in 1930 (OHP 2020). Mrs. Erle Stanly Gardner, or Agnes Jean Bethel, was the second wife of Erle Stanley Gardner, the author and creator of Perry Mason series of novels. Ms. Gardner moved from Temecula to Fallbrook following Erle Stanley's death in 1970 and lived there until her passing in 2003. A review of the California Office of Historic Preservation's (OHP) Built Environment Resource Directory (BERD) indicates the resource is listed in a local register (NRHP Status Code 5S1) under Criteria A and C for association with significant events and representative of a construction method and/or high artistic value, respectively, and therefore qualifies as a historical resources pursuant to CEQA. However, in reviewing the San Diego County Local Register of Historical Resources, this address does not appear on the list, and, after an extensive desktop review, no materials could be found providing a description of the resource or details regarding its listing in a local register. Therefore, it is presumed the historic address was incorrectly mapped. In addition, during the field survey it was confirmed that the resource does not exist within the proposed project site, and no impacts to this identified resource would occur as a result of project implementation.

The two isolates identified as a result of the survey do not qualify as historical resources pursuant to CEQA due to their isolated nature and lack of data potenial. Therefore, impacts to these two resources are not considered significant.

The residential building identified at 707 Morro Road, within 100 feet of the project site's northeastern boundary, appears to be over 45 years old and, therefore, meets the OHP's age threshold for consideratoin as a historical resource. The proposed project would not result in direct impacts to the residence; however, indirect visual impacts were assessed. The building's integrity of setting and feeling have been previously altered when residential subdivisions were constructed north and east of the bulding in the 1980s. Construction of the proposed park would simply add to the current residential setting of the building. Furthermore, existing mature landscaping within the residential parcel as well as landscaping to be installed as part of the proposed project would obscure direct views of the proposed park from the building's western and southern elevations. Therefore, no indirect visual impacts to the residence are anticpated as a result of project implementation.

In sum, the project would not cause a substantial adverse change in the significance of a historical resource, and a less than significant impact would occur.

b) **Less than Significant Impact**. The SCIC records search did not identify the presence of archaeological resources within the project site, but two prehistoric isolates (ESA-Fallbrook-ISO-001P and -002P) were documented in the southeastern portion of the project site as a result of the cultural resources survey. The two isolates consist of single pieces of fine grain metavolcanic debitage found within an open field. Given the degree of past disturbance, it is difficult to discern if the isolated artifacts represent lithic reduction or if they are the result of fracture associated with past discing and plowing of the project site when it was an operating orchard. Due to their isolated nature and lack of clear cultural context, isolates are generally considered not to be significant resources.

The subsurface archaeological sensitivity analysis indicates Cretaceous-age, undifferentiated Tonalite, a bedrock geologic unit, is mapped at surface within the project site. Given the Cretaceous age of this unit, it was deposited well before human settlement of North America, and is not conducive to the burial and preservation of archaeological deposits. The age of the unit coupled with the relatively shallow soils and past disturbances associated with past agricultural activities indicates the project site has a low potential to contain intact subsurface archaeological deposits. However, in the unlikely event that subsurface archaeological deposits are encountered, they may qualify as significant resources. As such, the County would be required to implement PDF-CUL-1 through PDF-CUL-4 (as detailed in Table 2), which includes the retention of a qualified archaeologist, cultural resources sensitivity training, and inadvertent discovery protcols. Implementation of the these PDFs would reduce potential project impacts to uknown subsurface archaeolgoical resources, should they be present, to less than signficiant levels. .

c) **Less than Significant Impact.** No known formal or informal cemeteries or other burial places are known to exist within the project site. However, because the project would involve earthmoving activities, there is the possibility that such actions could unearth, expose, or disturb previously unknown human remains. PDF-CUL-4 (as detailed in Table 2) would require all work within 100 feet of discovery of human remains to be halted and require compliance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. As a result, impacts regarding inadvertent discovery of human remains would be less than significant.

Energy

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY — 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?	☐	☐	☒	☐

Discussion

a, b) **Less than Significant Impact**. Project construction would use small-scale construction equipment and would occur over a seven-month period. Energy consumption during construction would vary from day-to-day and where construction activities would include clearing, grubbing, grading, paving, hauling construction supplies, building construction of the comfort station, and landscaping operations. During construction, energy uses would increase and would result primarily from on- and off-road vehicle fuel consumption in the form of diesel, gasoline, the conveyance of water used for dust control and, on a limited basis, electricity to power hand tools, or other construction activities necessitating power. However, the quantities of diesel, gasoline, and electricity use during construction would be minimal given the small scale of the project. Construction diesel, gasoline, and electricity demand would be temporary and cease once construction is completed over the approximately six-month duration. Energy demand for the duration of the construction period was quantified utilizing CalEEMod and EMFAC2017. A summary of energy usage during project construction is shown in **Table 8** below.

Once construction is complete, the project would generate additional vehicle trips and VMT compared to the current land use. However, as discussed in Section XVII, *Transportation*, the project would not substantially increase operational vehicle trips or VMT since it is anticipated to serve the surrounding local neighborhood and is not anticipated to draw a substantial number of park users from outside the community. Additionally, as mentioned previously, the proposed project would create additional bikeways and pathways as a way of reducing VMT. The project would include a development of Class I bike paths for shared use with bicyclists and pedestrians within the project site, which would connect to the Fallbrook Community Center and La Paloma Elementary school by way of the Class IV bikeway constructed as part of the Fallbrook Community Bike Plan development. The connectivity of these paths leading to the park would provide safe, multi-modal access and, ultimately, reduce the number of vehicle trips to access the facility.

TABLE 8
SUMMARY OF ENERGY USE DURING PROJECT CONSTRUCTION

Energy Type	Total Quantity during Project[a]
Electricity	
Project Construction:	
Water Consumption	43,297 kWh
Lighting, Electronic Equipment, Other[b]	6,726 kWh
Total Net Electricity	**50,024 kWh**
Gasoline	
Project Construction:	
On-Road Construction Equipment	1,639 gallons
Off-Road Construction Equipment	-
Total Net Gasoline	**1,639 gallons**
Diesel	
Project Construction:	
On-Road Construction Equipment	13,434 gallons
Off-Road Construction Equipment	14,735 gallons
Total Net Diesel	**28,168 gallons**

NOTES:
kWh = kilowatt-hours
N/A = not applicable

[a] Totals may not add up due to rounding of decimals.
[b] Electricity usage associated with this line item would be very limited and small in scale.

SOURCE: Appendix A, Air Quality/Energy/Greenhouse Gas Emissions Calculations, ESA, 2020.

Operation of the project would require the use of new energy sources to supply electricity to the project site for new light sources throughout the project components. Apart from operational vehicle trips, VMT and electricity, other operational energy consumption would be minimal and attributed to the energy required to supply, distribute, and treat water and wastewater generated by the project. Due to the minimal energy requirements of the project during operation, the project would not conflict with the local utility provider's ability to comply with applicable state and local plans established for renewable energy and energy efficiency. For these reasons, the project would result in less than significant impacts related to energy as it would not result in a wasteful, inefficient, or unnecessary usage of direct or indirect energy. A summary of the annual net new energy use during the project operation is shown in **Table 9** below.

TABLE 9
SUMMARY OF ANNUAL NET NEW ENERGY USE DURING PROJECT OPERATION

Energy Type		Proposed Project Annual Quantity
Electricity		
Proposed Project:		
Security Lighting		9,520 kWh
Water Conveyance		50,974 kWh
	Total Net Electricity	**60,494 kWh**
Transportation		
Proposed Project:		
Gasoline		10,519 gallons
Diesel		1,138 gallons

NOTES:
kWh = kilowatt-hour
Project electricity estimates assume compliance with applicable 2019 Title 24 and CALGreen requirements.

SOURCE: ESA, 2020.

The project would not conflict with state or local plan for renewable energy or energy efficiency. Although the project proposes new security light sources throughout the park's components and a small structure for the comfort station, it would not have a significant impact related to renewable energy for lighting and no significant impact related to the State's Title 24 building energy efficiency standards or the California Green Building Standards. Additionally, in compliance with the County's June 2020 Landscaping Ordinance, the proposed project would apply low impact development principles to the design of the site stormwater basins and include the installation of native gardens. These design features would maximize the water efficiency of the site, reduce demand on supplemental irrigation and, ultimately, reduce the energy required to supply irrigation to the project site. Furthermore, the project would convert the existing vacant lot to a recreational amenity within a high-density residential neighborhood and would serve the existing residents without generating a significant increase in vehicle trips from outside of the community. Further, the project would reduce trip distance to other recreational areas for local residents and include bike paths and pedestrian pathways resulting in a reduction in VMT. As discussed previously, the project would not substantially increase operational vehicle trips or VMT. Thus, the project would have a less than significant impact with respect to plans for minimizing vehicle miles traveled and associated transportation fuel demand.

Geology and Soils

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS — Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-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?	☐	☐	☒	☐

Discussion

a.i) **Less than Significant Impact.** The project site is not located in a fault rupture hazard zone identified by the Alquist-Priolo Earthquake Fault Zoning Act, or located within any other area with substantial evidence of a known fault as identified in local planning documents (CGS 2020a; Fallbrook 2011). The nearest active fault to the project site is the Elsinore Fault zone located approximately 10.5 miles east. Due to its distance from the project site, this fault is not considered to present a significant fault rupture hazard in the project area. Therefore, the potential for surface fault rupture at the Project site is considered to be very low, and impacts would be less than significant.

a.ii) **Less than Significant Impact.** The project site is located in the seismically active southern California region and would be subject to strong ground shaking in the event of a major seismic event. The nearest active fault zone is the Elsinore Fault located approximately 10.5 miles to the east. Due to the relatively close distance to this fault zone, the project site could be subject to strong ground motion and shaking resulting from seismic activity. The proposed project would create a new local park and would not construct any new habitable structures which could be substantially damaged and cause injury or death in the event of strong ground shaking. The project components would be required to comply with all applicable seismic regulations, including the California Building Code (CBC) and County of San Diego Code of Regulatory Ordinances, which would minimize the effects of ground shaking on the project components. Furthermore, due to the nature of the project, the project would not draw a substantial number of visitors over a long period of time. Visitors would use the local park on a relatively short-term basis per each visit. Overall, the potential risk of injury or death as a result of strong seismic ground shaking at the project site would be minimal. Thus, impacts related to ground shaking would be considered less than significant.

a.iii) **Less than Significant Impact.** Liquefaction occurs when cohesion-less soils become liquefied when agitated by strong vibratory motion due to earthquakes. Research and historical data indicate that loose granular soils and non-plastic silts that are saturated by a relatively shallow groundwater table are susceptible to liquefaction. According to the Safety Element of the County General Plan, (2011), the community of Fallbrook, including the project site, are not within a "Potential Liquefaction Area". This indicates that the liquefaction potential at the site is low. In addition, the project does not propose to construct any habitable structures in which cause adverse effects as a result of seismically induced liquefaction. As such, project-related impacts would be less than significant.

a.iv) **Less than Significant Impact.** The topography of the project site gently slopes to the south, and is underlain by Fallbrook Series soils, which consist of deep, well drained soils that formed in material weathered from granitic rock and are not considered slide prone (USDA 1973). Additionally, the project site is not within a "Landslide Susceptibility Area" as identified in the Safety Element of the County General Plan (County of San Diego 2011). As such, risk of landslides at the project site is considered to be low and landslide-related impacts as a result of the proposed project would be less than significant.

b) **Less than Significant Impact.** According to the U.S. Department of Agriculture, the majority of soils on the project site are identified as Fallbrook-Vista sandy loams, 9 to 15 percent slopes (FvD), which has a soil erodibility rating of "moderate" and a "medium" runoff class (USDA 1973). The project would include grading activities that could temporarily exacerbate erosion conditions by stockpiling of soils during construction, which could temporarily increase the amount of sediment in runoff entering the existing storm drain system. However, the proposed project would be required to obtain and comply with the Construction General Permit from the State Water Resources Control Board (SWRCB). Stormwater best management practices (BMPs) would be required to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. Furthermore, the project would be required to comply with the National Pollution Discharge Elimination System (NPDES) permit, which requires all projects over one acre in size to submit a Stormwater Pollution Prevention Plan

(SWPPP). Compliance under the Construction General Permit and SWPPP would ensure that construction activities would not degrade the surface water quality of receiving waters to levels that would be below the standards that are considered acceptable by the San Diego RWQCB or other regulatory agencies.

Once construction is complete, the project would include landscaping throughout the project site and green infrastructure improvements, including a bioretention swale, rain garden, infiltration basin, and pervious parking stalls, which would reduce surface runoff and stabilize soils. Therefore, impacts related to substantial soil erosion or the loss of topsoil would be less than significant.

c) **Less than Significant Impact.** As previously discussed above, the project site has low potential for liquefaction and landslides, and impacts are considered less than significant. Implementation of the project would comply with all applicable building and grading regulations, including the CBC and the County Code of Regulatory Ordinances, which would minimize the effects of unstable soils on the project site. Thus, the potential risk to people as a result of unstable soil would be minimal, and impacts would be less than significant.

d) **Less than Significant Impact.** Expansive soils are fine-grained soils (generally high-plasticity clays) that can undergo a significant increase in volume with an increase in water content and a significant decrease in volume with a decrease in water content. Changes in the water content of an expansive soil can result in severe distress to structures constructed upon the soil. The main soil unit underlying the project site is FvD Fallbrook-Vista sandy loams, 9 to 15 percent slopes (Figure 4). This soil type is well-drained and is not classified as expansive soils. FaB, Fallbrook sandy loam, 2 to 5 percent slope, are located on the northeastern portion of the project site. This soil type is gently sloping and are well-drained with slight erosion potential. FaC, Fallbrook sandy loam, 5 to 9 percent slopes, are also present within the northeastern project site. These soils are moderately permeable and share similar characteristics to FaB soils. At the northwestern portion of the site, near the proposed Multi-use Path and Skate Elements, underlying soils consist of FaE2 Fallbrook sandy loam, 15 to 20 percent slopes, eroded. This soil type is moderately deep and are considered well-drained (USDA 1973). In addition, all project components would comply with all applicable seismic regulations, including the CBC, and the County of San Diego Code of Regulatory Ordinances, which would ensure that effects from potential geologic hazards would be further minimized. For these reasons, impacts related to expansive soils would be less than significant.

e) **No Impact.** The project does not include the use of septic tanks or alternative wastewater disposal systems at the project site. The project would connect to the existing sewer line on E. Fallbrook Rd. Implementation of the project would not result in any impacts or changes to existing conditions regarding inadequate soils to support septic systems. Therefore, no impact would occur.

f) **Less than Significant Impact.** High paleontological resource sensitivity is assigned to geologic formations known to contain paleontological localities with rare, well preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleoclimatic, palaeobiological and/or evolutionary history of animal and plant groups.

A review of the County's Paleontological Resources Maps indicates that the project site is underlain by geologic material (Cretaceous plutonic) with zero potential for producing fossil remains (County of San Diego 2009). Although the proposed project would include construction of a local park including grading and ground disturbance for recreation features, the potential for destruction of a paleontological resource would be less than significant.

References

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Fallbrook, 2011. Fallbrook Community Plan. August 11, 2011.

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Greenhouse Gas Emissions

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VIII. GREENHOUSE GAS EMISSIONS — Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

a, b) **Less than Significant Impact.** The State of California has developed guidelines to address the significance of climate change impacts based on Appendix G of the CEQA Guidelines, which contains two significance criteria for evaluating greenhouse gas (GHG) emissions of a project. A project would have a significant environmental impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The two questions were intended to satisfy the Legislative directive in Public Resources Code Section 21083.05. Therefore, the analysis contained herein relies upon Appendix G of the CEQA Guidelines as the threshold of significance for evaluating the environmental effects of GHG emissions of the proposed project. CEQA Guidelines Section 15064.4 states that the "determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project."

Section 15064.4(b) further states that a lead agency should consider the following nonexclusive list of factors when assessing the significance of GHG emissions:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. The extent to which project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation for GHG emissions.

CEQA Guidelines Section 15064(h)(1) states that "the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable." A cumulative impact may be significant when the proposed project's incremental effect, though individually limited, is cumulatively considerable. As discussed above, climate change is the product of incremental contributions of GHG emissions on a global scale.

GHGs include carbon dioxide, methane, halocarbons (HFCs), and nitrous oxide, among others. Human-induced GHG emissions are a result of energy production and consumption, and personal vehicle use, among other sources.

The County of San Diego currently recommends projects be compared to a 900-metric-ton carbon dioxide equivalent ($MTCO_2e$) screening level to identify which projects require additional analysis and mitigation. Project emissions below this 900 $MTCO_2e$ level are considered less than cumulatively considerable, and project emissions above this level require additional analysis. If project emissions are greater than the screening threshold, the project should demonstrate how its overall GHG emissions would be reduced to 33 percent below projected Business as Usual (BAU). Moreover, projects that result in a net benefit by reducing GHG emissions are determined to have a less than significant impact related to GHG emissions. Recent Court decisions, including *Newhall Ranch*, have recommended that analyses emphasize the consideration of GHG efficiency, and while the County guidance encourages CEQA analyses to focus on the GHG efficiency of a proposed project, the County also acknowledges that some projects are sufficiently small such that it is highly unlikely they would generate a level of GHGs that would be cumulatively considerable.

The project would convert a vacant lot to a community park serving the local neighborhood. Project construction would use construction equipment and would occur over a seven-month period. Construction emissions would vary from day-to-day and where construction activities would include clearing, grubbing, grading, paving, hauling construction supplies, building construction of the comfort station, and landscaping operations. Due to the limited construction equipment and duration, the amount of emissions generated during construction would be relatively minimal and would not have the potential to generate a level of GHGs that would be cumulatively considerable. Construction-related GHG emissions would cease upon completion and would not contribute to long-term or on-going GHG emissions. Construction GHG emissions for the project modeled using CalEEMod and EMFAC2017 are shown in **Table 10**. The project's GHG emissions are amortized over the life of the project and included in the operational GHG emissions discussed below.

TABLE 10
ESTIMATED CONSTRUCTION GREENHOUSE GAS EMISSIONS

Construction Year	Project CO_2e (Metric Tons) [a,b]
2021	241
2022	326
Total	**567**
Amortized Emissions (30-years)	**19**

[a] Totals may not add up exactly due to rounding in the modeling calculations.

[b] CO_2e emissions are calculated using the global warming potential values from the Intergovernmental Panel on Climate Change *Fourth Assessment Report: 25 for CH_4 and 298 for N_2O* (Intergovernmental Panel on Climate Change, *Fourth Assessment Report: The Physical Science Basis, Summary for Policy Makers*, 2007).

SOURCE: Appendix A, Air Quality/Energy/Greenhouse Gas Emissions Calculations, ESA 2020

Operation of the project would generate a greater but still relatively small amount of operational emissions than the site currently generates since the site is vacant. However, as discussed in Section XVII, the project would not substantially increase operational vehicle trips or VMT since it is anticipated to serve the surrounding local neighborhood and is not anticipated to draw a substantial number of park users from outside the community. Additionally, as mentioned previously, the proposed project would create additional bikeways and pathways as a way of reducing VMT. The project would include a development of Class I bike paths for shared use with bicyclists and pedestrians within the project site, which would connect to the Fallbrook Community Center and La Paloma Elementary school by way of the Class IV bikeway constructed as part of the Fallbrook Community Bike Plan development. The connectivity of these paths leading to the park will provide safe, multi-modal access and, ultimately, reduce the number of vehicle trips to access the facility. Apart from operational vehicle trips and VMT, other operational GHG emissions would be minimal and attributed to the energy required to provide security lighting at the park and to supply, distribute, and treat water and wastewater generated by the project.

The project's estimated annual operational GHG emissions and total net GHG emissions (including the construction GHG emissions amortized over 30 years) are shown in **Table 11**. Due to the minimal amount of GHG emissions generated from project construction and operation (< 900 metric tons of carbon dioxide equivalent emissions annually), the project would not conflict with any applicable plan, policy, or regulation related to GHGs. The project would improve a vacant lot by converting it to a recreational land use serving the surrounding residential neighborhood without generating a significant increase in vehicle trips from outside of the community. Furthermore, the proposed project would sequester carbon by including at least 100native and hardy adapted/drought tolerant tree plantings which would be strategically placed to shade structures and mitigate urban heat island effects. Recently, the County's DPR has focused on planting 'climate-ready' species that are adapted to withstand changing climate conditions without relying on supplemental irrigation. The County utilized the default carbon dioxide accumulation factor from CalEEMod to estimate emissions reductions from tree plantings. Under this methodology, the approximately 100 trees planted for this project would sequester four (4) metric tons of carbon dioxide. Additionally, in compliance with the County's June 2020 Landscaping Ordinance, the proposed project would apply low impact development principles to the design of the site stormwater basins and include the installation of native gardens. These design features would maximize the water efficiency of the site and reduce demand on supplemental irrigation. Therefore, since the project would be designed in a manner that incorporates GHG efficiency measures and would not substantially increase VMT and transportation-related GHG emissions, the project would not result in GHG emissions that would have a significant impact on the environment.

TABLE 11
ESTIMATED ANNUAL OPERATIONAL GREENHOUSE GAS EMISSIONS (BUILDOUT YEAR 2022)

Emissions Source	Proposed Project CO_2e (metric tons) [a]
Construction (Amortized)	19
On-Road Mobile	108
Area	8
Electricity	3
Natural Gas	0
Water and Wastewater	14
Solid Waste	<1
Tree Planting (Carbon Sequestration)	(4)
Total	**148**

[a] Totals may not add up exactly due to rounding in the modeling calculations.

SOURCE: Appendix A, Air Quality/Energy/Greenhouse Gas Emissions Calculations, ESA 2020

Moreover, for the reasons discussed above, the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The most applicable plan, policy, or regulation is the County's Climate Action Plan (CAP), which was adopted by the Board of Supervisors on February 14, 2018[1]. The

[1] In March 2018, several petitioners filed a lawsuit against the County, alleging that the CAP and, in particular, M-GHG-1 were inconsistent with General Plan Goal COS-20 and Policy COS-20.1. In December 2018, the San Diego Superior Court (Judge Timothy B. Taylor, presiding) issued a writ ordering the approval of the CAP and its Environmental Impact Report (EIR) to be set aside, and enjoining reliance on the County CAP's mitigation measure M-GHG-1. (See Judge Taylor's Minute Order, dated December 24, 2018, at page 17.) In January 2019, the County appealed the San Diego Superior Court ruling, which stayed the above described writ issued by Judge Taylor. On June 12, 2020, the 4th District Court of Appeal also found that dependence upon carbon offsets was not legal. In response, the County is currently revising its 2018 CAP and EIR. Given the current legal uncertainty and ongoing revisions to the County's CAP, the CEQA analysis prepared for the proposed project did not rely on the CAP to streamline the proposed project's environmental analysis under State CEQA Guidelines Section 15183.5. Rather, the proposed project's significance determination used the criteria contained in State CEQA Guidelines Appendix G (informed by State CEQA Guidelines Section 15064.4) and mitigation strategies (informed by State CEQA Guidelines Section 15126.4(c)) that are independent of the CAP. As such, in the event that the CAP does

CAP outlines actions that the County would undertake to meet its GHG emissions reduction targets. However, the County's CAP has been challenged in court and invalidated by the 4th District Court of Appeals in San Diego, and therefore the project does not have to demonstrate consistency with the CAP. The project would be consistent with San Diego Association of Governments' (SANDAG) San Diego Forward: The Regional Plan, which is a combination of the Regional Comprehensive Plan (RCP) with the 2050 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). The plan identifies strategies to encourage sustainability in the region and includes focused housing and job growth in urban areas, ensuring smart growth and preserving open space, habitat, cultural resources, and farmland, investing in a transportation network with alternative transit options, addressing housing needs, and implementation through collaboration. The project includes pedestrian pathways and bike paths to actively encourage alternative transportation options and would reduce VMT by locating a park in a dense residential. Therefore, the project is consistent and does not conflict with the goals of the San Diego Forward plan.

Furthermore, the proposed project is consistent with the County General Plan, as it would support development of recreational opportunities while preserving habitat within the Multiple Species Conservation Program (MSCP) area. The proposed project would also be consistent with the Scoping Plan, as it would not hinder progress towards statewide reduction targets, while project emissions would decrease over the life of the proposed project as State measures are implemented.

Therefore, the proposed project's incremental contribution to cumulative GHG emissions is determined to not be cumulatively considerable because emissions are below relevant numerical thresholds, and the proposed project is consistent with the CAP, General Plan, and Scoping Plan.

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not withstand judicial scrutiny, the proposed project has undergone a separate, stand-alone analysis for determining whether the proposed project's GHG emissions would significantly impact the environment.

Hazards and Hazardous Materials

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
IX. HAZARDS AND HAZARDOUS MATERIALS — 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 one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials 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 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 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?	☐	☐	☒	☐

Discussion

a) **Less than Significant Impact.** The project would result in construction of a local park. Project construction would require the use of materials that are typically associated with construction activities, such as diesel fuels, hydraulic liquids, oils, solvents, and paints. However, the proposed project would not result in a significant hazard to the public or environment because all storage, handling, transport, emission and disposal of hazardous substances would be in full compliance with applicable regulations such as the Federal Resource Conservation and Recovery Act (RCRA), Department of Transportation (DOT) Hazardous Materials Regulations, and the local Certified Unified Program Agency (CUPA) regulations. These regulations provide tracking methods, standards, and procedures for the management of hazardous materials, as well as spill response measures. Because compliance with these regulations is mandatory, construction activities are anticipated to create a less than significant hazard to the public through use, transport, or disposal of hazardous materials. According to the Site Assessment and Mitigation Program Letter for the proposed project (Appendix D), no leaking underground storage tanks are present on the project site. Nevertheless, any potentially hazardous materials found on site would be removed in accordance with state and federal regulations regarding the transport, use, and storage of hazardous materials. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction.

Operation of the project would primarily not require the use of hazardous materials, with the exception of the potential use of commercial fertilizers, pesticides, or other landscaping chemicals. The use of all hazardous materials would be in accordance with all applicable hazardous materials regulations, including San Diego County Board of Supervisors Policy F-45 (Pesticide Use Reduction) to ensure that all effects to humans and the environment would be minimized. Therefore, construction and operational of the project would result in less than significant impacts related to the use, transport, and disposal of hazardous materials.

b) **Less than Significant Impact.** As detailed above, project construction would use typical construction materials, which would include hazardous materials such as diesel fuels, hydraulic liquids, oils, solvents, and paints. Operation of the project would primarily not require the use of hazardous materials, with the exception of use of commercial landscaping chemicals on an as needed basis. The use of landscaping chemicals would be limited due to conformance with San Diego County Board of Supervisors Policy F-45, which involves the use of non-chemical pest control methods and the careful use of chemical methods when non-chemical methods have been considered and evaluated.

As discussed in Section IX(a), all storage, handling, transport, emission, and disposal of hazardous substances would be in full compliance with applicable regulations such as the RCRA, DOT Hazardous Materials Regulations, and the local CUPA regulations. These regulations address spill response measures in order to reduce potential impacts on the public or the environment due to accidental spills. The local CUPA, the Department of Environmental Health and Quality - Hazardous Materials Division, develops and implements risk management plans and emergency response plans containing procedures to prevent accidental releases and to appropriately respond if accidental releases occur. Therefore, due to the low quantity of hazardous materials used during construction and operation and the compliance with Federal, State, and local regulations during construction and operational phases of the project, the proposed project would result in less than significant impacts related to foreseeable upset and accidental conditions.

c) **No Impact.** There are no existing or proposed schools within a 0.25-mile radius of the project site. Therefore, implementation of the proposed project would not create any impacts associated with hazardous emissions or handling of acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. No impact would occur.

d) **No Impact.** Government Code Section 65962.5 requires the California EPA (Cal EPA) to develop an annually update the Hazardous Waste and Substances Sites (Cortese) List. A review of the DTSC EnviroStor and SWRCB GeoTracker databases did not identify any open cleanup sites or hazardous waste facilities within the project site (DTSC 2020;

SWRCB 2020). According to the Site Assessment and Mitigation Program Letter for the proposed project (Appendix D), there are five Leaking Underground Storage Tanks (LUST) sites or other environmental cases within 0.5 miles of the site; however, all of five of these sites have received a closure summary and do not require further investigation. The nearest reported case is a cleanup program site located immediately approximately 0.4 miles west of the project site at 218 East Aviation Road (SWRCB 2020). The cleanup site is listed as case closed as of July 31, 1992, and as such does not have the potential to leak hazardous materials into the project site (SWRCB 2019). Therefore, as the project site is not listed as an open cleanup site or hazardous waste facility, no impact would occur.

e) **Less than Significant Impact.** The project site is located approximately 1.5 miles from the Fallbrook Community Airpark and is located within the Fallbrook Community Airpark Land Use Compatibility Plan Review Area 2 of the Airport Influence Area. Review Area 2 consists of locations beyond Review Area 1, but within the airspace protection and/or overflight notification areas (ALUC 2011). Within Review Area 2, only structures larger than 35 feet in building height are subject to Airport Land Use Commission review (ALUC 2011). The project would not include the construction of any structure greater than 35 feet in height that would constitute a safety hazard to aircraft and/or operations from an airport or heliport. Therefore, the proposed project would not constitute a safety hazard for people residing or working in the project area, and impacts would be less than significant.

f) **No Impact.** The proposed project would be located along East Fallbrook Street, which has been identified as a secondary evacuation route by the North County Fire Protection District (NCFPD) (NCFPD 2020). No roadway closures are expected to be required during construction of the project. Therefore, implementation of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No impact would occur.

g) **Less than Significant Impact.** According to the California Department of Forestry and Fire Protection (CalFire), the project site is not located within a Very High Fire Hazard Severity Zone (VHFHSZ). The project site is vacant and vegetated with relic trees from previous nursery operations, however, due to its proximity to existing development, the potential for wildland fire risk would be reduced. Further, the project does not propose to construct any habitable structures or infrastructure in which would exacerbate fire risk. Therefore, the project would not expose people or structures directly or indirectly to a significant risk of loss, injury, or death from wildfires. Impacts would be less than significant.

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Hydrology and Water Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
X. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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 offsite;	☐	☐	☒	☐
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?	☐	☐	☒	☐

Discussion

a) **Less than Significant Impact.** The project would result in the construction of a new local park. During construction, earthwork activity could temporarily increase the amount of sediment in runoff, which would enter the existing storm drain system. The project would be required to obtain and comply with the Construction General Permit from the SWRCB. Stormwater BMPs would be required to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. It is assumed that the limits of disturbance for the proposed project would require a SWPPP. Compliance under the Construction General Permit and SWPPP would ensure that construction activities would not degrade the surface water quality of receiving waters to levels that would be below the standards that are considered acceptable by the San Diego RWQCB or other regulatory agencies.

Once construction is complete, the project would include several park components, landscaping improvements, and associated parking. Construction of the project would increase the amount of impervious surfaces on the project site with the construction of the skate elements, passive recreation area, shaded picnic area, comfort station, and sidewalks. However, the project would include the construction of open space and landscaping, and development of a bioretention swale, rain garden, an infiltration basin, and permeable paving within the parking lot, which would prevent particles, debris, and petroleum-based materials from being conveyed into the storm drain system. These activities would minimize erosion and dust that could potentially degrade surface or ground water quality. Therefore, the project would not violate any water quality standards and impacts would be less than significant.

b, e) **Less than Significant Impact.** No groundwater wells are proposed as part of the project. Water for the proposed project would be supplied by the Fallbrook Public Utilities District (FPUD), a member of the San Diego County Water Authority (SDCWA).

The project site is currently a disturbed and vacant piece of land which would be converted into a local park. Construction of the proposed parking lot, skate elements, shaded area, comfort station, and sidewalks would increase the area of impervious surfaces in the project site. However, the project would include the use of pervious decomposed granite for the proposed off-leash dog zone, soft surface trails, and permeable parking stalls where feasible. The remainder of the site would be revegetated with native plantings, natural turf and grasses, and shade trees. Therefore, although the amount impervious surfaces would be increased as a result of the project, storm water would continue to percolate and infiltrate into the groundwater basin. As a result, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts related to groundwater quality would be less than significant.

c.i) **Less than Significant Impact.** Construction of the proposed project would include surficial grading activities to construct the new local park. These activities could temporarily alter the ground surface, consequently altering drainage patterns. Altered drainage patterns have the potential to result in erosion or sedimentation on or offsite by redirecting or concentrating flows on-site. However, as described above, the proposed project would be required to comply with the Construction General Permit and a SWPPP specific to the project site, which would include BMPs to reduce the potential for erosion or siltation. After the completion of construction, the project would include new landscaping and features designed to reduce erosion and siltation on and offsite including a bioretention swale, rain garden, and infiltration basin. These measures would control erosion and sedimentation and satisfy waste discharge requirements as required by the SDRWQCB MS4 Permit (SDRWQCB Order No. R9-2015-0100). Therefore, the project would not result in substantial erosion or siltation on- or offsite, and impacts would be less than significant.

c.ii) **Less than Significant Impact.** As described above in Section X(a), the project would include the construction of impervious features, such as the skate elements, sidewalks, and other recreational features. However, the parking lot would include the implementation of Green Infrastructure improvements, including a bioretention swale, rain garden, and infiltration basin, which would reduce the potential for flooding on-site. Further, the other impervious elements would be constructed in accordance with the County's Hydrology Manual, Hydraulic Design Manual, and BMP Design Manual. Additionally, no stream or river courses run through the project site that could be affected by the proposed project. Therefore, impacts on the existing drainage pattern resulting in flooding on- or off-site would be less than significant.

c.iii) **Less than Significant Impact.** See discussion under Sections X(c.i)and X(c.ii) above. Construction of the proposed project would not result in significant impacts on the existing drainage pattern due to implementation of BMPs that would minimize flooding and runoff. After the completion of construction, the project site would be landscaped and include new hardscaped recreational amenities. The hardscaped areas would be designed to properly convey stormwater drainage to prevent pooling or flooding. In addition, pervious pavements and Green Infrastructure would reduce the potential for substantial runoff. Drainage for the site would continue to be serviced by the existing storm drain system. Therefore, impacts related to runoff exceeding the drainage system capacity would be less than significant.

c.iv) **Less than Significant Impact.** The project site does not contain any natural or artificial water courses. According to the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map, the project site is not within a 100-year floodplain (FEMA 2020). Naturally the topography of the site slopes gently to the south. Construction of the project may result in a minimal increase of impervious surfaces, however, the project would incorporate the use of BMPs during construction and operation, as discussed in Section X above. As the project site remains entirely out of the areas designated as special flood hazard areas, there would be a low potential for flood hazards onsite. Furthermore, because the project site is not located within a flood zone and does not proposed to construct large structures onsite, the project would not redirect or impede flood flows (FEMA 2020). For these reasons, impacts related to flood flows would be less than significant.

d) **Less than Significant Impact.** The project site is located approximately 14 miles east of the Pacific Ocean. According to the Tsunami Inundation Map, the project site is not at risk of tsunami inundation (DOC 2020). In addition, the project site is not located near a body of water, and therefore not at risk by seiche. According to FEMA's Flood Insurance Rate Map the project site is not within the 100-year floodplain (FEMA 2020). As the project site remains entirely out of the areas designated as special flood hazard areas, there would be a low potential for flood hazards or release of pollutants due to inundation onsite. Thus, impacts related to increased risks from seiche, tsunami, or flood hazards with project implementation would be less than significant.

References

California Regional Water Quality Control Board (RWCQB), 2013. *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region.* Order No. R9-2013-0001. May 8, 2013.

County of San Diego, 2015. *Jurisdictional Runoff Management Program Document Update*. June 26, 2015.

County of San Diego Department of Public Works (DPW), 2003. *San Diego County Hydrology Manual*. June 2003.

County of San Diego Department of Public Works (DPW), 2014. San Diego County Hydraulic Design Manual.

County of San Diego Department of Public Works (DPW), 2020. 2020 BMP Design Manual

California Department of Conservation (DOC), 2020. *San Diego County Tsunami Inundation Maps.* Available at https://www.conservation.ca.gov/cgs/tsunami/maps/San-Diego, accessed November 2, 2020.

Federal Emergency Management Agency (FEMA), 2020. *National Flood Hazard Layer FIRMette, San Diego County 060284*. Revised May 16, 2012. Available at https://msc.fema.gov/portal/search?AddressQuery=fallbrook%2C%20CA#searchresultsanchor, accessed November 3, 2020.

Land Use and Planning

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XI. LAND USE AND PLANNING — 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?	☐	☐	☒	☐

Discussion

a) **No Impact.** The project does not propose the introduction of new infrastructure such as major roadways, water supply systems, or utilities to the area. The proposed project would add a local park adjacent to residential uses, compatible with the character and use of the surrounding area. Therefore, the proposed project would not significantly disrupt or divide an established community. No impact would occur.

b) **Less than Significant Impact.** The project site is designated in the County General Plan as VR-7.3 (Village Residential) and zoned as RS Residential-Single (County of San Diego 2011a; 2011b). Implementation of the project would be consistent with the applicable zoning and land use regulations for the site.

The proposed project is located within the unincorporated community of Fallbrook, which is under the County of San Diego jurisdiction. The County of San Diego General Plan and Fallbrook Community Plan are the applicable planning documents for the project site.

The goals and policies established by the County of San Diego General Plan and the Fallbrook Community Plan that would be relevant to the proposed project are described in **Table 12**.

The proposed project would be consistent with the abovementioned goals and policies because the proposed project would provide active and passive recreation for the local community. Therefore, the proposed project would not result in a conflict with the applicable land use plans, ordinances, and policies, and would have a less-than-significant impact.

TABLE 12
PROJECT CONSISTENCY WITH APPLICABLE LAND USE PLANS, POLICIES, OR REGULATIONS

Applicable Land Use Plan, Policy or Regulation	Consistency Determination
County of San Diego General Plan	
Goal COS-21: Park and Recreational Facilities. Park and recreation facilities that enhance the quality of life and meet the diverse active and passive recreational needs of County residents and visitors, protect natural resources, and foster an awareness of local history, with approximately ten acres of local parks and 15 acres of regional parks provided for every 1,000 persons in the unincorporated County.	**Consistent.** Implementation of the proposed project would provide approximately 6.8-acres of local parks within the community. Amenities include a shaded picnic area, play area, open lawn area, off-leash dog zone, soft surface trails, multi-use path, and passive recreation area, which would provide new active and passive recreational opportunities for residents of all ages, interests, and abilities
Policy COS-21.1: Diversity of Users and Services. Provide parks and recreation facilities that create opportunities for a broad range of recreational experiences to serve user interests.	**Consistent.** The project would provide a variety of recreational amenities for all ages and users, including a shaded picnic area, play area, open lawn area, off-leash dog zone, soft surface trails, multi-use path, and passive recreation area,
Policy COS-21.3: Park Design. Design parks that reflect community character and identity, incorporate local natural and cultural landscapes and features, and consider the surrounding land uses and urban form and cultural and historic resources	**Consistent.** See Goal COS-21 above.
Policy COS-21.5: Connections to Trails and Networks. Connect public parks to trails and pathways and other pedestrian or bicycle networks where feasible to provide linkages and connectivity between recreational uses.	**Consistent.** The project would include sidewalks and development of a Class I bike path for shared use with bicyclists and pedestrians within the project site, which would connect to the Fallbrook Community Center and La Paloma Elementary school by way of the Class IV bikeway constructed as part of the Fallbrook Community Bike Plan development.
Fallbrook Community Plan	
Goal COS 2.1: A well-balanced system of recreational facilities (public and private) that serves the Fallbrook community and meets the needs of all ages through both active and passive recreational opportunities.	**Consistent.** The project would provide a variety of recreational amenities for a variety of ages and users, including a shaded picnic area, play area, open lawn area, off-leash dog zone, soft surface trails, multi-use path, and passive recreation area,

SOURCE: County of San Diego 2011a; 2011b

References

County of San Diego, 2011a. *County of San Diego General Plan, Conservation and Open Space Element.* August 2011.

____, 2011b. *Fallbrook Community Plan*. August 3, 2011.

Mineral Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES — 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?	☐	☐	☐	☒

Discussion

a, b) **No Impact.** According to the County's General Plan Conservation and Open Space Element, the project site has been classified as Mineral Resource Zone (MRZ-) 3, which are areas containing minerals of unknown significance (DOC 1996; County of San Diego 2011a). The project site is surrounded by developed land uses, including residential and commercial agricultural land uses. A future mining operation at the project site would likely create a significant impact to neighboring properties for issues such as noise, air quality, traffic, and possibly other impacts. Therefore, the site would not likely be made available for mineral extraction activities in the future. Implementation of the project would not 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. Therefore, there would be no impact on the loss of availability of known or locally important mineral resources, or the loss of a mineral resource delineated on a land use plan.

References

California Department of Conservation (DOC), 1996. Update of Mineral Land Classification: Aggregate Materials in the Western San Diego Production-Consumption Region, 1996, California Department of Conservation, Division of Mines and Geology.

County of San Diego, 2011a. County of San Diego General Plan, Conservation and Open Space Element. August 2011.

____, 2011b. *Fallbrook Community Plan*. August 3, 2011.

Noise

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIII. NOISE — 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?	☐	☐	☐	☒

Discussion

a) **Less than Significant with Mitigation Incorporated.** The vicinity of the project site includes residential uses, a commercial nursery, a community center and school, and vacant/undeveloped land. East Fallbrook Street is located directly to the north of the project site, which is bounded by Golden Road on the west and Morro Road on the east. Both Golden Road and Morro Road are considered secondary street, connecting residential areas to the arterial, East Fallbrook Street. In rural residential settings, traffic noise is the primary contributor to ambient noise, although there may be other periodic contributors to noise such as nursery delivery trucks traveling in the area, lawnmowers, barking dogs, and other existing noise sources common to residential and open space areas.

The County of San Diego Municipal Code (County 2017) establishes prohibitions for disturbing, excessive, or offensive noise, and provisions such as sound level limits for the purpose of securing and promoting the public health, comfort, safety, peace, and quiet for its citizens (Chapter 4, Noise Abatement and Control). Section 36.408 of the County's Municipal Code prohibits construction between the hours of 7:00 p.m. and 7:00 a.m. Monday through Saturday, and at any time on Sunday or a holiday (i.e., construction is allowed Monday through Friday between 7:00 a.m. to 9:00 p.m.; and Saturdays and National Holidays between 8:00 a.m. to 6:00 p.m.). In addition, Section 36.409 of the County's Municipal Code sets a maximum noise level for construction equipment of 75 dBA for an eight-hour period, between 7:00 a.m. and 7:00 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

For operations, County of San Diego Municipal Code Section 36.404, General Sound Level Limits, indicates that for residential uses zoned R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-90, S-92, and R-V and R-U with a density of less than 11 dwelling units per acre, the one-hour sound level limits are 50 dBA during daytime hours

(7:00 a.m. to 10:00 p.m.) and 45 dBA during nighttime hours (10:00 p.m. to 7:00 a.m.). However, County of San Diego in its Guidelines for Determining Significance for Noise (County of San Diego, Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, January 27, 2009), stated that if the measured ambient level exceeds the applicable limit noted above, the allowable one- hour average sound level shall be the ambient noise level, plus three decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating.

Existing Ambient Noise Levels

To establish baseline noise conditions representing the nearby noise sensitive land uses in the vicinity of the project site, existing ambient noise levels measurements were conducted on December 1, 2020 at 5 locations on the project site. **Figure 5** shows the locations of the noise measurements, labeled as R1 through R5, as described as follows:

- R1 - on the northwest project site boundary, approximately 80 feet from residential uses north of East Fallbrook Street;
- R2 - on the northeastern project site boundary, approximately 50 feet from residences on the west side of Morro Road;
- R3 – on the southeastern project site boundary, west of Morro Road, approximately 150 feet west of the residences on the east side of Morro Road;
- R4 – on the southern project site boundary, midway between Morro Road and Golden Road, approximately 50 feet north of residences to the south of the project site;
- R5 – on the southwestern project site boundary, approximately 50 feet north of the residences to the south of the project site.

Short-term (15-minute) noise measurements were conducted at each of the measurement locations to characterize the existing noise environment at the project site. Measured noise levels at the project site represent typical noise levels expected in a suburban, mostly residential, environment. The predominant existing noise source observed was vehicle traffic noise from the roadways surrounding the project site. Secondary noise sources observed included general residential-related activities, such as landscaping and refuse service activities, and intermittent aircraft flyovers. **Table 13** lists the measured ambient noise levels at the project site.

SOURCE: ESA, 2020;ESRI, 2020

Fallbrook Local Park

Figure 5
Noise Measurement Locations

ESA

TABLE 13
SUMMARY OF SHORT-TERM AMBIENT NOISE MEASUREMENTS

Measurement Locations Date (Time of Day)	Noise Level (dBA L_{eq}) [a]
R1	
12/1/20 (8:13 AM - 8:28 AM)	68.6
R2	
12/1/20 (8:30 AM - 8:45 AM)	45.7
R3	
12/1/20 (8:48 AM - 9:03 AM)	51.4
R4	
12/1/20 (9:05 AM – 9:20 AM)	40.5
R5	
12/1/20 (9:25 AM - 9:40 AM)	50.8

[a] Detailed measured noise data is included in Appendix D. The ambient noise measurements were conducted using Larson Davis's model 820 Precision Integrated Sound Level Meter (SLM), which is a Type 1 standard instrument, as defined in the American National Standard Institute S1.4. The SLM was within its annual factory calibration, field calibrated prior to conducting measurements, and operated according to the applicable manufacturer specification. The microphone of the SLM was placed at a height of five feet above the local grade, representing an average height of the human ear.

SOURCE: ESA, 2020.

Construction Impacts

Construction of the project is anticipated to occur over a seven-month period, beginning in Fall 2021 and ending in Summer 2022. Construction activities would consist of site preparation and clearing, grading/excavation, paving, landscaping/trail construction/ancillary facilities construction, and architectural coating. The proposed play area, parking lot, and portions of the open lawn area would be graded to a level surface, while other recreation components would utilize the existing slope, including, but not limited to, the proposed skate elements and off-leash dog-zone. Construction equipment used would include, but not be limited to, dozers, tractors/loaders/backhoes, excavators, graders, loaders, pavers, paving equipment, rollers, air compressors, cement and mortar mixers, and plate compactors.

Project construction would generate noise from the daytime operation of construction equipment on the project site and from haul truck trips on local roadways accessing and departing the project site. Project construction would use small-scale construction equipment over a seven-month period, where construction activities would vary from day-to-day. As the project site is vacant, no demolition would occur onsite. In addition, as no large buildings are proposed, there would be no pile driving activities. The construction activities associated with the surficial grading would have the greatest potential to generate noise during construction; however, these activities would be conducted using small-scale construction equipment and would not occur continuously over the seven-month construction period. The following construction phases and equipment listed in **Table 13** are assumed for the proposed project.

TABLE 14
CONSTRUCTION EQUIPMENT

Phase Name	Equipment Type	Equipment Amount[1]	Hours per Day
Site Preparation/Clearing	Rubber Tired Dozers	2	8
	Tractors/Loaders/Backhoes	3	8
Grading/Excavation	Tractors/Loaders/Backhoes	1	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Loaders	2	8
Paving	Pavers	1	8
	Paving Equipment	1	8
	Rollers	1	8
Ancillary Facilities/Landscaping/ Trail Construction	Tractors/Loaders/Backhoes	2	8
	Cement and Mortar Mixers	1	8
	Compactor	1	8
	Graders	1	8
	Rollers	1	8
Architectural Coating	Air Compressor	1	6

1 Equipment quantities were assumptions made on the size of the park and intensity of work. Assumptions were based on a previous park construction project modeled by ESA.

According to the FHWA Roadway Construction Noise Model, which is based on a survey of heavy-duty construction equipment used for large scale projects, reference construction equipment noise levels for equipment such as an excavator, dump truck, forklift, and tractor/loader/backhoe range from an average of 69 to 77 dBA Leq at a distance of 50 feet from the equipment, taking into account equipment usage factors. Since this project is not a large-scale project and would use small-scale construction equipment, actual equipment noise levels would be less than the values listed below.

Individual pieces of construction equipment that would be used for construction of the project produce maximum noise levels of 77 dBA to 85 dBA at a reference distance of 50 feet from the noise source, as shown in **Table 15**. The construction equipment noise levels at 50 feet distance (Referenced Maximum Noise Levels) are based on the FHWA RCNM User's Guide,[2] which is a technical report containing actual measured noise data for construction equipment. Table 15 also presents the percentage of time that each piece of construction equipment would be operating at full power (the "acoustical usage factor") for a 1-hour period, as well as the resulting noise levels at 50 feet from an active construction area. Table 15 further lists the average noise level over the 1-hour period,

2 FHWA, Roadway Construction Noise Model, 2006.

taking into account each equipment's usage factor. While limited amounts of noise might be perceivable at the residences that are directly adjacent to the site during certain construction activities, those construction activities would occur on an interval basis and would be intermittent throughout the day depending on the type of construction activity and distance from the site boundary. It is assumed that over an 8-hour day, an area that covers between 200 feet from within the project site's property line to the property line nearest the offsite sensitive receivers to the east or south of the project site would be actively constructed by onsite equipment during each construction phase.

TABLE 15
CONSTRUCTION EQUIPMENT NOISE REFERENCE LEVELS AND USAGE FACTORS

Type of Equipment	Acoustical Usage Factor[a] (%)	Reference Maximum Noise Levels at 50 Feet,[a,b] L_{max} (dBA)	Reference Average Noise Levels at 50 Feet, Leq (dBA)
Air Compressor	40	78	74
Backhoe	40	78	74
Bulldozer	40	82	78
Cement and Mortar Mixer	50	80	77
Compactor (ground)	20	83	76
Concrete Mixer Truck	40	79	75
Dozer	40	82	78
Excavator	40	81	77
Grader	40	85	81
Front End Loader	40	79	75
Roller	20	80	73
Tractor	40	80	76
Asphalt Paver	50	77	74

[a] The usage factor is the percentage of time during a construction noise operation that a piece of construction is operating at full power.
[b] Construction equipment noise levels are based on the FHWA RCNM.
SOURCE: FHWA, Roadway Construction Noise Model User's Guide, 2006, Table 1.

Construction Noise Impacts to Off-Site Sensitive Receptors

Off-site sensitive land uses include residential uses located to the north, east, and south of the project site, approximately 50 to 100 feet from the project's closest boundary. Noise impacts from project construction activities would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to off-site noise-sensitive receptors.

The noise from construction equipment would generate both steady-state and episodic noise that could be heard within and adjacent to the project site. Construction noise levels fluctuate throughout a given workday as construction equipment moves from one location to another within a project site. When construction equipment would be in use further away from a sensitive receptor location, construction noise levels would be lower than the calculated values provided in this analysis, which assumes construction equipment would be in use nearest to a sensitive receptor location. It is assumed that exposure to fluctuating construction noise levels would be lower than the noise levels shown in the analysis below.

Individual pieces of construction equipment that would be used for construction of the project would produce maximum noise levels of 77 dBA to 85 dBA Lmax and an average noise level over a 1-hour period of 73 to 81 dBA Leq, at a reference distance of 50 feet from the noise source, as shown in **Table 15**. These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed).

Table 16 provides the aggregate noise level from each piece of equipment provided in Table 15 operating in the same area over a 1-hour period, using the utilization factors also provided in Table 15, and the impact at 50 feet from an active construction area. For a worst case scenario, it is assumed that during each construction phase, the construction equipment used in that construction phase would operate within an area between 200 feet from within the project site's property line to the property line nearest the offsite sensitive receiver to the east or south over an 8-hour construction day. Therefore, the mid-point of the construction area would be 100 feet from the property line. Between 50 feet and 100 feet from the property line, the construction activity noise would be attenuated by 6 dBA at the nearest sensitive receiver.

Table 16 presents the noise levels from individual and multiple pieces of equipment during each construction phase. Individual pieces of construction equipment would produce an average noise level over a 1-hour period of 73 to 78 dBA Leq, at a reference distance of 50 feet from the noise source, except for the grader that would result in a noise level of 81 dBA leq (1h) at a distance of 50 feet. At 100 feet, noise associated with one grader would result in 75 dBA over a 1-hour period. Other equipment would result in 67 to 71 dBA Leq (1h) at 100 feet. As a rule of thumb, two equal strength noise sources (e.g., 72 dBA and 72 dBA) combined together would result in a 3 dBA increase to result in 75 dBA from both noise sources. Combining more than two pieces of the equipment in the same area over the same time period would likely result in a combined noise level that exceeds 75 dBA.

TABLE 16
CONSTRUCTION NOISE IN EACH CONSTRUCTION PHASE

Phase Name	Equipment Type/Number	Reference Average Noise at 50 feet, Leq(1h)[1]	Aggregate Noise Level at 50 feet, Leq(8h)[1]
Site Preparation/Clearing	Rubber Tired Dozers/2	78	83
	Tractors/Loaders/Backhoes/3	75/76/74	
Grading/Excavation	Tractors/Loaders/Backhoes/1	75/76/74	85
	Excavators/2	77	
	Graders/1	81	
	Rubber Tired Loaders/2	75	
Paving	Pavers/1	74	78
	Paving Equipment/1	74	
	Rollers/1	73	
Ancillary Facilities/Landscaping/ Trail Construction	Tractors/Loaders/Backhoes/2	75/76/74	85
	Cement and Mortar Mixers/1	75	
	Compactor/1	76	
	Graders/1	81	
	Rollers/1	73	
Architectural Coating	Air Compressor/1	74	74

1 Assuming construction equipment would operate with the same usage factor over the 8-hour period, similar to the 1-hour usage factor.

SOURCE: ESA, January 2021

Table 16 shows that the highest average noise levels associated with each construction phase would range from 74 dBA Leq(1h) for the architectural paving phase and 85 dBA Leq (1h) during grading/excavation and ancillary Facilities/Landscaping/Trail Construction phases, measured at a distance of 50 feet from the active construction area. At the nearest residential property line, which would be 100 feet from the center of the active construction area described previously (which would reduce noise levels by 6 dBA), construction noise level would be reduced to 68 and 79 dBA Leq(1h). It is assumed that each equipment would be operating with the same utilization factor throughout the 8-hour construction day (Leq(8h)), the noise level would be averaged to the same level of noise as the 1-hour average (Leq(1h)). The nearest off-site sensitive receptors at 50 to 100 feet from the project boundary would be exposed to a maximum construction noise level of 79 to 73 dBA Leq(8h), respectively.

The nearest residence to the south of the project site has no outdoor living area on the north side of the property. In addition, there is an elevation difference between the project site and the residential property, which would increase the shielding provided by the residential building itself to the outdoor living area on the south side of the residential building. With the noise attenuation provided by the residential building, no project-related construction noise impact would occur for the nearest residence to the south of the project site. However, the nearest off-site sensitive receptor at 50 feet from the project boundary near the northeast corner of the project site would be exposed to 79 dBA Leq(8h). The project site's range of construction noise levels at the northeast residence would be above the County's 75 dBA Leq(8h) noise threshold for construction activities that occur over an 8-hour period for all land use types (Section 36.409, Sound Level Limitations on Construction Equipment). Therefore, noise impacts resulting from construction related activities to the off-site sensitive (i.e., residential) uses would result in significant environmental effects. Therefore, **Mitigation Measure NOI-1** would be required to be implemented, which includes noise reduction techniques that would reduce impacts to a less than significant level. A free-standing noise barrier that blocks the line-of-sight between the noise source and the receiver would provide a minimum of 5 dBA in noise reduction. Since some construction equipment would have noise sources such as engine or exhaust that is above ground level, a minimum of 8 feet in height for the noise barrier would be required to block the line-of-sight from the receiver standing on the residential property. The noise barrier with a height sufficient to block the direct line-of-sight between the residents and the construction equipment would reduce the noise exposure at the off-site receptor by 5 dBA from 79 dBA to 74 dBA Leq(8h), which would be lower than the County's 75 dBA Lew(8h) threshold, resulting in a less than significant impact.

Operation Impacts

Operation of the project would result in recreational activities but would not include any motorized or stationary mechanical equipment sources of noise. The project would include the construction of a variety of recreational components, as further detailed below.

Open Lawn Area

The open lawn area could accommodate small scale pick-up soccer or practice, along with a variety of other passive uses. For conservative worst-case modeling purposes, the open lawn area is expected to have a total 18 players in the field with 40 spectators around the field. As such, there would be approximately a total of 58 people in the open lawn area at the same time. Crowd noise during a round of soccer practice has been calculated based on a reference noise level for "shouting" of 89 dBA for one-third (20) of the spectators shouting at the same time, noise level for "loud" of 76 dBA for one-third (20) of the spectators, and noise level for "raised" of 65 dBA for one-third (18) of the players and spectators at 3.3 feet (1 meter) from the source.

It is assumed that the spectators would be spread around the middle of the open lawn area, and the players would move from one end of the open lawn area to another end together. Therefore, the spectators are considered to form a group centered in the middle of the open field (approximately 200 feet to the nearest residences to the south) and the players as a group moving around together (approximately 50 feet to the nearest residences to the south at the closest boundary on the south). For 6 people at 89 dBA, 6 people at 76 dBA, and 6 people at 65 dBA, the combined noise level would be equal to 97 dBA[3] at a distance of 3.3 feet. For 13 people at 89 dBA, 13 people at 76 dBA, and 14 people at 65 dBA, the combined noise level would be equal to 100 dBA[4] at a distance of 3.3 feet.

The nearest residences to the north are 345 feet from the boundary of the proposed open lawn area or 440 feet to the middle of the open lawn area, nearest residences to the south are 50 feet from the boundary of the proposed open lawn area or 160 feet to the middle of the open lawn area, and the nearest residences to the east across Morro Road are 500 feet from the boundary of the proposed open lawn area or 555 feet to the middle of the open lawn area, as shown in **Table 17**. These distances would receive 42 dBA (440 feet), 34 dBA (160 feet), and 45 dBA (555 feet) of noise attenuation compared to the noise level measured at 3.3 feet from the source. Therefore, noise from the open lawn area would be reduced to 58 dBA[5], 66 dBA[6], and 55 dBA[7] at the nearest residences to the north, south, and east of the proposed open lawn area, respectively.

TABLE 17
SUMMARY OF OPEN LAWN AREA NOISE LEVELS

Locations	Distance to Project Boundary (feet)	Distance to Middle of Open Field (feet)[1]	Noise Level (dBA L_{eq})
Residences to the North	345	440	58
Residences to the South	50	160	66
Residences to the East[2]	500	555	55

[1] Source noise level was calculated at the center of the field.

[2] Residences across Morro Road to the east.

SOURCE: ESA, 2021.

Because these noise levels used the worst-case scenario for the players to be at the boundary of the open lawn area with the shortest distances to these off-site receivers, and the players in realty would be moving around from one end of the open lawn area to another end, the estimated noise levels are the highest that can be reached intermittently throughout the practice period. Under this worst-case scenario, the resulting composite noise levels from the players and spectators would result in a noise level that exceeds the County’s 50 dBA Leq threshold over one-hour period. Therefore, potentially significant noise impact would occur from the use of the open lawn area component. However, as stated above, the nearest residence to the south of the project site has no outdoor living area on the north side of the property. In addition, there is an elevation difference between the project site and the residential property, which would increase the shielding

3 10 Log $[6x10^{8.9} + 6x10^{7.6} + 6x10^{6.5}]$ = 97 dBA at a distance of 3.3 feet
4 10 Log $[13x10^{8.9} + 13x10^{7.6} + 14x10^{6.5}]$ = 100 dBA at a distance of 3.3 feet
5 57 dBA + 56 dBA = 60 dBA at the nearest residences to the north of the proposed open lawn area.
6 73 dBA + 65 dBA = 74 dBA at the nearest residences to the south of the proposed open lawn area.
7 61 dBA + 64 dBA = 66 dBA at the nearest residences to the east of the proposed open lawn area.

provided by the residential building itself to the outdoor living area on the south side of the residential building. With the noise attenuation provided by the residential building, no project-related operational noise impact would occur for the nearest residence to the south of the project site. Residences to the east across Morro Road are affected by traffic noise on Morro Road, with ambient noise level measured at 66 dBA Leq. Residences to the north across East Fallbrook Street are affected by traffic on East Fallbrook Street, with ambient noise measured at 69 dBA Leq. Both ambient noise levels are higher than the projected noise levels from activity at the open lawn area. Therefore, impacts would be less than significant, and no mitigation would be required.

Passive Recreation Area

The passive recreation area would be located in the northeastern portion of the project site. The voice level for two people conversing at a distance of 3 feet would be 65 dBA. Users on the walking path would be similar to pedestrians on the sidewalk, which generates transient conversational noise, estimated to be a maximum of 51 dBA at a distance of 15 feet. Because this conversation is transient in nature, the noise level over one hour would be lower than 51 dBA Leq(1h) unless there are people using the walking path continuously over the entire hour. Conversation at the seating area would generate similar level of voice as people walking by, but they may have the potential to continue over the entire hour.

The nearest residences to the proposed passive recreation area are 100 feet to the north, 420 feet to the south, and 30 feet to the east, as shown in **Table 18**. These distances would receive 16 dBA (100 feet), 29 dBA (420 feet), and 6 dBA (30 feet) of noise attenuation compared to the noise level measured at 15 feet from the source. Therefore, noise from the passive recreation area would be reduced to 35 dBA, 29 dBA, and 45 dBA at the nearest residences to the north, south, and east of the passive recreation area, respectively.

TABLE 18
SUMMARY OF PASSIVE RECREATION AREA NOISE LEVELS

Locations	Distance to Project Boundary (feet)	Noise Reduction due to Distance Attenuation (dBA)	Noise Level (dBA L_{eq})
Residences to the North	100	16	35
Residences to the South	420	29	29
Residences to the East[1]	30	6	45

1 Residence near the northeast corner of the project site.

SOURCE: ESA, 2021.

Because these noise levels used the worst case scenario for the passive recreation area users to be at the boundary of the nearest off-site residences with the shortest distances to these off-site receivers, the estimated noise levels are the highest that can be reached intermittently throughout day. Under this worst case scenario, the resulting composite noise levels from the passive recreation area would not result in a noise level that exceeds the County's 50 dBA Leq threshold over one-hour period. Therefore, no significant noise impact would occur from the use of the passive recreation area , and no mitigation measure would be required.

Skate Elements

To characterize noise levels that would be produced at the skate elements component of the project, noise measurements at other skate parks were analyzed. According to the Monterey Avenue Skatepark Project Noise and Vibration Assessment (Capitola 2011), skatepark noise averaged 56 dBA Leq and 68 dBA Lmax at a distance of 60 feet.

The nearest residences to the proposed skate elements are 115 feet to the north, 285 feet to the south, and 220 feet to the east, as shown in **Table 19**. These distances would receive 12 dBA (115 feet), 20 dBA (285 feet), and 17 dBA (220 feet) of noise attenuation compared to the noise level measured at 30 feet from the source. Therefore, noise from the skate elements would be reduced to 44 dBA, 36 dBA, and 39 dBA at the nearest residences to the north, south, and east of the proposed Skate Elements, respectively.

TABLE 19
SUMMARY OF SKATE ELEMENTS NOISE LEVELS

Locations	Distance to Project Boundary (feet)	Noise Reduction due to Distance Attenuation (dBA)[1]	Noise Level (dBA L_{eq})
Residences to the North	115	12	44
Residences to the South	285	20	36
Residences to the East[2]	220	17	39

1 Noise level reduction compared to those measured at 30 feet from the skate element.

2 Residence near the northeast corner of the project site.

SOURCE: ESA, 2021.

Because these noise levels used the worst case scenario for the skate element users to be at the boundary of the nearest off-site residences with the shortest distances to these off-site receivers, and the skate elements users in realty would be spread out, the estimated noise levels are the highest that can be reached intermittently. Under this worst case scenario, the resulting composite noise levels from the skate element users would not result in a noise level that exceeds the County's 50 dBA Leq threshold over one-hour period. Therefore, no significant noise impact would occur from the use of the skate element component.

Off-Leash Dog Zone

Use of the proposed off-leash dog zone is expected to occur between dawn and dusk throughout the week, with varying levels of activity during the day. In order to evaluate the effect of implementing a dog park on ambient noise at the project site, noise measurements at other dog parks were analyzed. According to the City of Beverly Hills Dog Park Project Initial Study Mitigated Negative Declaration (Rincon 2015), the recorded noise level at the associated dog park was 51.8 dBA Leq, reflecting instantaneous noise from the barking of dogs averaged over a 15-minute period.

The nearest residences to the proposed off-leash dog zone are 145 feet to the north, 45 feet to the south, and 80 feet to the east, as shown in **Table 20**. These distances would receive 14 dBA (145 feet), 4 dBA (45 feet), and 9 dBA (80 feet) of noise attenuation compared to the noise level measured at 30 feet from the source. Therefore, noise from the off-leash dog zone would be reduced to 38 dBA, 48 dBA, and 43 dBA at the nearest residences to the north, south, and east of the proposed off-leash dog zone, respectively.

Because these noise levels used the worst case scenario for the off-leash dog zone users to be at the boundary of the nearest off-site residences with the shortest distances to these off-site receivers, and the dog park users in realty would be spread out, the estimated noise levels are the highest that can be reached intermittently. Under this worst case scenario, the resulting composite noise levels from the users would result in a noise level that exceeds the County's 50 dBA Leq threshold over one-hour period. Therefore, no significant noise impact would occur from the use of the dog park field.

TABLE 20
SUMMARY OF OFF-LEASH DOG ZONE NOISE LEVELS

Locations	Distance to Project Boundary (feet)	Noise Reduction due to Distance Attenuation (dBA)[1]	Noise Level (dBA L_{eq})
Residences to the North[2]	145	14	38
Residences to the South	45	4	48
Residences to the North[3]	80	9	43

1 Noise level reduction compared to those measured at 30 feet from the off-leash dog zone.

2 Residence north of East Fallbrook Street.

3 Residence near the northeast corner of the project site.

SOURCE: ESA, 2021.

Shaded Picnic Area and Play Area

Both the shaded picnic area and play area would consist of human voices and no equipment or high energy activity noise. Compared to noise generated by the other onsite recreational uses (passive recreation area, open lawn area, skate elements, and the off-leash dog zone), these two areas would not generate any substantial noise that would affect off-site receivers. Therefore, no further analysis is warranted.

Composite Noise

Under the unlikely scenario that all components of the proposed park would be occupied and used to the fullest extent, composite noise levels from all onsite recreational uses would be 58 dBA[8], 66 dBA[9], and 55 dBA[10] at the nearest residences to the north, south, and east, respectively. See **Table 21** below.

TABLE 21
SUMMARY OF COMPOSITE NOISE LEVELS

Locations	Noise Level (dBA L_{eq})
Residences to the North	58
Residences to the South	66
Residences to the East[1]	55

[1] Residence on the east side of Morro Road.

SOURCE: ESA, 2021.

Ambient noise measured at or near residences to the north (R1; 69 dBA Leq), east (R3, 51 dBA Leq), and south (R5, 51 dBA Leq; R4, 41 dBA Leq) show that except for R4, ambient noise levels measured at other off-site receivers would be higher than the County's 50 dBA Leq measured over a one-hour period for rural residential (with a density of less than 11 dwelling units per acre) uses during daytime hours (7:00 a.m. to 10:00 p.m.). County of San Diego in its Guidelines for Determining Significance for Noise (County of San Diego, Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, January 27, 2009) stated that if the measured ambient level exceeds the applicable limit noted above, the allowable one- hour average sound level shall be the ambient noise level, plus three decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating.

Therefore, the ambient noise level at the residences to the north is adjusted up to 72 dBA Leq. The ambient noise level at the residences to the east across Morro Road is adjusted up to 69 dBA Leq. The ambient noise level at the residences to the south is adjusted up to 54 dBA Leq and remains at 50 dBA Leq at the residences south of the proposed off-leash dog zone.

Because these noise levels used the worst case scenario for all elements of the park to be at the boundary of the nearest off-site residences with the shortest distances to these off-site receivers, the estimated noise levels are the highest that can be reached intermittently. Under this worst case scenario, the resulting composite noise levels from all the elements combined would potentially result in a noise level that exceeds the County's 50 dBA Leq threshold but would not exceed the adjusted ambient noise level over one-hour period at the nearest off-

[8] 60 dBA + 54 dBA + 44 dBA + 38 dBA = 62 dBA at the nearest residences to the north.
[9] 74 dBA + 49 dBA + 36 dBA + 48 dBA = 74 dBA at the nearest residences to the south.
[10] 66 dBA + 64 dBA + 39 dBA + 43 dBA = 69 dBA at the nearest residences to the east.

site sensitive receiver locations to the north or east. Residences on the north side of East Fallbrook Street are already exposed to ambient and traffic noise levels (69 dBA Leq, see Table 13; adjusted to be 72 dBA Leq) exceeding the projected project operational noise level of 62 dBA Leq, thus no mitigation measures would be required. Similarly, residences on the east side of Morro Road have a measured ambient noise level of 66 dBA Leq and adjusted ambient noise level of 69 dBA Leq, higher than the projected composite noise level of 55 dBA Leq from project operations. No mitigation measure is required for these residences. In addition, the nearest residence to the south of the project site has no outdoor living area on the north side of the property. Shielding provided by the residential building itself to the outdoor living area on the south side of the residential building would reduce project-related operational noise impact to a less than significant level. The noise impact at these off-site sensitive receiver locations are summarized as follows:

- Residences to the north: Adjusted ambient noise level would be 72 dBA leq, and the projected project composite noise level would be 58 dBA Leq. Therefore, a less than significant impact would occur, and no mitigation would be needed.
- Residences to the east: Adjusted ambient noise level would be 69 dBA Leq, and the projected project composite noise level would be 55 dBA Leq. Therefore, a less than significant impact would occur, and no mitigation would be needed.
- Residences to the south: Adjusted ambient noise level would be 54 dBA Leq, and the projected project composite noise level would be 66 dBA Leq. However, the nearest residence to the south of the project site has no outdoor living area on the north side of the property. The elevation difference between the project site and the residential property would increase the shielding provided by the residential building itself to the outdoor living area on the south side of the residential building. With the noise attenuation provided by the residential building, no project-related operational noise impact would occur for the nearest residence to the south of the project site. Therefore, a less than significant impact would occur, and no mitigation would be needed.

The park would be open from sunrise to sunset; therefore, the park users would not generate any operational noise during sensitive nighttime hours. Therefore, no significant nighttime noise impact would occur from the use of the proposed park.

Vehicular Traffic

Noise levels attributed to existing traffic volumes on local roadways were estimated using a spreadsheet model developed based on the methodologies provided in Federal Highway Administration's (FHWA) Traffic Noise Model (TNM) Technical Manual, and the Caltrans Technical Noise Supplement (TeNS) document.[11]

Traffic volumes were prepared by Chen Ryan Associates, as presented in the project-specific Local Mobility Analysis (Appendix F). **Table 22** presents the calculated existing CNEL levels from the existing traffic volumes in the vicinity of the project site. **Table 23**

[11] FHWA, *Federal Highway Administration's Traffic Noise Model, Version 1.0 Technical Manual.* February 1998 https://www.fhwa.dot.gov/environment/noise/traffic_noise_model/old_versions/tnm_version_10/tech_manual/index.cfm.

presents the calculated CNEL levels from the existing plus project traffic volumes in the vicinity of the project site. Tables 21 and 22 show that project-related traffic would contribute up to 0.1 dBA over the existing baseline to the roadway segments in the project vicinity. **Table 24** and **Table 25**, which show calculated CNEL levels in 2022, show that project-related traffic would contribute up to 0.6 dBA over the Near Term (2022) baseline to the roadway segments in the project vicinity. **Table 26**, which shows the cumulative 2025 traffic noise levels, shows that project-related traffic would contribute up to 0.8 dBA over the existing baseline on roadway segments in the project vicinity. This range of traffic noise level increases is small and not perceptible by the human ear in an outdoor environment over time. Therefore, project-related traffic noise would result in less than significant impacts to the ambient noise levels in the project area.

TABLE 22
EXISTING VEHICULAR TRAFFIC NOISE LEVELS

Roadway Segment	Existing CNEL (dBA) at 30 feet from Roadway
East Fallbrook Street	
West of Potter Street/Golden Road	70.0
Between Potter Street/Golden Road and Shady Glen Drive	69.7
Between Shady Glen Drive and Morro Road	69.6
East of Morro Road	69.4
Potter Street	
North of East Fallbrook Street	58.3
Golden Road	
South of East Fallbrook Street	52.1
Shady Glen Drive	
North of East Fallbrook Street	51.9
Morro Road	
North of East Fallbrook Street	50.4
South of East Fallbrook Street	55.8

SOURCE: ESA, 2021

TABLE 23
EXISTING PLUS PROJECT VEHICULAR TRAFFIC NOISE LEVELS

Roadway Segment	Existing with Project CNEL (dBA) at 30 feet from Roadway	Increase over Existing Baseline CNEL (dBA) at 30 feet from Roadway
East Fallbrook Street		
West of Potter Street/Golden Road	70.0	0
Between Potter Street/Golden Road and Shady Glen Drive	69.7	0
Between Shady Glen Drive and Morro Road	69.6	0
East of Morro Road	69.4	0
Potter Street		
North of East Fallbrook Street	58.3	0
Golden Road		
South of East Fallbrook Street	52.1	0
Shady Glen Drive		
North of East Fallbrook Street	52.0	0.1
Morro Road		
North of East Fallbrook Street	50.4	0
South of East Fallbrook Street	55.8	0

SOURCE: ESA, 2021

TABLE 24
NEAR TERM (2022) VEHICULAR TRAFFIC NOISE LEVELS

Roadway Segment	Near Term (2022) CNEL (dBA) at 30 feet from Roadway
East Fallbrook Street	
West of Potter Street/Golden Road	70.1
Between Potter Street/Golden Road and Shady Glen Drive	69.8
Between Shady Glen Drive and Morro Road	69.7
East of Morro Road	69.5
Potter Street	
North of East Fallbrook Street	58.6
Golden Road	
South of East Fallbrook Street	52.9
Shady Glen Drive	
North of East Fallbrook Street	52.1
Morro Road	
North of East Fallbrook Street	50.4
South of East Fallbrook Street	55.9

SOURCE: ESA, 2021

TABLE 25
NEAR TERM (2022) PLUS PROJECT VEHICULAR TRAFFIC NOISE LEVELS

Roadway Segment	Near Term (2022) with Project CNEL (dBA) at 30 feet from Roadway	Increase from Near Term (2022) Baseline CNEL (dBA) at 30 feet from Roadway
East Fallbrook Street		
West of Potter Street/Golden Road	70.2	0.1
Between Potter Street/Golden Road and Shady Glen Drive	69.8	0.1
Between Shady Glen Drive and Morro Road	69.8	0.1
East of Morro Road	69.5	0.1
Potter Street		
North of East Fallbrook Street	58.6	0
Golden Road		
South of East Fallbrook Street	52.9	0
Shady Glen Drive		
North of East Fallbrook Street	52.7	0.6
Morro Road		
North of East Fallbrook Street	50.4	0
South of East Fallbrook Street	55.9	0

SOURCE: ESA, 2021

TABLE 26
CUMULATIVE (2025) VEHICULAR TRAFFIC NOISE LEVELS

Roadway Segment	Cumulative (2025) CNEL (dBA) at the 30 feet from Roadway	Increase from Existing CNEL (dBA) at 30 feet from Roadway
East Fallbrook Street		
West of Potter Street/Golden Road	70.2	0.1
Between Potter Street/Golden Road and Shady Glen Drive	69.8	0.1
Between Shady Glen Drive and Morro Road	69.8	0.1
East of Morro Road	69.5	0.1
Potter Street		
North of East Fallbrook Street	58.6	0
Golden Road		
South of East Fallbrook Street	52.9	0
Shady Glen Drive		
North of East Fallbrook Street	52.7	0.6
Morro Road		
North of East Fallbrook Street	50.4	0
South of East Fallbrook Street	55.9	0

SOURCE: ESA, 2021

In summary, noise impacts resulting from construction related activities to the off-site sensitive (i.e., residential) uses would be above County construction noise standards. Therefore, **Mitigation Measure NOI-1** would be required to be implemented. With implementation of Mitigation Measure NOI-1, impacts would be reduced to a less than significant level.

MM-NOI-1: Construction Noise Reduction: One of the following mitigation measures shall be implemented during project construction:

1. Temporary free-standing noise barriers or earthen berm with a minimum height of 8 feet, erected along the northeastern project property line adjacent to the off-site residences.
2. Limiting the number of pieces of construction equipment to a maximum of two pieces at a time that operate in the same area (within 200 feet of the property line at the nearest off-site sensitive receiver to the northeast) at the same time (within the same hour of the day). While a grader is being used within 200 feet of the property line near the offsite sensitive receiver to the northeast corner, no other construction equipment shall be operated in the same area at the same time to avoid noise level at this nearest off-site receiver to exceed 75 dBA Leq(8h).

b) **Less than Significant Impact**. The proposed project does not propose any of the following land uses that can be impacted by groundborne vibration or groundborne noise levels.

1. Buildings where low ambient vibration is essential for interior operation, including research and manufacturing facilities with special vibration constraints.
2. Residences and buildings where people normally sleep including hotels, hospitals, residences, and where low ambient vibration is preferred.
3. Civic and institutional land uses including schools, churches, libraries, other institutions, and quiet office where low ambient vibration is preferred.
4. Concert halls for symphonies or other special use facilities where low ambient vibration is preferred.

Also, the proposed project does not propose any major, new, or expanded infrastructure such as mass transit, highways or major roadways or intensive extractive industry that could generate excessive groundborne vibration or groundborne noise levels on site or in the surrounding area.

Typically, heavy-duty construction equipment used for demolition, earth-moving, and compaction for paving would generate localized vibration levels, which, depending upon distance, could potentially affect structures or annoy people. Similar to noise levels, vibration levels diminish with increasing distance away from the source (FTA, 2018). Project construction would use small-scale construction equipment over a seven-month period, where construction activities would vary from day-to-day and include clearing, grading, landscaping, as well as installation of park features.

Thresholds of Significance for Vibration

According to the Federal Transit Administration (FTA) and California Department of Transportation, the criteria for environmental impact from ground-borne vibration are based on the maximum levels for a single event. **Table 27** lists the potential vibration damage criteria associated with construction activities, as suggested in the Transit Noise and Vibration Impact Assessment (FTA 2006).

TABLE 27
CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building Category	PPV (inch/sec)	Approximate L_V[1]
Reinforced-concrete, steel, or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Non-engineered timber and masonry buildings	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

SOURCE: Federal Transit Administration. Table 12-3, *Transit Noise and Vibration Impact Assessment* (2006).

1 RMS velocity in decibels (VdB) re 1 µin/sec.

µin/sec = microinches per second
FTA = Federal Transit Administration
inch/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square

FTA guidelines show that a vibration level of up to 102 VdB (equivalent to 0.5 inch per second [inch/sec] in RMS) (FTA 2006) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 inch/sec in RMS). The RMS values for building damage thresholds referenced above are shown in **Table 28**, which is taken from the Transportation and Construction Vibration Guidance Manual (Caltrans 2013).

TABLE 28
GUIDELINE VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

	Maximum PPV (inch/sec)	
Structure and Condition	**Transient Sources[1]**	**Continuous/Frequent Intermittent Sources[2]**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

SOURCE: Table 19, Transportation and Construction Vibration Guidance Manual (Caltrans 2013).

1 Transient sources create a single, isolated vibration event, such as blasting or drop balls.

2 Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Caltrans = California Department of Transportation
inch/sec = inches per second
PPV = peak particle velocity

Based on Table 8-3 in the FTA's Transit Noise and Vibration Impact Assessment (FTA 2006), interpretation of vibration criteria for detailed analysis is 78 VdB for residential uses during daytime hours. During nighttime hours, the vibration criterion is 72 VdB.

All grading activities would be surficial. Due to the use of small-scale construction equipment, the amount of vibration generated during construction would be minimal and would dissipate as distance from the activity increased. Therefore, while limited amounts vibration might be perceivable at the residences that are directly adjacent to the site during certain construction activities occurring at the closest boundary of the project site, those construction activities would occur on a short-term basis and would be intermittent throughout the day depending on the distance from the site boundary. Construction equipment tend to move through a construction site area during a construction workday; therefore, construction vibrations would typically not be concentrated at a single location. Vibration generated by the project would not be substantial enough to exceed applicable significance thresholds and would not cause structural damage due to the small construction equipment proposed for project construction.

Table 29 further shows the PPV values at 25 feet from the construction vibration source as well as vibration levels in terms of VdB at 25 feet from the construction vibration source.

TABLE 29
VIBRATION SOURCE AMPLITUDES FOR CONSTRUCTION EQUIPMENT

	Reference PPV/L_V at 25 ft	
Equipment	**PPV (inch/sec)**	**L_V (VdB)**
Earth Mover	**0.011**	**69**
Excavator/Roller/Compactor	0.047	81
Forklift/Cement Mixer	**0.047**	**81**
Wheel Loader/Tractor/Backhoe	**0.076**	**86**
Large Bulldozer/Grader	0.089	87
Loaded Trucks	**0.076**	**86**
Small Bulldozer/Paver/Air Compressor	**0.003**	**58**

SOURCE: Federal Transit Administration. Table 12-2, *Transit Noise and Vibration Impact Assessment* (2006).

NOTE: Equipment and associated source vibration levels that are expected to be used on the project site are shown in **bold**.

ft = feet/foot
inch/sec = inch per second
L_V = velocity in decibels
PPV = peak particle velocity
VdB = vibration velocity decibels

As can be seen from Table 29, construction equipment expected to be used on the project site would not result in vibration levels exceeding the 0.5 PPV damage threshold from transient sources or the 0.30 PPV damage threshold from continuous/frequent intermittent sources for older residential structures at a distance of 25 feet. These off-site residential structures would be more than 50 feet or 100 feet from the project construction area, and, therefore would not result in any building damages.

Once construction is completed, the project would have no potential to generate vibration during operation as the project would not introduce new sources of vibration to the project site relative to existing conditions. Operation of the project would not include any motorized or stationary mechanical equipment sources of vibration. Therefore, impacts related to vibration would be less than significant.

c) **No Impact.** The project site is within 2 miles of a public or private airport or airstrip facility. The nearest airfield to the project site is the Fallbrook Community Airpark, approximately 1.5 miles southwest of the project site. The project site is within the 65 dBA CNEL zone of the Fallbrook Airport. However, operation of the project would not be impacted by the airport noise or any other applicable rules and regulations that pertain to airports and excessive noise. Therefore, no impact would occur with implementation of the project.

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Population and Housing

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIV. POPULATION AND HOUSING — Would the project:				
a) 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a, b) **No Impact.** The project proposes to construct a local park within the community of Fallbrook. No residential or commercial development is proposed as part of the project; therefore, substantial unplanned population growth would not occur. Furthermore, the proposed project would not displace people or housing necessitating the construction of additional housing elsewhere as the project site is currently vacant. No impact would occur.

Public Services

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES —				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 following public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☒	☐
v) Other public facilities?	☐	☐	☐	☒

Discussion

a.i) **Less than Significant Impact.** The proposed project would construct a local park upon 6.8 acres of vacant land within the community of Fallbrook, which would be served by North County Fire Protection District (NCFPD). NCFPD serves the unincorporated San Diego County communities of Fallbrook, Bonsall, and Rainbow. The nearest Fire Station to the project site is Station One, located at 315 East Ivy Street, approximately 1 mile northwest of the project site (NCFPD 2020). Although the project may result in the increased use of the project site, the project does not contain any uses that would substantially exacerbate fire risks. Further, the proposed project does not induce population growth in the area, which would result in the increased demand of fire protection services. Project-related impacts regarding fire protection services would be less than significant.

a.ii) **Less than Significant Impact.** The proposed project would be served by the San Diego County Sheriff's Department. The nearest substation to the project site is the Fallbrook Substation, which is located at 388 East Alvarado Street, approximately 0.68 miles from the project site (Sheriff 2020). Given the recreational nature of the proposed park project, implementation of the project would not induce growth or result in the generation of significant demand for police protection services in the area. The project site would be regularly managed by County Department of Parks and Recreation staff, and, in coordination with the San Diego County Sheriff's Department, would be capable or ensuring adequate police protection service for the proposed project. As such, impacts related to police protection would be less than significant.

a.iii) **No Impact.** As discussed in Section XIV, the proposed project would not induce population growth, either directly or indirectly, in the project area. Since the project would not have the potential to cause population growth, the project would also have no potential to affect local school services or capacities. Therefore, no impact would occur.

a.iv) **Less than Significant Impact.** The proposed project itself would result in the provision of a new park. However, physical environmental impacts of the park are analyzed throughout this IS/MND for adverse physical effects on the environment. With implementation of mitigation measures mentioned throughout this document, the project's proposed recreational facilities would not have an adverse physical effect on the environment, and impacts would be less than significant.

a.v) **No Impact.** As discussed above, the project does not propose the construction of housing that could result in an increase to the local population. Therefore, the proposed project would not result in an increased demand requiring the need for new or physically altered public facilities. No impact would occur.

References

North County Fire Protection District (NCFPD). 2020. *Fire Stations* – Webpage. Available at https://www.ncfire.org/fire-stations, accessed December, 2020.

San Diego County Sheriff's Department (Sheriff), 2020. *Fallbrook Substation* - Webpage. Available at https://www.sdsheriff.net/patrolstations/fallbrook.html, accessed November 2, 2020.

Recreation

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVI. RECREATION —				
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?	☐	☐	☒	☐

Discussion

a) **Less than Significant Impact.** In addition to the proposed recreational facilities associated with the proposed project itself, Fallbrook Community Center and Park is located approximately 0.25 miles northeast and is the closest recreational facility to the project site (Fallbrook 2020). The proposed project would provide a variety of recreational opportunities, which would help alleviate the use and deterioration of other local parks in the surrounding area. Moreover, the project does not have the potential to induce population growth, either directly or indirectly, and as such would not require additional parkland or parks be provided in the community. Therefore, because the project is adding a recreational facility with a variety of amenities, the project would be a benefit in the community and would not cause the physical deterioration of existing parks or other recreational facilities. Impacts would be less than significant.

b) **Less than Significant Impact.** While the proposed project would introduce a new recreational facility in the area, the project would serve the existing community, and is not anticipated to result in any induced population growth. While the project itself consists of a new recreational facility, impacts are analyzed throughout this IS/MND for adverse physical effects on the environment. With implementation of mitigation measures mentioned throughout this document, the project's proposed recreational facilities would not have an adverse physical effect on the environment, and impacts would be less than significant.

References

Fallbrook Community Center Friends (Fallbrook), 2020. Fallbrook Community Center and Park – Webpage. Available at http://www.fallbrookcommunitycenterfriends.org/, accessed November 2, 2020.

Transportation

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVII. TRANSPORTATION — Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Would the project 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 uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Discussion

a) **Less than Significant Impact.** Construction of the project is anticipated to occur over a seven-month period; construction activities would consist of site preparation and clearing, grading, paving, and landscaping. Construction of the proposed project has the potential to affect the transportation system through the hauling of soil, the transport of construction equipment, the delivery of construction materials, and travel by construction workers to and from the project site. Construction trucks and vehicles would use the regional circulation system, including Interstate (I-) 15 and State Route (SR) 76, as well as the local circulation system, including South Mission Road, East Mission Road, Stage Coach Lane, and East Fallbrook Street.

Construction of the project components would add temporary construction-related traffic to nearby roadways over the course of construction of the proposed project. While construction of the project would temporarily generate additional truck and vehicle trips on the regional and local circulation systems, traffic levels would not substantially increase and would be temporary in nature and would return to similar conditions as in existing conditions. Moreover, due to typical construction start and finish times, construction trips would occur outside peak traffic periods and would, therefore, not contribute to delays currently experienced by vehicles traveling through the local and regional circulation systems. Additionally, delivery and hauling of construction materials to and from the project site would be scheduled outside of peak hours to the greatest extent feasible to reduce the effects to the local and regional circulation systems.

To further decrease effects to existing traffic operations, construction trucks accessing the project site would use designated truck routes to the extent feasible, which would keep heavy trucks moving at slower speeds along roadways that have been designed to accommodate these types of vehicles. While local drivers could experience increased travel times if they were traveling behind a heavy truck due to slower movement and turning radii compared to passenger vehicles, these delays would be intermittent throughout the day, where the majority of these trips would occur outside peak hours, and would cease once construction activities are completed. All construction trucks traveling on Caltrans facilities would be required to comply with California Vehicle Code, division 15, chapters 1 through 5 (Size, Weight, and Load) and California Street and Highway Code Sections 660-711, as applicable, to minimize impacts to roadway operations. No roadway closures are expected to be required during construction of the project.

Once construction is complete, the new park would be open year-round from sunrise to sunset. Since the project site is currently vacant, visitors to the park and facility management and operations staff would result in the addition of new vehicle trips to the surrounding roadway network. New vehicle trips, which were estimated as part of the Local Mobility Analysis (LMA) attached as Appendix F, would be constrained by the proposed supply of 68 parking spaces. Project access and parking would be provided by one proposed new driveway on East Fallbrook Street across from Shady Glen Drive, between Golden Road and Morro Road. The LMA estimates that the project would generate a total of 136 weekday daily trips, including 6 trips during the AM peak hour and 11 trips during the PM peak hour. Due to the operational characteristics of parks, most trips would occur outside of the AM and PM peak hours and on weekends when background traffic volumes are lower. In addition, some trips would likely be made by non-auto modes such as bicycles and pedestrians due to the proximity of the project site to residential uses.

In addition, the project would not conflict with policies related to non-motorized travel such as mass transit, pedestrian, or bicycle facilities. The proposed project would install RRFB and a high visibility crosswalk at the East Fallbrook Street and Shady Glen Road/project driveway intersection. In addition, the proposed project would construct new sidewalks along the south side of East Fallbrook Street between Golden Road and Morro Road, as well as the west side of Morro Road between East Fallbrook Street and the project's southern limit. These new facilities would fill in gaps in the existing pedestrian sidewalk network, thus resulting in improved pedestrian connectivity. As discussed in the LMA, the County of San Diego Active Transportation Plan identifies planned Class IV bicycle facilities along East Fallbrook Street between South Mission Road and Stage Coach Lane, which includes the northern project frontage.[12] Implementation of the proposed project would not preclude the implementation of this planned bicycle facility. There are no public bus stops located adjacent to the project site.

Based on the above discussion, the project would not conflict with any policies establishing measures of the effectiveness for the performance of the circulation system and impacts would be less than significant.

b) **Less than Significant Impact.** In accordance with Senate Bill (SB) 743, the CEQA Guidelines Section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA Guidelines criteria for determining the significance of transportation impacts are primarily focused on

12 Class IV separated bikeways (also called cycle tracks) are located in the road but incorporate a physical barrier, such as flex posts, curbs, or parked vehicles to separate bike traffic from vehicle traffic.

projects within transit priority areas and shifts the focus from driver delay to reduction of greenhouse gas emissions, creation of multi-modal networks, and promotion of a mix of land uses. Vehicle miles traveled, or VMT, is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person.

The newly adopted guidance provides that a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide. The County published its *Transportation Study Guidelines* (TSG) in June 2020, which updated transportation significance thresholds and transportation impact analysis procedures. Therefore, the TSG was used to determine the significance of transportation impacts.

According to the TSG, a detailed transportation VMT analysis is required for all land development projects, except those that meet one of six designated screening criteria. A project that meets at least one of the screening criteria would be presumed to result in a less-than-significant VMT impact due to the project characteristics and/or location. The proposed project would meet Criterion 4 – Locally Serving Public Facilities, which states that public facilities that serve the local community would result in a less-than-significant VMT impact. The types of public facilities covered by this screening criterion include transit centers, public schools, libraries, post office, park-and-ride lots, other government offices, parks/trail heads, and passive public uses. Since the proposed project is a public park, it falls within the scope of screening Criterion 4, and the proposed project would result in a less-than-significant impact related to CEQA Guidelines Section 15064.3.

c) **Less than Significant Impact.** As noted above, the proposed project would construct a new driveway on East Fallbrook Street across from Shady Glen Drive, between Golden Road and Morro Road. This driveway would be constructed as the south leg of the existing intersection of Shady Glen Road and East Fallbrook Street and would allow for full-access with one inbound lane and one outbound lane. The driveway would be designed to conform with all applicable Public Works design standards, ensuring that all vehicles, including emergency response vehicles, would be able to safely turn into and out of the driveway. As part of the project, the terrain near the driveway entrance would be properly graded per County standards in order to increase line of sight distance as well as prohibit/remove any other objects in the line of sight prior to project operation. Additionally, vegetation would be trimmed and/or removed to achieve the required sight distances. Operating conditions at this intersection were evaluated as part of the LMA attached as Appendix F, which is currently an unsignalized side-street stop-controlled intersection with East Fallbrook Street being uncontrolled.

All-way stop-controlled intersection and traffic signal warrants were conducted for this intersection to determine if the daily or peak hour traffic volumes at this intersection justified the installation of stop signs or traffic signals. According to the California Manual on Uniform Traffic Control Devices, Revision 6 (CA MUTCD) (2021), the intersection does not meet the minimum daily or peak hour traffic volumes for an all-way stop-controlled or signalized intersection. However, due to community concerns regarding existing traffic conditions along East Fallbrook Street and the potential for unsafe conditions for pedestrians crossing East Fallbrook Street to access the park (see below), intersection control modifications at this point of access were evaluated.

The proposed project would likely generate additional pedestrian activity due to its location within walking distance from the nearby neighborhood. The proposed project would provide two access points for pedestrians, including access from the north along East Fallbrook Street and from the east along Morro Road. In order to connect these access points to the existing sidewalk network, new sidewalks would be constructed along the south side of East Fallbrook Street between Golden Road and Morro Road, as well as the west side of Morro Road between East Fallbrook Street and the project's southern limit.

There are currently no striped crosswalks on East Fallbrook Street near the project site. As stated above, the LMA concluded that additional traffic control (and associated crosswalks) would not be warranted at the proposed project driveway based on peak hour traffic volumes. However, in accordance with the CA MUTCD and the use of engineering judgement, a side-street stop-control, an all-way stop-control, or traffic signal may be considered at an intersection that does not meet the peak hour traffic volume warrants. Therefore, the LMA evaluated operating conditions with these three intersection control modification options to address community concerns regarding existing traffic conditions along East Fallbrook Street and the potential for unsafe conditions for pedestrians crossing East Fallbrook Street to access the park. These intersection control options would allow pedestrians to safely cross East Fallbrook Road because they would require through-traffic to stop at the project driveway and would include striped crosswalks and pedestrian call buttons (only with traffic signal option).

The LMA concluded that both an all-way stop-control or traffic signal at the project driveway would result in eastbound queues on East Fallbrook Street that would extend beyond the intersection of Potters Street/Golden Road and East Fallbrook Street. Due to these extensive queues, the LMA recommended that a RRFB and high visibility crosswalk be installed at the intersection of Shady Glen Road/project driveway and Fallbrook Street.

Based on the analysis and recommendations of the LMA, the County has determined that the best way to address potential pedestrian safety issues at the project driveway intersection on East Fallbrook Street is to implement the RRFB and high visibility crosswalk. The RRFB and high visibility crosswalk would be required to be designed to the County of San Diego standards. These improvements have been incorporated in the project design and would be implemented if the project is approved.

The project would not introduce an incompatible use, such as farm equipment, onto the surrounding local circulation system, which could cause a roadway hazard. The project would not result in a new or increase an existing roadway hazard through a design feature or incompatible use. Based on the above discussion, impacts would be less than significant.

d) **Less than Significant Impact.** As stated in Section IX(f), the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. While construction of the project would generate additional truck and vehicle trips on surrounding roadways, this increase in trips would be temporary and would return to similar conditions as in existing conditions. Furthermore, while construction trucks travel at slower speeds than passenger vehicles, the presence of construction trucks would not interfere with normal roadway operations. As noted above in Section XVII (a), operation of the project is not anticipated to substantially increase the amount of vehicular traffic to the project site, especially during the weekday AM and PM peak hours when background traffic volumes are highest; roadway conditions would be similar to existing conditions. For these reasons, implementation of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

Tribal Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVIII. TRIBAL CULTURAL RESOURCES —				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in 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:				
i) 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	☐	☒	☐	☐
ii) 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 the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Discussion

a.i, a.ii) **Less than Significant Impact with Mitigation Incorporated**. Pursuant to AB 52, California Native American tribes that are traditionally and culturally affiliated with the area can request notification of projects in their traditional cultural territory. In accordance with AB 52, the County of San Diego mailed out tribal consultation letters to tribes traditionally and culturally affiliated with the project area on February 26, 2021. Requests for formal consultation were received by Pechanga Band of Luiseño Indians (Pechanga) and Rincon Band of Luiseño Indians (Rincon). Formal consultation with Pechanga occurred on July 12, 2021, and with Rincon on July 15, 2021. Due to tribal requests from both Pechanga and Rincon, Native American monitoring would be required during all ground disturbing activities. Measure **MM-TCR-1** would reduce impacts to less than significant.

MM-TCR-1: Native American Monitoring. DPR shall retain a Luiseño monitor, as determined during AB 52 tribal consultation, to monitor all project-related ground disturbance. The Native American monitor shall work in concert with the archaeological monitor, as outlined in PDF-CUL-1, and shall be consulted in the event of inadvertent discoveries of prehistoric archaeological resources.

Utilities and Service Systems

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS — 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?	☐	☐	☒	☐

Discussion

a) **Less than Significant Impact.** The Fallbrook Public Utilities District (FPUD) has a service area of approximately 6.6 miles and would be the water and wastewater provider for the project site. Existing irrigation lines may be present within the project site which were associated with site's previous use as a nursery, and would be removed, relocated, and/or replaced to serve the proposed project.

The proposed project would include the planting of shade trees and landscaping elements throughout the project site, which would increase the site's water use compared to the existing condition. According to the Fallbrook Public Utility District, the estimated total water use for the project site would be approximately 4,000 gallons per day/per acre (gpd/ac) (Fallbrook Public Utility District 2021). As the project site is 6.8 acres, and includes approximately 6.35 acres of landscaped area, implementation of the project would result in an estimated 25,400 gpd, or 28.5 acre feet per year (AFY) of water use on the project site. As stated in the FPUD 2015 Urban Water Management Plan (UWMP), FPUD supplied 11,849 acre-feet (AF) of water in the year 2015 (FPUD 2015). Due to state and local regulations as well as multiple water supply projects, FPUD projects an estimated available water supply of 17,741 AF by year 2025, with an estimated existing demand of 12,384 AF by year 2025, leaving a remaining excess of 5,357 AF for new development. As the proposed project would introduce 28.5 AFY, this would represent a fractional increase of the remaining excess water supply in the year 2025 (0.5 percent).

Furthermore, the proposed project would apply low impact development principles to the design of site stormwater basins and include the installation of native gardens. These design features would maximize the water efficiency of the project site and reduce demand on supplemental irrigation. The County adopted an amendment to its Landscaping Ordinance in June 2020. As a result, the ordinance now requires water use reductions that exceed the State's Model Water Efficient Landscape Ordinance. The proposed project would comply with these new regulations, therefore minimizing the use of supplemental irrigation. The proposed project would not exceed available water supplies and would incorporate water efficiency features and drought tolerant landscaping. Therefore, the project would not result in the relocation or the construction of new or expanded water supply facilities and impacts would be less than significant.

Wastewater treatment service for the project site would also be provided by FPUD. FPUD's Water Reclamation Plant treats an average of 1.7 million gallons per day (mgd) and has a capacity of 3.1 mgd, which allows for an excess of approximately 1.4 mgd for new development. Implementation of the project would represent a new source of wastewater from the use of public restrooms, which would connect to existing FPUD infrastructure. According to San Diego County Sanitation District (SDCSD), parks generate approximately 500 gpd/acre (County of San Diego 2015). Therefore, as the proposed park would include restroom facilities, the project would generate a total of 3,400 gpd or 3.8 AFY of wastewater. However, this increase would represent a fraction (0.24 percent) of the District's remaining water treatment plant capacity of 1.4 mgd and would be adequately served by the existing wastewater treatment provider. Therefore, the project would not result in the need for relocation or construction or wastewater treatment facilities and impacts would be less than significant.

The project would utilize the existing surrounding water drainage system and power lines. In addition, the project does not propose to construct any structures that would require natural gas or telecommunication facilities. As such, implementation of the project would not 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. Therefore, a less than significant impact would occur.

b) **Less than Significant Impact.** The community of Fallbrook, including the project site, receives municipal water service from the FPUD. As detailed above in Section XIX(a), FPUD would have sufficient water supplies available to serve the project. According to the FPUD UWMP, FPUD has a diverse portfolio of supplies, storage, and supply management practices to provide a consistent and secure supply of water. A reliability assessment determined that the region's existing and projected water resources are drought-resilient, with no shortages anticipated during single dry year events through 2040, and only minor shortages in multiple dry years, that can be mitigated through water conservation efforts.

The FPUD has established a Water Shortage Contingency Plan (WSCP), which includes voluntary and mandatory rationing of water supply shortages to help control consumption for normal, dry, and multiple dry years. In Stage 2 of a drought emergency, landscaping activities, such as at the project site, would cease, to allow for water use at higher priority location. Therefore, although the amount of water proposed to be used during revegetation would be relatively small and would not exceed available water supplies, the FPUD has established procedures to ensure water contingency for normal, dry, multiple dry years. Therefore, FPUD would have sufficient water supplies to serve the project and foreseeable development during normal, dry, and multiple dry years, and a less than significant impact would occur.

c) **Less than Significant Impact.** The proposed project would include the construction of public restrooms, which would introduce a new source of wastewater at the project site. However, these public restrooms would represent nominal amounts of wastewater. As discussed in Section XIX(a) above, the minor increase in wastewater at the project site would result in a fraction of a percent increase to FPUD's wastewater treatment plants' remaining capacity, and would not cause the applicable wastewater treatment plant to exceed its service capacity or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project in addition to its existing commitments. The nominal increase in wastewater conveyance to FPUD's treatment plant would result in a less than significant impact.

d, e) **Less than Significant Impact.** The proposed project would generate waste during the construction phase, largely of soil material, which would be composted at a local landfill. Once construction is complete, the park would be managed by the County Department of Parks and Recreation, and would contain waste receptacles and a trash enclosure area for visitors and staff, which would be regularly maintained and disposed of at the appropriate facility in accordance with all applicable federal, state, and local regulations related to solid waste.

The nearest landfill to the project site is the Sycamore Landfill, which is located approximately 39 miles south of the site, at 8514 Mast Boulevard at West Hills Parkway, San Diego. The Sycamore Landfill currently has anticipated closure date of 2042, and a remaining capacity of 147,908,000 cubic yards. As the project would produce a nominal amount of solid waste, the landfill would have capacity to serve the proposed project and would not generate solid waste in excess of State or local standards or local infrastructure capacity. Because the project is expected to generate minimal solid waste and would comply with all applicable regulations, the proposed project would have a less than significant impact related to solid waste.

References

Blue Ridge Services. 2020. Bolton on Landfill Management: Converting Cubic Yard to Tons. Available https://www.solidwaste.com/doc/bolton-on-landfill-management-converting-cubi-0001#:~:text=On%20average%2C%20a%20cubic%20yard,provides%20a%20good%20planning%20figure., accessed January 2020.

CalRecycle, 2020. *SWIS Facility/Site Activity Details Sycamore Landfill (37-AA-0023*). Available at https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1798?siteID=2871,accessed November 3, 2020.

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Fallbrook Public Utilities District (FPUD), 2015. Urban Water Management Plan. Available at https://www.fpud.com/files/d5469aa45/CurrentUWMP.pdf, accessed November 3, 2020.

Fallbrook Public Utilities District (FPUD), 2021. Communication between ESA and FPUD. June 7, 2021.

Wildfire

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XX. WILDFIRE — 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 downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Discussion

a) **No Impact.** The proposed project is not located within a Very High Fire Hazard Severity Zone (VHFHSZ) as identified by CalFire (2007). The nearest VHFHSZ is located approximately 1.75 miles east of the project site along the vegetated canyons of Live Oak Park Road. The project site is located along East Fallbrook Street, which has been identified as a secondary evacuation route by North County Fire Protection District (NCFFPD 2020). As discussed above in Section IX(g), no road closures would be needed as a result of the proposed project. For these reasons, implementation of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and no impact would occur.

b) **No Impact.** As discussed above, the proposed project is not located within or near a VHFHSZ (CalFire 2007). The site is currently vacant and gently slopes to the south. The project site is completely surrounded by existing development, including paved roadways, a commercial nursey, and residential developments, which would reduce the potential for uncontrolled wildfire to spread to the project site. Construction of the project would require grading to achieve the desired flat terrain of specific recreational components, including the parking lot, skate elements, and the open lawn area. Further, the project would be constructed in compliance with the County of San Diego Building and Fire Codes (Title 9, Divisions 1, 2 and 6, San Diego County Code of Regulatory Ordinances). Therefore, the project would not exacerbate wildfire risks due to slope, prevailing winds, or other factors, and thereby expose project visitors to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, and no impact would occur.

c) **No Impact.** The project would connect to existing utility lines and infrastructure in the area, and any utilities installed on the site would be in compliance with all applicable fire codes. As such, the project would not exacerbate fire risks through the installation of maintenance or associated infrastructure; there would be no impact.

d) **No Impact.** As discussed in Section VII, the project site is not located within a flood hazard zone or landslide zone. As detailed above in Section X, construction of the project would not result in significant impacts on the existing drainage pattern due to implementation of BMPs that would minimize flooding and runoff. Drainage for the site would continue to be serviced by the existing storm drain system.

Additionally, it is standard operating procedure for DPR to evaluate a park facility after a natural disaster, such as a wildfire, for possible unsafe conditions (i.e., downed power lines, fallen/unstable trees, unstable slopes, or washed out trails) prior to reopening the facility to the public. DPR would also comply with the Uniform Fire Code and Defensible Space for Fire Protection Ordinance, which require the implementation of best practices for fire. By complying with these measures, the proposed project would reduce potential wildfire risks within the project site. Therefore, with implementation of the standard operating safety procedures and compliance with regulations related to fire risk and protection, the project would not result in significant direct, or cumulative, impacts related to exposing structures or people to significant risk associated with post-fire downslope flooding or landslides and there would be no impact.

References

California Department of Forestry and Fire Protection (CalFire), 2009. Very High Fire Hazard Severity Zones in LRA – North County Fire Protection District. June 11, 2009.

North County Fire Protection District (NCFPD), 2020. Fallbrook, Bonsall, De Luz & Rainbow Area Evacuation Map. Available at https://www.ncfire.org/files/6a2602b8a/Evacuation+Map+Fallbrook+2018.pdf, accessed October 30, 2020.

Mandatory Findings of Significance

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XXI. MANDATORY FINDINGS OF SIGNIFICANCE —				
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?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

a) **Less than Significant Impact with Mitigation Incorporated.** As discussed in Section IV, the project would result in temporary biological resource impacts during construction of the proposed project. Implementation of MM-BIO-1 would reduce impacts to less than significant, and ensure that the project would not 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, or reduce the number or restrict the range of a rare or endangered plant or animal. As discussed in Section V and Section XVIII, implementation of PDF-CUL-1 through PDF-CUL-4 and MM-TCR-1 would ensure that the project would not eliminate important examples of the major periods of California history or prehistory.

b) **Less than Significant Impact .** A cumulative impact would occur if the project would result in an incrementally considerable contribution to a significant cumulative impact in consideration of past, present, and reasonably foreseeable future projects for each resource area. As indicated throughout this IS/MND, the project would convert the type of recreational use on the project site from a vacant parcel to a new local park. As detailed above, the project would result in less than significant impacts or would be able to reduce impacts to a less than significant level with incorporation of mitigation measures. While construction of the project could overlap with surrounding cumulative projects, due to the limited construction activities which would use small construction equipment, the project would not contribute significantly to any potential cumulative impacts during construction. As a result of this evaluation, there is no substantial evidence that there would be substantive cumulative effects associated with this project. Therefore, the project would result in less than significant cumulative impacts.

c) **Less than Significant Impact with Mitigation Incorporated.** As discussed above, all identified potential impacts associated with the project would be reduced to less than significant with implementation of Mitigation Measures MM-BIO-1, MM-NOI-1, and MM-TCR-1. No direct or indirect significant and unavoidable impacts would occur with implementation of the project. As a result, the project would not cause a substantial adverse effect on human beings, either directly, or indirectly, with implementation of mitigation measures.

Appendix A

Air Quality, Greenhouse Gas Emissions, and Energy Calculations

ESA

A-1 Air Quality Calculations

Fallbrook Local Park - Construction

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.19	Acre	6.19	269,636.40	0
Parking Lot	68.00	Space	0.61	27,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total acreage of park is 6.8 acres.

Construction Phase - Phase durations were assumptions made on size of park and intesnity of work. Assumptions based on a previous park project modeled by ESA
Off-road Equipment - Equipment quantities were assumptions made on size of park and intesnity of work. Assumptions based on a previous park project modeled by ESA
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Off-road Equipment - Equipment quantities were assumptions made on size of park and intesnity of work. Assumptions based on a previous park project modeled by ESA
Grading - Total acres graded is conservatively assumed to cover the entire 6.8-acre site with three grading passes for a total of 20.4 total acres graded

Trips and VMT - Trips calculated separately

Off-road Equipment -

Architectural Coating - Arch coating only needed for line painting in parking lot

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	148,104.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	444,312.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	58.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	PhaseEndDate	2/17/2023	6/6/2022
tblConstructionPhase	PhaseEndDate	2/4/2022	2/16/2022
tblConstructionPhase	PhaseEndDate	1/20/2023	3/16/2022
tblConstructionPhase	PhaseEndDate	1/7/2022	12/18/2021
tblConstructionPhase	PhaseStartDate	1/21/2023	3/17/2022
tblConstructionPhase	PhaseStartDate	1/8/2022	12/19/2021
tblConstructionPhase	PhaseStartDate	12/24/2022	2/17/2022
tblConstructionPhase	PhaseStartDate	12/25/2021	11/29/2021
tblGrading	AcresOfGrading	21.50	20.40
tblGrading	AcresOfGrading	29.00	0.00
tblGrading	MaterialSiltContent	6.90	4.30
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	27.00	0.00

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					
2021	2.6545	27.6300	14.8563	0.0326	5.9252	1.4002	7.3255	3.7535	1.2882	5.0417	0.0000	3,159.4728	3,159.4728	1.0218	0.0000	3,185.0188
2022	4.9963	16.5674	13.5477	0.0326	0.5031	0.6331	1.1362	0.0543	0.5825	0.6368	0.0000	3,159.9337	3,159.9337	1.0220	0.0000	3,185.4834
Maximum	**4.9963**	**27.6300**	**14.8563**	**0.0326**	**5.9252**	**1.4002**	**7.3255**	**3.7535**	**1.2882**	**5.0417**	**0.0000**	**3,159.9337**	**3,159.9337**	**1.0220**	**0.0000**	**3,185.4834**

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					
2021	2.6545	27.6300	14.8563	0.0326	2.3108	1.4002	3.7111	1.4639	1.2882	2.7521	0.0000	3,159.4728	3,159.4728	1.0218	0.0000	3,185.0188
2022	4.9963	16.5674	13.5477	0.0326	0.1962	0.6331	0.8293	0.0212	0.5825	0.6036	0.0000	3,159.9337	3,159.9337	1.0220	0.0000	3,185.4834
Maximum	**4.9963**	**27.6300**	**14.8563**	**0.0326**	**2.3108**	**1.4002**	**3.7111**	**1.4639**	**1.2882**	**2.7521**	**0.0000**	**3,159.9337**	**3,159.9337**	**1.0220**	**0.0000**	**3,185.4834**

	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**	**61.00**	**0.00**	**46.34**	**61.00**	**0.00**	**40.90**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation/Clearing	Site Preparation	11/29/2021	12/18/2021	5	15	
2	Grading/Excavation	Grading	12/19/2021	2/16/2022	5	43	
3	Paving	Paving	2/17/2022	3/16/2022	5	20	
4	Landscaping/Trail Construction/Ancillary Facilities	Grading	3/17/2022	6/6/2022	5	58	
5	Architectural Coating	Architectural Coating	5/31/2022	6/3/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.61

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,632

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Landscaping/Trail Construction/Ancillary Facilities	Air Compressors	0	0.00	78	0.48
Landscaping/Trail Construction/Ancillary Facilities	Excavators	0	8.00	158	0.38
Landscaping/Trail Construction/Ancillary Facilities	Graders	1	8.00	187	0.41
Grading/Excavation	Excavators	2	8.00	158	0.38
Landscaping/Trail Construction/Ancillary Facilities	Rubber Tired Dozers	0	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading/Excavation	Rubber Tired Loaders	2	8.00	203	0.36
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Landscaping/Trail Construction/Ancillary Facilities	Cement and Mortar Mixers	1	8.00	9	0.56
Grading/Excavation	Rubber Tired Dozers	0	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Plate Compactors	1	8.00	8	0.43
Grading/Excavation	Graders	1	8.00	187	0.41
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation/Clearing	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation/Clearing	Rubber Tired Dozers	2	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Rollers	1	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation/Clearing	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping/Trail Construction/Ancillary	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation/Clearing - 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					
Fugitive Dust					5.9252	0.0000	5.9252	3.7535	0.0000	3.7535			0.0000			0.0000
Off-Road	2.6545	27.6300	14.8563	0.0264		1.4002	1.4002		1.2882	1.2882		2,557.4046	2,557.4046	0.8271		2,578.0825
Total	**2.6545**	**27.6300**	**14.8563**	**0.0264**	**5.9252**	**1.4002**	**7.3255**	**3.7535**	**1.2882**	**5.0417**		**2,557.4046**	**2,557.4046**	**0.8271**		**2,578.0825**

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					2.3108	0.0000	2.3108	1.4639	0.0000	1.4639			0.0000			0.0000
Off-Road	2.6545	27.6300	14.8563	0.0264		1.4002	1.4002		1.2882	1.2882	0.0000	2,557.4046	2,557.4046	0.8271		2,578.0825
Total	**2.6545**	**27.6300**	**14.8563**	**0.0264**	**2.3108**	**1.4002**	**3.7111**	**1.4639**	**1.2882**	**2.7521**	**0.0000**	**2,557.4046**	**2,557.4046**	**0.8271**		**2,578.0825**

3.3 Grading/Excavation - 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					
Fugitive Dust					0.5031	0.0000	0.5031	0.0543	0.0000	0.0543			0.0000			0.0000
Off-Road	1.7881	19.8933	13.7844	0.0326		0.7673	0.7673		0.7059	0.7059		3,159.4728	3,159.4728	1.0218		3,185.0188
Total	**1.7881**	**19.8933**	**13.7844**	**0.0326**	**0.5031**	**0.7673**	**1.2704**	**0.0543**	**0.7059**	**0.7603**		**3,159.4728**	**3,159.4728**	**1.0218**		**3,185.0188**

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					0.1962	0.0000	0.1962	0.0212	0.0000	0.0212			0.0000			0.0000
Off-Road	1.7881	19.8933	13.7844	0.0326		0.7673	0.7673		0.7059	0.7059	0.0000	3,159.4728	3,159.4728	1.0218		3,185.0188
Total	**1.7881**	**19.8933**	**13.7844**	**0.0326**	**0.1962**	**0.7673**	**0.9635**	**0.0212**	**0.7059**	**0.7271**	**0.0000**	**3,159.4728**	**3,159.4728**	**1.0218**		**3,185.0188**

3.3 Grading/Excavation - 2022

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					0.5031	0.0000	0.5031	0.0543	0.0000	0.0543			0.0000			0.0000
Off-Road	1.5702	16.5674	13.5477	0.0326		0.6331	0.6331		0.5825	0.5825		3,159.9337	3,159.9337	1.0220		3,185.4834
Total	**1.5702**	**16.5674**	**13.5477**	**0.0326**	**0.5031**	**0.6331**	**1.1362**	**0.0543**	**0.5825**	**0.6368**		**3,159.9337**	**3,159.9337**	**1.0220**		**3,185.4834**

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					0.1962	0.0000	0.1962	0.0212	0.0000	0.0212			0.0000			0.0000
Off-Road	1.5702	16.5674	13.5477	0.0326		0.6331	0.6331		0.5825	0.5825	0.0000	3,159.9337	3,159.9337	1.0220		3,185.4834
Total	**1.5702**	**16.5674**	**13.5477**	**0.0326**	**0.1962**	**0.6331**	**0.8293**	**0.0212**	**0.5825**	**0.6036**	**0.0000**	**3,159.9337**	**3,159.9337**	**1.0220**		**3,185.4834**

3.4 Paving - 2022

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	0.5514	5.5624	7.2902	0.0114		0.2840	0.2840		0.2612	0.2612		1,103.8302	1,103.8302	0.3570		1,112.7552
Paving	0.0799					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6313**	**5.5624**	**7.2902**	**0.0114**		**0.2840**	**0.2840**		**0.2612**	**0.2612**		**1,103.8302**	**1,103.8302**	**0.3570**		**1,112.7552**

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	0.5514	5.5624	7.2902	0.0114		0.2840	0.2840		0.2612	0.2612	0.0000	1,103.830 2	1,103.830 2	0.3570		1,112.755 2
Paving	0.0799					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6313**	**5.5624**	**7.2902**	**0.0114**		**0.2840**	**0.2840**		**0.2612**	**0.2612**	**0.0000**	**1,103.830 2**	**1,103.830 2**	**0.3570**		**1,112.755 2**

3.5 Landscaping/Trail Construction/Ancillary Facilities - 2022

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0096	10.9543	8.5769	0.0167		0.4710	0.4710		0.4352	0.4352		1,582.856 4	1,582.856 4	0.4933		1,595.187 9
Total	**1.0096**	**10.9543**	**8.5769**	**0.0167**	**0.0000**	**0.4710**	**0.4710**	**0.0000**	**0.4352**	**0.4352**		**1,582.856 4**	**1,582.856 4**	**0.4933**		**1,595.187 9**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0096	10.9543	8.5769	0.0167		0.4710	0.4710		0.4352	0.4352	0.0000	1,582.856 4	1,582.856 4	0.4933		1,595.187 9
Total	**1.0096**	**10.9543**	**8.5769**	**0.0167**	**0.0000**	**0.4710**	**0.4710**	**0.0000**	**0.4352**	**0.4352**	**0.0000**	**1,582.856 4**	**1,582.856 4**	**0.4933**		**1,595.187 9**

3.6 Architectural Coating - 2022

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	3.7822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**3.9867**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	3.7822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**3.9867**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Fallbrook Local Park - Construction

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.19	Acre	6.19	269,636.40	0
Parking Lot	68.00	Space	0.61	27,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total acreage of park is 6.8 acres.

Construction Phase - Phase durations were assumptions made on the size of the park and intesnity of work. Assumptions were based on a previous

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Grading - Total acres graded is conservatively assumed to cover the entire 6.8-acre site with three grading passes for a total of 20.4 total acres graded

Trips and VMT - Trips calculated separately

Off-road Equipment -

Architectural Coating - Arch coating only needed for line painting in parking lot

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	148,104.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	444,312.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	58.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	PhaseEndDate	2/17/2023	6/6/2022
tblConstructionPhase	PhaseEndDate	2/4/2022	2/16/2022
tblConstructionPhase	PhaseEndDate	1/20/2023	3/16/2022
tblConstructionPhase	PhaseEndDate	1/7/2022	12/18/2021
tblConstructionPhase	PhaseStartDate	1/21/2023	3/17/2022
tblConstructionPhase	PhaseStartDate	1/8/2022	12/19/2021
tblConstructionPhase	PhaseStartDate	12/24/2022	2/17/2022
tblConstructionPhase	PhaseStartDate	12/25/2021	11/29/2021
tblGrading	AcresOfGrading	21.50	20.40
tblGrading	AcresOfGrading	29.00	0.00
tblGrading	MaterialSiltContent	6.90	4.30
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	27.00	0.00

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					
2021	2.6545	27.6300	14.8563	0.0326	5.9252	1.4002	7.3255	3.7535	1.2882	5.0417	0.0000	3,159.4728	3,159.4728	1.0218	0.0000	3,185.0188
2022	4.9963	16.5674	13.5477	0.0326	0.5031	0.6331	1.1362	0.0543	0.5825	0.6368	0.0000	3,159.9337	3,159.9337	1.0220	0.0000	3,185.4834
Maximum	**4.9963**	**27.6300**	**14.8563**	**0.0326**	**5.9252**	**1.4002**	**7.3255**	**3.7535**	**1.2882**	**5.0417**	**0.0000**	**3,159.9337**	**3,159.9337**	**1.0220**	**0.0000**	**3,185.4834**

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					
2021	2.6545	27.6300	14.8563	0.0326	2.3108	1.4002	3.7111	1.4639	1.2882	2.7521	0.0000	3,159.4728	3,159.4728	1.0218	0.0000	3,185.0188
2022	4.9963	16.5674	13.5477	0.0326	0.1962	0.6331	0.8293	0.0212	0.5825	0.6036	0.0000	3,159.9337	3,159.9337	1.0220	0.0000	3,185.4834
Maximum	**4.9963**	**27.6300**	**14.8563**	**0.0326**	**2.3108**	**1.4002**	**3.7111**	**1.4639**	**1.2882**	**2.7521**	**0.0000**	**3,159.9337**	**3,159.9337**	**1.0220**	**0.0000**	**3,185.4834**

	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**	**61.00**	**0.00**	**46.34**	**61.00**	**0.00**	**40.90**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation/Clearing	Site Preparation	11/29/2021	12/18/2021	5	15	
2	Grading/Excavation	Grading	12/19/2021	2/16/2022	5	43	
3	Paving	Paving	2/17/2022	3/16/2022	5	20	
4	Landscaping/Trail Construction/Ancillary Facilities	Grading	3/17/2022	6/6/2022	5	58	

5	Architectural Coating	Architectural Coating	5/31/2022	6/3/2022		5	5

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.61

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,632

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Landscaping/Trail Construction/Ancillary Facilities	Air Compressors	0	0.00	78	0.48
Landscaping/Trail Construction/Ancillary Facilities	Excavators	0	8.00	158	0.38
Landscaping/Trail Construction/Ancillary Facilities	Graders	1	8.00	187	0.41
Grading/Excavation	Excavators	2	8.00	158	0.38
Landscaping/Trail Construction/Ancillary Facilities	Rubber Tired Dozers	0	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading/Excavation	Rubber Tired Loaders	2	8.00	203	0.36
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Landscaping/Trail Construction/Ancillary Facilities	Cement and Mortar Mixers	1	8.00	9	0.56
Grading/Excavation	Rubber Tired Dozers	0	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Plate Compactors	1	8.00	8	0.43
Grading/Excavation	Graders	1	8.00	187	0.41
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation/Clearing	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation/Clearing	Rubber Tired Dozers	2	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Rollers	1	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation/Clearing	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping/Trail Construction/Ancillary	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation/Clearing - 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					
Fugitive Dust					5.9252	0.0000	5.9252	3.7535	0.0000	3.7535			0.0000			0.0000
Off-Road	2.6545	27.6300	14.8563	0.0264		1.4002	1.4002		1.2882	1.2882		2,557.4046	2,557.4046	0.8271		2,578.0825
Total	**2.6545**	**27.6300**	**14.8563**	**0.0264**	**5.9252**	**1.4002**	**7.3255**	**3.7535**	**1.2882**	**5.0417**		**2,557.4046**	**2,557.4046**	**0.8271**		**2,578.0825**

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					2.3108	0.0000	2.3108	1.4639	0.0000	1.4639			0.0000			0.0000
Off-Road	2.6545	27.6300	14.8563	0.0264		1.4002	1.4002		1.2882	1.2882	0.0000	2,557.4046	2,557.4046	0.8271		2,578.0825
Total	**2.6545**	**27.6300**	**14.8563**	**0.0264**	**2.3108**	**1.4002**	**3.7111**	**1.4639**	**1.2882**	**2.7521**	**0.0000**	**2,557.4046**	**2,557.4046**	**0.8271**		**2,578.0825**

3.3 Grading/Excavation - 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					
Fugitive Dust					0.5031	0.0000	0.5031	0.0543	0.0000	0.0543			0.0000			0.0000
Off-Road	1.7881	19.8933	13.7844	0.0326		0.7673	0.7673		0.7059	0.7059		3,159.4728	3,159.4728	1.0218		3,185.0188
Total	**1.7881**	**19.8933**	**13.7844**	**0.0326**	**0.5031**	**0.7673**	**1.2704**	**0.0543**	**0.7059**	**0.7603**		**3,159.4728**	**3,159.4728**	**1.0218**		**3,185.0188**

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					0.1962	0.0000	0.1962	0.0212	0.0000	0.0212			0.0000			0.0000
Off-Road	1.7881	19.8933	13.7844	0.0326		0.7673	0.7673		0.7059	0.7059	0.0000	3,159.4728	3,159.4728	1.0218		3,185.0188
Total	**1.7881**	**19.8933**	**13.7844**	**0.0326**	**0.1962**	**0.7673**	**0.9635**	**0.0212**	**0.7059**	**0.7271**	**0.0000**	**3,159.4728**	**3,159.4728**	**1.0218**		**3,185.0188**

3.3 Grading/Excavation - 2022

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					0.5031	0.0000	0.5031	0.0543	0.0000	0.0543			0.0000			0.0000
Off-Road	1.5702	16.5674	13.5477	0.0326		0.6331	0.6331		0.5825	0.5825		3,159.9337	3,159.9337	1.0220		3,185.4834
Total	**1.5702**	**16.5674**	**13.5477**	**0.0326**	**0.5031**	**0.6331**	**1.1362**	**0.0543**	**0.5825**	**0.6368**		**3,159.9337**	**3,159.9337**	**1.0220**		**3,185.4834**

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					0.1962	0.0000	0.1962	0.0212	0.0000	0.0212			0.0000			0.0000
Off-Road	1.5702	16.5674	13.5477	0.0326		0.6331	0.6331		0.5825	0.5825	0.0000	3,159.9337	3,159.9337	1.0220		3,185.4834
Total	**1.5702**	**16.5674**	**13.5477**	**0.0326**	**0.1962**	**0.6331**	**0.8293**	**0.0212**	**0.5825**	**0.6036**	**0.0000**	**3,159.9337**	**3,159.9337**	**1.0220**		**3,185.4834**

3.4 Paving - 2022

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	0.5514	5.5624	7.2902	0.0114		0.2840	0.2840		0.2612	0.2612		1,103.8302	1,103.8302	0.3570		1,112.7552
Paving	0.0799					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6313**	**5.5624**	**7.2902**	**0.0114**		**0.2840**	**0.2840**		**0.2612**	**0.2612**		**1,103.8302**	**1,103.8302**	**0.3570**		**1,112.7552**

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	0.5514	5.5624	7.2902	0.0114		0.2840	0.2840		0.2612	0.2612	0.0000	1,103.8302	1,103.8302	0.3570		1,112.7552
Paving	0.0799					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6313**	**5.5624**	**7.2902**	**0.0114**		**0.2840**	**0.2840**		**0.2612**	**0.2612**	**0.0000**	**1,103.8302**	**1,103.8302**	**0.3570**		**1,112.7552**

3.5 Landscaping/Trail Construction/Ancillary Facilities - 2022

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0096	10.9543	8.5769	0.0167		0.4710	0.4710		0.4352	0.4352		1,582.8564	1,582.8564	0.4933		1,595.1879
Total	**1.0096**	**10.9543**	**8.5769**	**0.0167**	**0.0000**	**0.4710**	**0.4710**	**0.0000**	**0.4352**	**0.4352**		**1,582.8564**	**1,582.8564**	**0.4933**		**1,595.1879**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0096	10.9543	8.5769	0.0167		0.4710	0.4710		0.4352	0.4352	0.0000	1,582.8564	1,582.8564	0.4933		1,595.1879
Total	**1.0096**	**10.9543**	**8.5769**	**0.0167**	**0.0000**	**0.4710**	**0.4710**	**0.0000**	**0.4352**	**0.4352**	**0.0000**	**1,582.8564**	**1,582.8564**	**0.4933**		**1,595.1879**

3.6 Architectural Coating - 2022

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	3.7822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**3.9867**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	3.7822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**3.9867**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Fallbrook Local Park - Operations

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	68.00	Space	0.61	27,200.00	0
City Park	6.80	Acre	6.80	296,208.00	0
User Defined Residential	1.00	Dwelling Unit	0.00	0.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total acreage of park is 6.8 acres. User defined land use is to account for grills using fireplace inputs. Land use must be defined as residential to input fireplaces which are a proxy for grills

Construction Phase - Phase durations were assumptions made on the size of the park and intesnity of work. Assumptions were based on a previous park construction project modeled by ESA

Off-road Equipment -

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a previous park construction project modeled by ESA

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Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a previous park construction project modeled by ESA

Trips and VMT - Trips calculated separately

Grading - Total acres graded is conservatively assumed to cover the entire 6.8-acre site with three grading passes for a total of 20.4 total acres graded

Architectural Coating - Arch coating only needed for line painting in parking lot

Vehicle Trips - Trip rate based on 136 daily trips from Traffic Study and a 6.8-acre park size

Woodstoves - 8 grills assumed for park

Water And Wastewater - Water consumption calculated using consumptive use and acres of irrigated land from USGS' Estimated Use of Water in the United States in 2015, Table 7, p. 37. This use is more efficient than CalEEMod defaults and is meant to account for efficiency increases from the 2020

Sequestration -

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	0	148104
tblAreaCoating	Area_Nonresidential_Interior	0	444312
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	58.00
tblConstructionPhase	NumDays	10.00	15.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	0.55	0.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberPropane	0.00	8.00
tblGrading	AcresOfGrading	21.50	20.40
tblGrading	AcresOfGrading	29.00	0.00
tblGrading	MaterialSiltContent	6.90	4.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblSequestration	NumberOfNewTrees	0.00	109.00
tblSolidWaste	SolidWasteGenerationRate	0.58	0.53
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	27.00	0.00
tblVehicleTrips	HO_TL	7.50	0.00
tblVehicleTrips	HS_TL	7.30	0.00
tblVehicleTrips	HW_TL	10.80	0.00
tblVehicleTrips	ST_TR	22.75	20.00
tblVehicleTrips	SU_TR	16.74	20.00
tblVehicleTrips	WD_TR	1.89	20.00
tblWater	OutdoorWaterUseRate	8,102,073.18	3,914,742.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

Category	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
	lb/day										lb/day					
Area	1.9297	0.2056	0.2083	0.0000		0.0115	0.0115		0.0115	0.0115	0.0000	196.8862	196.8862	3.3300e-003	0.0142	201.1904
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Operational

Category	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
	lb/day										lb/day					
Area	1.9297	0.2056	0.2083	0.0000		0.0115	0.0115		0.0115	0.0115	0.0000	196.8862	196.8862	3.3300e-003	0.0142	201.1904
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

	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**

4.0 Operational Detail - Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	136.00	136.00	136.00	290,340	290,340
Parking Lot	0.00	0.00	0.00		
User Defined Residential	0.00	0.00	0.00		
Total	136.00	136.00	136.00	290,340	290,340

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Residential	0.00	0.00	0.00	41.60	18.80	39.60	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
User Defined Residential	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
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
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
User Defined Residential	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
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
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
User Defined Residential	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	1.9297	0.2056	0.2083	0.0000		0.0115	0.0115		0.0115	0.0115	0.0000	196.8862	196.8862	3.3300e-003	0.0142	201.1904
Unmitigated	1.9297	0.2056	0.2083	0.0000		0.0115	0.0115		0.0115	0.0115	0.0000	196.8862	196.8862	3.3300e-003	0.0142	201.1904

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	1.8859					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0157	0.2046	0.1180	0.0000		0.0110	0.0110		0.0110	0.0110	0.0000	196.7213	196.7213	3.1500e-003	0.0142	201.0209
Landscaping	3.2100e-003	1.0200e-003	0.0902	0.0000		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.1649	0.1649	1.9000e-004		0.1696
Total	**1.9297**	**0.2056**	**0.2083**	**0.0000**		**0.0115**	**0.0115**		**0.0115**	**0.0115**	**0.0000**	**196.8862**	**196.8862**	**3.3400e-003**	**0.0142**	**201.1904**

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	1.8859					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0157	0.2046	0.1180	0.0000		0.0110	0.0110		0.0110	0.0110	0.0000	196.7213	196.7213	3.1500e-003	0.0142	201.0209
Landscaping	3.2100e-003	1.0200e-003	0.0902	0.0000		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.1649	0.1649	1.9000e-004		0.1696
Total	**1.9297**	**0.2056**	**0.2083**	**0.0000**		**0.0115**	**0.0115**		**0.0115**	**0.0115**	**0.0000**	**196.8862**	**196.8862**	**3.3400e-003**	**0.0142**	**201.1904**

Fallbrook Local Park - Operations

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	68.00	Space	0.61	27,200.00	0
City Park	6.80	Acre	6.80	296,208.00	0
User Defined Residential	1.00	Dwelling Unit	0.00	0.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total acreage of park is 6.8 acres. User defined land use is to account for grills using fireplace inputs. Land use must be defined as

Construction Phase - Phase durations were assumptions made on the size of the park and intesnity of work. Assumptions were based on a previous

Off-road Equipment -

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

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Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Trips and VMT - Trips calculated separately

Grading - Total acres graded is conservatively assumed to cover the entire 6.8-acre site with three grading passes for a total of 20.4 total acres graded

Architectural Coating - Arch coating only needed for line painting in parking lot

Vehicle Trips - Trip rate based on 136 daily trips from Traffic Study and a 6.8-acre park size

Woodstoves - 8 grills assumed for park

Water And Wastewater - Water consumption calculated using consumptive use and acres of irrigated land from USGS' Estimated Use of Water in the United States in 2015, Table 7, p. 27. This use is more efficient than CalEEMod defaults and is meant to account for efficiency increases from the 2020

Sequestration -

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	0	148104
tblAreaCoating	Area_Nonresidential_Interior	0	444312
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	58.00
tblConstructionPhase	NumDays	10.00	15.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	0.55	0.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberPropane	0.00	8.00
tblGrading	AcresOfGrading	21.50	20.40
tblGrading	AcresOfGrading	29.00	0.00
tblGrading	MaterialSiltContent	6.90	4.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblSequestration	NumberOfNewTrees	0.00	109.00
tblSolidWaste	SolidWasteGenerationRate	0.58	0.53
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	27.00	0.00
tblVehicleTrips	HO_TL	7.50	0.00
tblVehicleTrips	HS_TL	7.30	0.00
tblVehicleTrips	HW_TL	10.80	0.00
tblVehicleTrips	ST_TR	22.75	20.00
tblVehicleTrips	SU_TR	16.74	20.00
tblVehicleTrips	WD_TR	1.89	20.00
tblWater	OutdoorWaterUseRate	8,102,073.18	3,914,742.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

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	1.9297	0.2056	0.2083	0.0000		0.0115	0.0115		0.0115	0.0115	0.0000	196.8862	196.8862	3.3300e-003	0.0142	201.1904
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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	1.9297	0.2056	0.2083	0.0000		0.0115	0.0115		0.0115	0.0115	0.0000	196.8862	196.8862	3.3300e-003	0.0142	201.1904
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

	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**

4.0 Operational Detail - Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	136.00	136.00	136.00	290,340	290,340
Parking Lot	0.00	0.00	0.00		
User Defined Residential	0.00	0.00	0.00		
Total	136.00	136.00	136.00	290,340	290,340

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Residential	0.00	0.00	0.00	41.60	18.80	39.60	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
User Defined Residential	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
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
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
User Defined Residential	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
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
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
User Defined Residential	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	1.9297	0.2056	0.2083	0.0000		0.0115	0.0115		0.0115	0.0115	0.0000	196.8862	196.8862	3.3300e-003	0.0142	201.1904
Unmitigated	1.9297	0.2056	0.2083	0.0000		0.0115	0.0115		0.0115	0.0115	0.0000	196.8862	196.8862	3.3300e-003	0.0142	201.1904

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	1.8859					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0157	0.2046	0.1180	0.0000		0.0110	0.0110		0.0110	0.0110	0.0000	196.7213	196.7213	3.1500e-003	0.0142	201.0209
Landscaping	3.2100e-003	1.0200e-003	0.0902	0.0000		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.1649	0.1649	1.9000e-004		0.1696
Total	**1.9297**	**0.2056**	**0.2083**	**0.0000**		**0.0115**	**0.0115**		**0.0115**	**0.0115**	**0.0000**	**196.8862**	**196.8862**	**3.3400e-003**	**0.0142**	**201.1904**

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	1.8859					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0157	0.2046	0.1180	0.0000		0.0110	0.0110		0.0110	0.0110	0.0000	196.7213	196.7213	3.1500e-003	0.0142	201.0209
Landscaping	3.2100e-003	1.0200e-003	0.0902	0.0000		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.1649	0.1649	1.9000e-004		0.1696
Total	**1.9297**	**0.2056**	**0.2083**	**0.0000**		**0.0115**	**0.0115**		**0.0115**	**0.0115**	**0.0000**	**196.8862**	**196.8862**	**3.3400e-003**	**0.0142**	**201.1904**

Fallbrook Local Park

Air Quality Construction Analysis

Regional Maximums	**ROG**	**NOX**	**CO**	**SO2**	**Total PM10**	**Total PM2.5**
Source				**lb/day**		
3.2 Site Preparation/Clearing - 2021	2.7	27.7	15.3	0.0	3.9	2.8
3.3 Grading/Excavation - 2021	3.2	50.8	26.5	0.1	3.3	1.6
3.3 Grading/Excavation - 2022	2.6	43.5	25.8	0.1	3.0	1.3
3.4 Paving - 2022	0.7	6.0	8.0	0.0	0.5	0.3
3.5 Landscaping/Trail Construction/Ancillary Facilities - 2022	1.0	11.0	9.2	0.0	0.7	0.5
3.6 Architectural Coating - 2022	4.0	1.4	2.0	0.0	0.2	0.1

Overlapping Phases	**ROG**	**NOX**	**CO**	**SO2**	**Total PM10**	**Total PM2.5**
2022						
Landscaping/Trail Construction/Ancillary Facilities - 2022 + Architectural Coating - 2022	5.0	12.4	11.2	0.0	0.9	0.6
Project Daily Maximum Emissions	**5.01**	**50.75**	**26.53**	**0.13**	**3.89**	**2.80**
SCAQMD Regional Significance Threshold	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Fallbrook Local Park

Summer

Air Quality Construction Analysis

Summer / Source	Onsite Emissions ROG	NOX	CO	SO2	Total PM10	Total PM2.5	Offsite Emissions ROG	NOX	CO	SO2	Total PM10	Total PM2.5
	lb/day						lb/day					
3.2 Site Preparation/Clearing - 2021	2.65	27.63	14.86	0.03	3.71	2.75	0.01	0.04	0.46	0.00	0.18	0.05
3.3 Grading/Excavation - 2021	1.79	19.89	13.78	0.03	0.96	0.73	1.40	30.86	12.75	0.09	2.38	0.90
3.3 Grading/Excavation - 2022	1.57	16.57	13.55	0.03	0.83	0.60	1.04	26.94	12.24	0.09	2.22	0.74
3.4 Paving - 2022	0.63	5.56	7.29	0.01	0.28	0.26	0.03	0.39	0.74	0.00	0.25	0.07
3.5 Landscaping/Trail Construction/Ancillary Facilities - 2022	1.01	10.95	8.58	0.02	0.47	0.44	0.01	0.05	0.63	0.00	0.27	0.07
3.6 Architectural Coating - 2022	3.99	1.41	1.81	0.00	0.08	0.08	0.00	0.02	0.21	0.00	0.09	0.02

Regional Emissions	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
3.2 Site Preparation/Clearing - 2021	2.7	27.7	15.3	0.0	3.9	2.8
3.3 Grading/Excavation - 2021	3.2	50.8	26.5	0.1	3.3	1.6
3.3 Grading/Excavation - 2022	2.6	43.5	25.8	0.1	3.0	1.3
3.4 Paving - 2022	0.7	6.0	8.0	0.0	0.5	0.3
3.5 Landscaping/Trail Construction/Ancillary Facilities - 2022	1.0	11.0	9.2	0.0	0.7	0.5
3.6 Architectural Coating - 2022	4.0	1.4	2.0	0.0	0.2	0.1

Overlapping Phases

	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
2022						
Landscaping/Trail Construction/Ancillary Facilities - 2022 + Architectural Coating - 2022	5.0	12.4	11.2	0.0	0.9	0.6
Project Daily Maximum Emissions	**5.01**	**50.75**	**26.53**	**0.13**	**3.89**	**2.80**

Fallbrook Park
Winter
Air Quality Construction Analysis

Winter	Onsite Emissions						Offsite Emissions					
	ROG	NOX	CO	SO2	Total PM10	Total PM2.5	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
Source	lb/day						lb/day					
3.2 Site Preparation/Clearing - 2021	2.65	27.63	14.86	0.03	3.71	2.75	0.01	0.04	0.46	0.00	0.18	0.05
3.3 Grading/Excavation - 2021	1.79	19.89	13.78	0.03	0.96	0.73	1.40	30.86	12.75	0.09	2.38	0.90
3.3 Grading/Excavation - 2022	1.57	16.57	13.55	0.03	0.83	0.60	1.04	26.94	12.24	0.09	2.22	0.74
3.4 Paving - 2022	0.63	5.56	7.29	0.01	0.28	0.26	0.03	0.39	0.74	0.00	0.25	0.07
3.5 Landscaping/Trail Construction/Ancillary Facilities - 2022	1.01	10.95	8.58	0.02	0.47	0.44	0.01	0.05	0.63	0.00	0.27	0.07
3.6 Architectural Coating - 2022	3.99	1.41	1.81	0.00	0.08	0.08	0.00	0.02	0.21	0.00	0.09	0.02

Regional Emissions	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
3.2 Site Preparation/Clearing - 2021	2.7	27.7	15.3	0.0	3.9	2.8
3.3 Grading/Excavation - 2021	3.2	50.8	26.5	0.1	3.3	1.6
3.3 Grading/Excavation - 2022	2.6	43.5	25.8	0.1	3.0	1.3
3.4 Paving - 2022	0.7	6.0	8.0	0.0	0.5	0.3
3.5 Landscaping/Trail Construction/Ancillary Facilities - 2022	1.0	11.0	9.2	0.0	0.7	0.5
3.6 Architectural Coating - 2022	4.0	1.4	2.0	0.0	0.2	0.1

Overlapping Phases

	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
2022						
Landscaping/Trail Construction/Ancillary Facilities - 2022 + Architectural Coating - 2022	5.0	12.4	11.2	0.0	0.9	0.6
Project Daily Maximum Emissions	**5.01**	**50.75**	**26.53**	**0.13**	**3.89**	**2.80**

Fallbrook Local Park

Construction Assumptions

Project Site Acreage 6.8

Project Summary

Land Use[1]	Sub Use	CalEEMod Landuse Type	Amount	Unit
Community Park	Play Area	City Park	0.80	acres
	Open Field		1.20	acres
	Off-Leash Dog Zone		0.50	acres
	Skate Elements		0.50	acres
	Multisport Courts		0.10	acres
	Trails and Paths		3,024	linear feet
	Comfort Station/Restrooms		400	square feet
Parking Lot		Parking Lot	68	spots

Notes

1 Total land use acreage is 6.8 acres. Any area not specified above is assumed to be open park space

2 Park is modeled as 6.8 acres in CalEEMod and includes parking area

Construction Schedule[4]

Phase Name	CalEEMod Phase Type	Start Date	End Date	Total Days	# of Workers per day	Total One-way Worker Trips per day	Trip Length	Vendor Trips per day	Total One-Way Vendor Trips	Trip Length	Total Haul Trucks	Total One-way Haul Trips	Trucks per day	Trip Length
Site Preparation/Clearing	Site Preparation	11/29/2021	12/18/2021	15	8	16	14.7	-	-	6.9	-	-	-	-
Grading/Excavation	Grading	12/19/2021	2/16/2022	43	12	24	14.7	-	-	6.9	2,143	4,286	50	-
Paving	Paving	2/17/2022	3/16/2022	20	10	20	14.7	2	4	6.9	-	-	-	-
Ancillary Facilities/Landscaping/Trail Construction	Grading	3/17/2022	6/6/2022	58	12	24	14.7	-	-	-	-	-	-	-
Architectural Coating	Architectural Coating	5/31/2022	6/6/2022	5	4	8	15.7	-	-	-	-	-	-	-

Notes: Phase durations were assumptions made on the size of the park and intesnity of work. Assumptions were based on a previous park construction project modeled

Construction Equipment

Phase Name	Equipment Type	Equipment Amount[1]	Hours per Day
Site Preparation/Clearing	Rubber Tired Dozers	2	8
	Tractors/Loaders/Backhoes	3	8
Grading/Excavation	Tractors/Loaders/Backhoes	1	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Loaders	2	8
Paving	Pavers	1	8
	Paving Equipment	1	8
	Rollers	1	8
Ancillary Facilities/Landscaping/Tra	Tractors/Loaders/Backhoes	2	8
	Cement and Mortar Mixers	1	8
	Compactor	1	8
	Graders	1	8
	Rollers	1	8
Architectural Coating	Air Compressor	1	6

Notes:

1 Equipment quantities were assumptions made on the size of the park and intensity of work. Assumptions were based on a previous park construction project modeled by ESA

Excavation

Land Use Excavation/ Grading Quantities[1]	Cut (cy)	Fill (cy)	Site Acreage	Grading Passes	Total Acres Graded
Excavation	30,000	552,521	6.8	3	20.4

Grading/Excavation	Cut (cy)	Fill (cy)
Entire Site Development	30,000	552,521
Total Volume	**30,000**	
Haul Truck Capacity (CY)	14	
Total Haul Trucks	2,143	
Total One-way Haul Trips	4,285.71	*Enter into CalEEMod*
Duration (days)	43	
Daily Haul Trucks	50	

Source: Construction data needs

Location	Area (sf)[1]	Elevation Difference (ft)[2]	Cut		Fill	
			Excavation Volume (cf)	Excavation Volume (cy)	Excavation Volume (cf)	Excavation Volume (cy)
Soccer Field/Accommodations	53,822	22	592,042	197,347	561,552	187,184
Parking Lot	58,299	30	874,485	291,495	829,449	276,483
Play Area	33,748	14	236,236	78,745	224,070	74,690
Sport Courts	8,960	10	44,800	14,933	42,493	14,164
Total Exacavation	**-**	**-**	**1,747,563**	**582,521**	**1,657,563**	**552,521**

Notes:

1. Areas taken from PD except for parking lot, which was estimated using Google Earth
2. Elevation difference was conservatively estimated using a topographical overlay of the project site

Concrete Estimates

Hardscape Demolition Volume		
Total Area(KSF)	19.7	
Thickness (ft)	0.5	*feet*
Debris Volume (CY)	370	*(rounded, estimc*

Land Use	Concrete Volume (CY)	Concrete Truck Capacity (CY)[4]	Total Trucks Needed (Vendor Trips)
Project	370	10	37

Land Use	Total Trucks
Project	37
Duration (days)	20
Trucks per day	2

Notes:

1 Based on data needs provided by CWE

Fallbrook Local Park

Total On-Road Emissions

314 Max construction days per year

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (pounds/day)									
						ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5
Site Preparation/Clearing	2021														
Total Haul Trips	0														
Hauling	0	15	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	15	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	15	8	14.7	0	0.01	0.04	0.46	0.00	0.18	0.00	0.18	0.05	0.00	0.05
					Total	0.01	0.04	0.46	0.00	0.18	0.00	0.18	0.05	0.00	0.05
Grading/Excavation - 2021	2021														
Total Haul Trips	4286														
Hauling	100	10	8	20	15	1.39	30.80	12.06	0.09	1.75	0.37	2.11	0.48	0.35	0.83
Vendor	0	10	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	10	8	14.7	0	0.01	0.06	0.69	0.00	0.27	0.00	0.27	0.07	0.00	0.07
					Total	1.40	30.86	12.75	0.09	2.01	0.37	2.38	0.55	0.35	0.90
Grading Excavation - 2022	2022														
Total Haul Trips	4286														
Hauling	100	33	8	20	15	1.03	26.89	11.61	0.09	1.75	0.20	1.95	0.48	0.19	0.67
Vendor	0	33	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	33	8	14.7	0	0.01	0.05	0.63	0.00	0.27	0.00	0.27	0.07	0.00	0.07
					Total	1.04	26.94	12.24	0.09	2.01	0.20	2.22	0.55	0.19	0.74
Paving	2022														
Total Haul Trips	0														
Hauling	0	20	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	20	8	6.9	15	0.02	0.35	0.21	0.00	0.03	0.00	0.03	0.01	0.00	0.01
Worker	20	20	8	14.7	0	0.01	0.04	0.52	0.00	0.22	0.00	0.22	0.06	0.00	0.06
					Total	0.03	0.39	0.74	0.00	0.25	0.00	0.25	0.07	0.00	0.07
Ancillary Facilities/Landscaping/Tr	2022														
Total Haul Trips	0														
Hauling	0	58	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	58	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	58	8	14.7	0	0.01	0.05	0.63	0.00	0.27	0.00	0.27	0.07	0.00	0.07
					Total	0.01	0.05	0.63	0.00	0.27	0.00	0.27	0.07	0.00	0.07
Architectural Coating	2022														
Total Haul Trips	0														
Hauling	0	5	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	5	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	8	5	8	14.7	0	0.00	0.02	0.21	0.00	0.09	0.00	0.09	0.02	0.00	0.02
					Total	0.00	0.02	0.21	0.00	0.09	0.00	0.09	0.02	0.00	0.02

Fallbrook Local Park

Total On-Road Emissions

314 Max construction days per year

						Regional Emissions (Tons/year)									
Construction Phase	**Daily One-Way Trips**	**Haul Days per Phase (days)**	**Work Hours per Day (hours/day)**	**One-Way Trip Distance per Day (miles)**	**Idling per Day (minutes)**	**ROG**	**NOX**	**CO**	**SO2**	**PM10 Dust**	**PM10 Exh**	**Total PM10**	**PM2.5 Dust**	**PM2.5 Exh**	**Total PM2.5**
Site Preparation/Clearing	2021														
Total Haul Trips	0														
Hauling	0	15	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	15	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	15	8	14.7	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation - 2021	2021														
Total Haul Trips	4286														
Hauling	100	10	8	20	15	0.01	0.15	0.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Vendor	0	10	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	10	8	14.7	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading Excavation - 2022	2022														
Total Haul Trips	4286														
Hauling	100	33	8	20	15	0.02	0.44	0.19	0.00	0.03	0.00	0.03	0.01	0.00	0.01
Vendor	0	33	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	33	8	14.7	0	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	2022														
Total Haul Trips	0														
Hauling	0	20	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	20	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	20	20	8	14.7	0	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ancillary Facilities/Landscaping/	2022														
Total Haul Trips	0														
Hauling	0	58	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	58	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	58	8	14.7	0	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Architectural Coating	2022														
Total Haul Trips	0														
Hauling	0	5	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	5	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	8	5	8	14.7	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Fallbrook Local Park
Running Emissions

	Running Emissions Factor (grams/mile)					
	ROG	NOX	CO	SO2	PM10	PM2.5
2021Hauling	0.14116338	4.084471031	0.7454088	0.01408842	0.06403219	0.06126213
2021Vendor	0.16521431	3.416108421	0.78445173	0.01268151	0.06808103	0.06513195
2021Worker	0.01805208	0.074781361	0.88259795	0.0030099	0.00185657	0.00171012
2022Hauling	0.07737413	3.386864349	0.5819193	0.01363057	0.03513196	0.03361212
2022Vendor	0.08523322	2.679385459	0.5607605	0.01229326	0.03511901	0.03359594
2022Worker	0.01575412	0.065670089	0.80683624	0.00291872	0.00175516	0.00161654
	N/A	N/A	N/A	N/A	N/A	N/A

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Regional Emissions (pounds/day) ROG	NOX	CO	SO2	PM10	PM2.5
Site Preparation/Clearing	2021								
Total Haul Trips	0								
Hauling	0	15	8	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	15	8	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	15	8	0.01	0.04	0.46	0.00	0.00	0.00
Grading/Excavation - 2021	2021								
Total Haul Trips	4286								
Hauling	100	10	8	0.78	22.51	4.11	0.08	0.35	0.34
Vendor	0	10	8	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	10	8	0.01	0.06	0.69	0.00	0.00	0.00
Grading Excavation - 2022	2022								
Total Haul Trips	4286								
Hauling	100	33	8	0.43	18.67	3.21	0.08	0.19	0.19
Vendor	0	33	8	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	33	8	0.01	0.05	0.63	0.00	0.00	0.00
Paving	2022								
Total Haul Trips	0								
Hauling	0	20	8	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	20	8	0.01	0.16	0.03	0.00	0.00	0.00
Worker	20	20	8	0.01	0.04	0.52	0.00	0.00	0.00
Ancillary Facilities/Landsca	2022								
Total Haul Trips	0								
Hauling	0	58	8	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	58	8	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	58	8	0.01	0.05	0.63	0.00	0.00	0.00
Architectural Coating	2022								
Total Haul Trips	0								
Hauling	0	5	8	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	5	8	0.00	0.00	0.00	0.00	0.00	0.00
Worker	8	5	8	0.00	0.02	0.21	0.00	0.00	0.00

Fallbrook Local Park
Idling Emissions

	Idling Emissions Factor (grams/minute) ROG	NOX	CO	SO2	PM10	PM2.5
2021Hauling Hauling	0.18415228	2.506756354	2.40454806	0.00425027	0.00394082	0.00377034
2021Vendor Vendor	0.09736024	1.41862613	1.29271719	0.0023045	0.00244523	0.00233945
2021Worker Worker	0	0	0	0	0	0
2022Hauling Hauling	0.18164383	2.486439248	2.54062644	0.00431899	0.00159722	0.00152813
2022Vendor Vendor	0.09574566	1.384767027	1.36110719	0.00233519	0.00108898	0.00104187
2022Worker Worker	0	0	0	0	0	0
GWP	N/A	N/A	N/A	N/A	N/A	N/A

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Idling minutes per Day (miles)	Regional Emissions (pounds/day) ROG	NOX	CO	SO2	PM10	PM2.5
Site Preparation/Clearing	2021									
Total Haul Trips	0									
Hauling	0	15	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	15	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	15	8	0	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation - 2021	2021									
Total Haul Trips	4286									
Hauling	100	10	8	15	0.61	8.29	7.95	0.01	0.01	0.01
Vendor	0	10	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	10	8	0	0.00	0.00	0.00	0.00	0.00	0.00
Grading Excavation - 2022	2022									
Total Haul Trips	4286									
Hauling	100	33	8	15	0.60	8.22	8.40	0.01	0.01	0.01
Vendor	0	33	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	33	8	0	0.00	0.00	0.00	0.00	0.00	0.00
Paving	2022									
Total Haul Trips	0									
Hauling	0	20	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	20	8	15	0.01	0.18	0.18	0.00	0.00	0.00
Worker	20	20	8	0	0.00	0.00	0.00	0.00	0.00	0.00
Ancillary Facilities/Landsca	2022									
Total Haul Trips	0									
Hauling	0	58	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	58	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	58	8	0	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	2022									
Total Haul Trips	0									
Hauling	0	5	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	5	8	15	0.00	0.00	0.00	0.00	0.00	0.00
Worker	8	5	8	0	0.00	0.00	0.00	0.00	0.00	0.00

Fallbrook Local Park
Road Dust, Break Wear, and Tire wear Emissions

	Emission Factors (grams/mile)					
	PM10			PM2.5		
	RD	BW	TW	RD	BW	TW
2021Hauling Hauling	3.00E-01	0.06085398	0.03546617	7.36E-02	0.02608028	0.00886654
2021Vendor Vendor	3.00E-01	0.095597009	0.02373309	7.36E-02	0.04097015	0.00593327
2021Worker Worker	3.00E-01	0.036750011	0.008	7.36E-02	0.01575	0.002
2022Hauling Hauling	3.00E-01	0.060860667	0.03547016	7.36E-02	0.02608314	0.00886754
2022Vendor Vendor	3.00E-01	0.095600352	0.02373508	7.36E-02	0.04097158	0.00593377
2022Worker Worker	3.00E-01	0.036750011	0.008	7.36E-02	0.01575	0.002

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day) PM10 RD	PM10 BW	PM10 TW	PM2.5 RD	PM2.5 BW	PM2.5 TW
Site Preparation/Clearing	2021									
Total Haul Trips	0									
Hauling	0	15	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	15	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	15	8	14.7	0.16	0.02	0.00	0.04	0.01	0.00
Grading/Excavation - 2021	2021									
Total Haul Trips	4286									
Hauling	100	10	8	20	1.32	0.27	0.16	0.32	0.11	0.04
Vendor	0	10	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	10	8	14.7	0.23	0.03	0.01	0.06	0.01	0.00
Grading Excavation - 2022	2022									
Total Haul Trips	4286									
Hauling	100	33	8	20	1.32	0.27	0.16	0.32	0.12	0.04
Vendor	0	33	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	33	8	14.7	0.23	0.03	0.01	0.06	0.01	0.00
Paving	2022									
Total Haul Trips	0									
Hauling	0	20	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	20	8	6.9	0.02	0.01	0.00	0.00	0.00	0.00
Worker	20	20	8	14.7	0.19	0.02	0.01	0.05	0.01	0.00
Ancillary Facilities/Landscaping/Trail Cosnt	2022									
Total Haul Trips	0									
Hauling	0	58	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	58	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	24	58	8	14.7	0.23	0.03	0.01	0.06	0.01	0.00
Architectural Coating	2022									
Total Haul Trips	0									
Hauling	0	5	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	5	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	8	5	8	14.7	0.08	0.01	0.00	0.02	0.00	0.00

Fallbrook Local Park
Air Quality and Greenhouse Gas Assessment
Regional Operational Emissions

Maximum Unmitigated Regional Operational Emissions (pounds per day) [a]

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	2	0.206	0.208	0.000	0.012	0.012
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Motor Vehicles	0	0	2	0	1	0.2
Total Project On-Site and Off-Site Emissions	**2**	**1**	**2**	**0.0**	**1**	**0**
SDAPCD Numeric Indicators	**137.0**	**250.0**	**550.0**	**250.0**	**100.0**	**55.0**
Over/(Under)	(135)	(249)	(547.7)	(250.0)	(99)	(55)
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Net Regional Operations

Maximum Unmitigated Regional Operational Emissions (pounds per day) [a]

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	2	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Motor Vehicles	<1	0	2	<1	<1	<1
Total Project On-Site and Off-Site Emissions	**2**	**1**	**2**	**0**	**1**	**0**
SDAPCD Numeric Indicators	**137.0**	**250.0**	**550.0**	**250.0**	**100.0**	**55.0**
Over/(Under)	(135)	(249)	(548)	(250)	(99.4)	(54.8)
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Fallbrook Local Park
Air Quality and GHG Assessment
Operational Mobile Emissions

Scenario	Year	Max Daily VMT	Criteria Pollutant Emission Factors (lb/mile) ROG	NOx	CO	SOx	PM10 Road Dust	PM10	PM10 Total	PM2_5 Road Dust	PM2_5	PM2.5 Tota
Project	2022	795	3.32E-04	5.54E-04	2.69E-03	7.84E-06	6.61E-04	1.16E-04	7.77E-04	1.62E-04	5.04E-05	2.13E-04

Scenario	GHG Emissions (metric tons/mile) CO2	CH4	N2O	CO2e
Project	3.65E-04	2.27E-08	1.89E-08	3.72E-04

Scenario	Criteria Pollutant Emissions (pounds/day) ROG	NOx	CO	SOx	PM10 Road Dust	PM10	PM10 Total	PM2_5 Road Dust	PM2_5	PM2.5 Total
Project	0.26	0.44	2.14	0.01	0.53	0.09	0.62	0.13	0.04	0.17

Scenario	GHG Emissions (metric tons/year) CO2	CH4	N2O	CO2e
Project	106.09	0.01	0.01	107.89

Source: Chen Ryan Associates, Fallbrook Community Park Transportation Impact Study, 2021

Region	(All)

Row Labels	Sum of ROG_TOTAL	Sum of NOx_TOTEX	Sum of CO_TOTEX	Sum of SOx_TOTEX	Sum of PM10_TOTAL	Sum of PM2.5_TOTAL	Sum of CO2_TOTEX	Sum of CH4_TOTEX	Sum of N2O_TOTEX	Sum of VMT
2022	16.65445461	27.80518082	134.8461321	0.392974169	5.835584166	2.527874226	40398.61462	2.505040703	2.090688015	100299748.7
Grand Total	**16.65445461**	**27.80518082**	**134.8461321**	**0.392974169**	**5.835584166**	**2.527874226**	**40398.61462**	**2.505040703**	**2.090688015**	**100299748.7**

Tons/Day

	Sum of ROG_TOTAL	Sum of NOx_TOTEX	Sum of CO_TOTEX	Sum of SOx_TOTEX	Sum of PM10_TOTAL	Sum of PM2.5_TOTAL	Sum of CO2_TOTEX	Sum of CH4_TOTEX	Sum of N2O_TOTEX	Sum of VMT
2022	16.65445461	27.80518082	134.8461321	0.392974169	5.835584166	2.527874226	40398.61462	2.505040703	2.090688015	100299748.7
Grand Total	16.65445461	27.80518082	134.8461321	0.392974169	5.835584166	2.527874226	40398.61462	2.505040703	2.090688015	100299748.7
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0

Emissions Factors

	lbs/mile						MT/mile			
	ROG	**NOx**	**CO**	**SOx**	**PM10**	**PM2_5**	**CO2**	**CH4**	**N2O**	**CO2e**
2017	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
2020	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
2022	0.000332094	0.000554442	0.002688863	7.836E-06	0.000116363	5.04064E-05	0.000365395	2.26574E-08	1.89097E-08	0.000371596

A-2 Energy Calculations

Fallbrook Local Park
Construction Energy Analysis

Annual Fuel Summary

	Heavy-Duty Construction Equipment
14,735	Total Project Consumption
	Haul Trucks
13,362	Total Project Consumption
	Vendor Trucks
71	Total Project Consumption
	Workers
1,639	Total Project Consumption
13,434	Project Consumption of diesel for Haul Trucks and Vendors
28,168	Total Gallons Diesel
1,639	Total Gallons Gasoline

San Diego County			Percent of Annual Project Compared to San Diego County
Source	**Fuel Type**	**Gallons**	
Workers	Gasoline	1,325,000,000	0.0001%
Off-Road/Vendor/Haul Trucks	Diesel	233,050,847	0.012%

Notes:
1 Gasoline and diesel amounts from CEC, 2019. Available: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting

Annual Electricity Summary

Temporary Construction Trailer - Electricity	6,726	kWh/year
Construction Water Energy Estimates	43,297	kWh/year
Total	**50,024**	**kWh/year**

Fallbrook Local Park
Construction Energy Analysis

Off-Road Equipment

Equipment ≤ 100 hp		
pounds diesel fuel/hp-hr (lb/hp-hr):[1]	0.408	lb/hp-hr
diesel density (lb/gal):[1]	7.11	lb/gal
diesel gallons/hp-hr:	0.0574	gal/hp-hr
Total <100	82,600	hp-hr
Total diesel gallons:	4,741	gal
Equipment > 100 hp		
pounds diesel fuel/hp-hr (lb/hp-hr):[1]	0.367	lb/hp-hr
diesel density (lb/gal):[1]	7.11	lb/gal
diesel gallons/hp-hr:	0.0516	gal/hp-hr
Total >100	193,587	hp-hr
Total diesel gallons:	9,994	gal
Total diesel gallons (off-road equipment):	**14,735**	**gal**

1. OFFROAD2017 Emission Factor Documentation

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
Site Preparation/Clearing	Rubber Tired Dozers	2	8	247	0.4	15	23,712
Site Preparation/Clearing	Tractors/Loaders/Backhoes	3	8	97	0.37	15	12,920
Grading/Excavation	Excavators	2	8	158	0.38	43	41,308
Grading/Excavation	Graders	1	8	187	0.41	43	26,374
Grading/Excavation	Rubber Tired Loaders	2	8	203	0.36	43	50,279
Grading/Excavation	Tractors/Loaders/Backhoes	1	8	97	0.37	43	12,346
Paving	Pavers	1	8	130	0.42	20	8,736
Paving	Paving Equipment	1	8	132	0.36	20	7,603
Paving	Rollers	1	8	80	0.38	20	4,864
Landscaping/Trail Construction/Ancilla	Cement and Mortar Mixers	1	8	9	0.56	58	2,339
Landscaping/Trail Construction/Ancilla	Graders	1	8	187	0.41	58	35,575
Landscaping/Trail Construction/Ancilla	Plate Compactors	1	8	8	0.43	58	1,596
Landscaping/Trail Construction/Ancilla	Rollers	1	8	80	0.38	58	14,106
Landscaping/Trail Construction/Ancilla	Tractors/Loaders/Backhoes	2	8	97	0.37	58	33,306
Architectural Coating	Air Compressors	1	6	78	0.48	5	1,123
						Total >100	193,587
						Total <100	82,600

Fallbrook Local Park
Construction Energy Analysis

Temporary Construction Trailer - Electricity			
Land Use	**Square Feet**	**Energy Use per year (kWh)**	**Energy Use during Construction Period (kWh)**
General Office	1,000	12,990	6,726

Note: CalEEMod 2016.3.2 used to estimate energy use for temporary construction office

Fallbrook Local Park
Construction Energy Analysis

Construction Water Energy Estimates

Project Acres	6.8
Construction Duration	0.52

Source	**Construction Water Use per Day (Mgal)**	**Total Construction Water Use (Mgal)**	**Total Electricity Demand from water Demand (kWh)**	
Project	0.020	3.325	43,297	
CalEEMod Water Electricity Factors	**Electricity Intensity Factor To Supply (kWh/Mgal)**	**Electricity Intensity Factor To Treat (kWh/Mgal)**	**Electricity Intensity Factor To Distribute (kWh/Mgal)**	**Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)**
Project	9727	111	1272	1911

Sources:

Electricity Intensity Factors - California Emissions Estimator Model (CalEEMod).

Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%. Factor is therefore (20.94 GAL/SF/year) x (43,560 SF/acre) / (365 days/year) / (0.85) = 2,940 gallons/acre/day, rounded up to 3,000 gallons/acre/day. (U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. “Guidelines for Estimating Unmetered Landscaping Water Use." July 2010. Page 12, Table 4 - Annual Irrigation Factor – Landscaped Areas with High Water Requirements).

Fallbrook Local Park
Operational Energy Demand

Electricity		**kWh/yr**	**GWh/yr**
Community Park		0	-
Parking Lot		9,520	0.010
	Total Building Energy	**9,520**	**0.010**
	Total	**9,520**	**0.010**
	Total (including water, see below)	**60,494**	**0.060**

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Water		**Mgal/yr**	
Community Park		3.91	
Parking Lot		0.00	
	Total	**3.915**	
Electricity Intensity Factors		**kWh/Mgal**	
Electricity Factor - Supply		9,727	
Electricity Factor - Treat		111	
Electricity Factor - Distribute		1,272	
Electricity Factor - Wastewater Treatment		1,911	
Electricity from Water Demand	**kWh/yr**	**GWh/yr**	
	Total	**50,973.86**	**0.051**

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Water Demand based on Project Water supply Assessment

Sewage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, 2012.

Fallbrook Local Park
Operational Energy Analysis
Fuel Usage from VMT

	795	Daily VMT - Project
Annual VMT (Traffic Study)[4]:	290,340	miles/year

Fuel Type:[1]	GAS	DSL	ELEC	NG
Percent:	94.4%	4.2%	1.4%	0.1%
Miles per Gallon Fuel:	26.0	10.7	-	3.39
Annual VMT by Fuel Type (miles):	273,989	12,178	3,959	214
Annual Fuel Usage (gallons):	10,519	1,138	-	9
Annual Fuel Savings from Electric Vehicles:[2]	-	-	152	

	San Diego County Fuel Consumption [3]	
	Gasoline	Diesel
San Diego County:	1,325,000,000	233,050,847
Project Annual:	10,519	1,138
Percent Net Project of Los Angeles County:	0.0008%	0.0005%

Notes:

1. California Air Resources Board, EMFAC2017 (South Coast Air Basin; Annual; 2024', Aggregate Fleet).
2. 3.914742
3. California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2019. Available at: https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html. Accessed January 2021. Diesel is adjusted to account for retail (48%) and non-retail (52%) diesel sales.

A-3 Greenhouse Gas Emissions Calculations

Fallbrook Local Park - Construction

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.19	Acre	6.19	269,636.40	0
Parking Lot	68.00	Space	0.61	27,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total acreage of park is 6.8 acres.

Construction Phase - Phase durations were assumptions made on size of park and intensity of work. Assumptions based on previous park project modeled by ESA
Off-road Equipment - Equipment quantities were assumptions made on size of park and intensity of work. Assumptions based on aprevious park project modeled by ESA
Off-road Equipment - Equipment quantities were assumptions made on size of park and intensity of work. Assumptions based on previous park project modeled by ESA
Off-road Equipment - Equipment quantities were assumptions made on size of park and intensity of work. Assumptions based on previous park project modeled by ESA
Off-road Equipment - Equipment quantities were assumptions made on size of park and intensity of work. Assumptions based on previous park project modeled by ESA
Grading - Total acres graded is conservatively assumed to cover the entire 6.8-acre site with three grading passes for a total of 20.4 total acres graded

Trips and VMT - Trips calculated separately

Off-road Equipment -

Architectural Coating - Arch coating only needed for line painting in parking lot

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	148,104.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	444,312.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	58.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	PhaseEndDate	2/17/2023	6/6/2022
tblConstructionPhase	PhaseEndDate	2/4/2022	2/16/2022
tblConstructionPhase	PhaseEndDate	1/20/2023	3/16/2022
tblConstructionPhase	PhaseEndDate	1/7/2022	12/18/2021
tblConstructionPhase	PhaseStartDate	1/21/2023	3/17/2022
tblConstructionPhase	PhaseStartDate	1/8/2022	12/19/2021
tblConstructionPhase	PhaseStartDate	12/24/2022	2/17/2022
tblConstructionPhase	PhaseStartDate	12/25/2021	11/29/2021
tblGrading	AcresOfGrading	21.50	20.40
tblGrading	AcresOfGrading	29.00	0.00
tblGrading	MaterialSiltContent	6.90	4.30
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblOffRoadEquipment	PhaseName		Landscaping/Trail Construction/Ancillary Facilities
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	27.00	0.00

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					
2021	0.0289	0.3067	0.1803	3.6000e-004	0.0553	0.0143	0.0696	0.0293	0.0132	0.0425	0.0000	31.7314	31.7314	0.0103	0.0000	31.9880
2022	0.0695	0.6495	0.5488	1.1400e-003	0.0108	0.0271	0.0379	1.1700e-003	0.0250	0.0262	0.0000	99.4664	99.4664	0.0316	0.0000	100.2551
Maximum	**0.0695**	**0.6495**	**0.5488**	**1.1400e-003**	**0.0553**	**0.0271**	**0.0696**	**0.0293**	**0.0250**	**0.0425**	**0.0000**	**99.4664**	**99.4664**	**0.0316**	**0.0000**	**100.2551**

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					
2021	0.0289	0.3067	0.1803	3.6000e-004	0.0216	0.0143	0.0359	0.0114	0.0132	0.0246	0.0000	31.7314	31.7314	0.0103	0.0000	31.9879
2022	0.0695	0.6495	0.5488	1.1400e-003	4.2200e-003	0.0271	0.0313	4.6000e-004	0.0250	0.0255	0.0000	99.4663	99.4663	0.0316	0.0000	100.2549
Maximum	**0.0695**	**0.6495**	**0.5488**	**1.1400e-003**	**0.0216**	**0.0271**	**0.0359**	**0.0114**	**0.0250**	**0.0255**	**0.0000**	**99.4663**	**99.4663**	**0.0316**	**0.0000**	**100.2549**

	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**	**61.00**	**0.00**	**37.48**	**61.00**	**0.00**	**27.08**	**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	**11-29-2021**	**2-27-2022**	0.6458	0.6458
2	**2-28-2022**	**5-28-2022**	0.3495	0.3495
3	**5-29-2022**	**8-28-2022**	0.0462	0.0462
		Highest	0.6458	0.6458

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation/Clearing	Site Preparation	11/29/2021	12/18/2021	5	15	
2	Grading/Excavation	Grading	12/19/2021	2/16/2022	5	43	
3	Paving	Paving	2/17/2022	3/16/2022	5	20	
4	Landscaping/Trail Construction/Ancillary Facilities	Grading	3/17/2022	6/6/2022	5	58	
5	Architectural Coating	Architectural Coating	5/31/2022	6/3/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.61

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,632

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Landscaping/Trail Construction/Ancillary Facilities	Air Compressors	0	0.00	78	0.48
Landscaping/Trail Construction/Ancillary Facilities	Excavators	0	8.00	158	0.38
Landscaping/Trail Construction/Ancillary Facilities	Graders	1	8.00	187	0.41
Grading/Excavation	Excavators	2	8.00	158	0.38
Landscaping/Trail Construction/Ancillary Facilities	Rubber Tired Dozers	0	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading/Excavation	Rubber Tired Loaders	2	8.00	203	0.36
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Landscaping/Trail Construction/Ancillary Facilities	Cement and Mortar Mixers	1	8.00	9	0.56
Grading/Excavation	Rubber Tired Dozers	0	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Plate Compactors	1	8.00	8	0.43
Grading/Excavation	Graders	1	8.00	187	0.41
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation/Clearing	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation/Clearing	Rubber Tired Dozers	2	8.00	247	0.40
Landscaping/Trail Construction/Ancillary Facilities	Rollers	1	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation/Clearing	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping/Trail Construction/Ancillary	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation/Clearing - 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					
Fugitive Dust					0.0444	0.0000	0.0444	0.0282	0.0000	0.0282	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.2072	0.1114	2.0000e-004		0.0105	0.0105		9.6600e-003	9.6600e-003	0.0000	17.4003	17.4003	5.6300e-003	0.0000	17.5410
Total	**0.0199**	**0.2072**	**0.1114**	**2.0000e-004**	**0.0444**	**0.0105**	**0.0549**	**0.0282**	**9.6600e-003**	**0.0378**	**0.0000**	**17.4003**	**17.4003**	**5.6300e-003**	**0.0000**	**17.5410**

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					0.0173	0.0000	0.0173	0.0110	0.0000	0.0110	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.2072	0.1114	2.0000e-004		0.0105	0.0105		9.6600e-003	9.6600e-003	0.0000	17.4003	17.4003	5.6300e-003	0.0000	17.5410
Total	**0.0199**	**0.2072**	**0.1114**	**2.0000e-004**	**0.0173**	**0.0105**	**0.0278**	**0.0110**	**9.6600e-003**	**0.0206**	**0.0000**	**17.4003**	**17.4003**	**5.6300e-003**	**0.0000**	**17.5410**

3.3 Grading/Excavation - 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					
Fugitive Dust					0.0108	0.0000	0.0108	1.1700e-003	0.0000	1.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9400e-003	0.0995	0.0689	1.6000e-004		3.8400e-003	3.8400e-003		3.5300e-003	3.5300e-003	0.0000	14.3311	14.3311	4.6300e-003	0.0000	14.4470
Total	**8.9400e-003**	**0.0995**	**0.0689**	**1.6000e-004**	**0.0108**	**3.8400e-003**	**0.0147**	**1.1700e-003**	**3.5300e-003**	**4.7000e-003**	**0.0000**	**14.3311**	**14.3311**	**4.6300e-003**	**0.0000**	**14.4470**

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					4.2200e-003	0.0000	4.2200e-003	4.6000e-004	0.0000	4.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9400e-003	0.0995	0.0689	1.6000e-004		3.8400e-003	3.8400e-003		3.5300e-003	3.5300e-003	0.0000	14.3311	14.3311	4.6300e-003	0.0000	14.4470
Total	**8.9400e-003**	**0.0995**	**0.0689**	**1.6000e-004**	**4.2200e-003**	**3.8400e-003**	**8.0600e-003**	**4.6000e-004**	**3.5300e-003**	**3.9900e-003**	**0.0000**	**14.3311**	**14.3311**	**4.6300e-003**	**0.0000**	**14.4470**

3.3 Grading/Excavation - 2022

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					0.0108	0.0000	0.0108	1.1700e-003	0.0000	1.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0259	0.2734	0.2235	5.4000e-004		0.0105	0.0105		9.6100e-003	9.6100e-003	0.0000	47.2996	47.2996	0.0153	0.0000	47.6821
Total	**0.0259**	**0.2734**	**0.2235**	**5.4000e-004**	**0.0108**	**0.0105**	**0.0213**	**1.1700e-003**	**9.6100e-003**	**0.0108**	**0.0000**	**47.2996**	**47.2996**	**0.0153**	**0.0000**	**47.6821**

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					4.2200e-003	0.0000	4.2200e-003	4.6000e-004	0.0000	4.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0259	0.2734	0.2235	5.4000e-004		0.0105	0.0105		9.6100e-003	9.6100e-003	0.0000	47.2996	47.2996	0.0153	0.0000	47.6820
Total	**0.0259**	**0.2734**	**0.2235**	**5.4000e-004**	**4.2200e-003**	**0.0105**	**0.0147**	**4.6000e-004**	**9.6100e-003**	**0.0101**	**0.0000**	**47.2996**	**47.2996**	**0.0153**	**0.0000**	**47.6820**

3.4 Paving - 2022

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	5.5100e-003	0.0556	0.0729	1.1000e-004		2.8400e-003	2.8400e-003		2.6100e-003	2.6100e-003	0.0000	10.0138	10.0138	3.2400e-003	0.0000	10.0948
Paving	8.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.3100e-003**	**0.0556**	**0.0729**	**1.1000e-004**		**2.8400e-003**	**2.8400e-003**		**2.6100e-003**	**2.6100e-003**	**0.0000**	**10.0138**	**10.0138**	**3.2400e-003**	**0.0000**	**10.0948**

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	5.5100e-003	0.0556	0.0729	1.1000e-004		2.8400e-003	2.8400e-003		2.6100e-003	2.6100e-003	0.0000	10.0138	10.0138	3.2400e-003	0.0000	10.0947
Paving	8.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.3100e-003**	**0.0556**	**0.0729**	**1.1000e-004**		**2.8400e-003**	**2.8400e-003**		**2.6100e-003**	**2.6100e-003**	**0.0000**	**10.0138**	**10.0138**	**3.2400e-003**	**0.0000**	**10.0947**

3.5 Landscaping/Trail Construction/Ancillary Facilities - 2022

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0293	0.3177	0.2487	4.8000e-004		0.0137	0.0137		0.0126	0.0126	0.0000	41.6424	41.6424	0.0130	0.0000	41.9668
Total	**0.0293**	**0.3177**	**0.2487**	**4.8000e-004**	**0.0000**	**0.0137**	**0.0137**	**0.0000**	**0.0126**	**0.0126**	**0.0000**	**41.6424**	**41.6424**	**0.0130**	**0.0000**	**41.9668**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0293	0.3177	0.2487	4.8000e-004		0.0137	0.0137		0.0126	0.0126	0.0000	41.6423	41.6423	0.0130	0.0000	41.9667
Total	**0.0293**	**0.3177**	**0.2487**	**4.8000e-004**	**0.0000**	**0.0137**	**0.0137**	**0.0000**	**0.0126**	**0.0126**	**0.0000**	**41.6423**	**41.6423**	**0.0130**	**0.0000**	**41.9667**

3.6 Architectural Coating - 2022

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	7.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1000e-004	2.8200e-003	3.6300e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	0.5107	0.5107	3.0000e-005	0.0000	0.5115
Total	**7.9700e-003**	**2.8200e-003**	**3.6300e-003**	**1.0000e-005**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.5107**	**0.5107**	**3.0000e-005**	**0.0000**	**0.5115**

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	7.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1000e-004	2.8200e-003	3.6300e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	0.5107	0.5107	3.0000e-005	0.0000	0.5115
Total	**7.9700e-003**	**2.8200e-003**	**3.6300e-003**	**1.0000e-005**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.5107**	**0.5107**	**3.0000e-005**	**0.0000**	**0.5115**

Fallbrook Local Park - Operations

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	68.00	Space	0.61	27,200.00	0
City Park	6.80	Acre	6.80	296,208.00	0
User Defined Residential	1.00	Dwelling Unit	0.00	0.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total acreage of park is 6.8 acres. User defined land use is to account for grills using fireplace inputs. Land use must be defined as

Construction Phase - Phase durations were assumptions made on the size of the park and intesnity of work. Assumptions were based on a previous

Off-road Equipment -

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Off-road Equipment - Equipment quantities were assumptions made on the size of the park and intesnity of work. Assumptions were based on a

Trips and VMT - Trips calculated separately

Grading - Total acres graded is conservatively assumed to cover the entire 6.8-acre site with three grading passes for a total of 20.4 total acres graded

Architectural Coating - Arch coating only needed for line painting in parking lot

Vehicle Trips - Trip rate based on 136 daily trips from Traffic Study and a 6.8-acre park size

Woodstoves - 8 grills assumed for park

Water And Wastewater - Water consumption calculated using consumptive use and acres of irrigated land from USGS' Estimated Use of Water in the

Sequestration -

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	0	148104
tblAreaCoating	Area_Nonresidential_Interior	0	444312
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	58.00
tblConstructionPhase	NumDays	10.00	15.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	0.55	0.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberPropane	0.00	8.00
tblGrading	AcresOfGrading	21.50	20.40
tblGrading	AcresOfGrading	29.00	0.00
tblGrading	MaterialSiltContent	6.90	4.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblSequestration	NumberOfNewTrees	0.00	109.00
tblSolidWaste	SolidWasteGenerationRate	0.58	0.53
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	27.00	0.00
tblVehicleTrips	HO_TL	7.50	0.00
tblVehicleTrips	HS_TL	7.30	0.00
tblVehicleTrips	HW_TL	10.80	0.00
tblVehicleTrips	ST_TR	22.75	20.00
tblVehicleTrips	SU_TR	16.74	20.00
tblVehicleTrips	WD_TR	1.89	20.00
tblWater	OutdoorWaterUseRate	8,102,073.18	3,914,742.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

Category	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
	tons/yr										MT/yr					
Area	0.3497	8.4800e-003	0.0130	0.0000		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.3304	7.3304	1.3000e-004	5.3000e-004	7.4907
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.1112	3.1112	1.3000e-004	3.0000e-005	3.1221
Waste						0.0000	0.0000		0.0000	0.0000	0.1076	0.0000	0.1076	6.3600e-003	0.0000	0.2665
Water						0.0000	0.0000		0.0000	0.0000	0.0000	14.2138	14.2138	5.7000e-004	1.2000e-004	14.2634

Mitigated Operational

Category	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
	tons/yr										MT/yr					
Area	0.3497	8.4800e-003	0.0130	0.0000		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.3304	7.3304	1.3000e-004	5.3000e-004	7.4907
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.1112	3.1112	1.3000e-004	3.0000e-005	3.1221
Waste						0.0000	0.0000		0.0000	0.0000	0.1076	0.0000	0.1076	6.3600e-003	0.0000	0.2665
Water						0.0000	0.0000		0.0000	0.0000	0.0000	14.2138	14.2138	5.7000e-004	1.2000e-004	14.2634

	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

2.3 Vegetation

Vegetation

Category	CO2e
	MT
New Trees	77.1720
Total	**77.1720**

4.0 Operational Detail - Mobile

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	136.00	136.00	136.00	290,340	290,340
Parking Lot	0.00	0.00	0.00		
User Defined Residential	0.00	0.00	0.00		
Total	136.00	136.00	136.00	290,340	290,340

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Residential	0.00	0.00	0.00	41.60	18.80	39.60	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
User Defined Residential	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	3.1112	3.1112	1.3000e-004	3.0000e-005	3.1221
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.1112	3.1112	1.3000e-004	3.0000e-005	3.1221
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
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
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
User Defined Residential	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
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
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
User Defined Residential	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	9520	3.1112	1.3000e-004	3.0000e-005	3.1221
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**3.1112**	**1.3000e-004**	**3.0000e-005**	**3.1221**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	9520	3.1112	1.3000e-004	3.0000e-005	3.1221
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**3.1112**	**1.3000e-004**	**3.0000e-005**	**3.1221**

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	0.3497	8.4800e-003	0.0130	0.0000		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.3304	7.3304	1.3000e-004	5.3000e-004	7.4907
Unmitigated	0.3497	8.4800e-003	0.0130	0.0000		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.3304	7.3304	1.3000e-004	5.3000e-004	7.4907

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	0.3442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.5000e-004	8.3900e-003	4.8400e-003	0.0000		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	7.3170	7.3170	1.2000e-004	5.3000e-004	7.4769
Landscaping	2.9000e-004	9.0000e-005	8.1200e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0135	0.0135	2.0000e-005	0.0000	0.0139
Total	**0.3497**	**8.4800e-003**	**0.0130**	**0.0000**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**7.3304**	**7.3304**	**1.4000e-004**	**5.3000e-004**	**7.4907**

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	0.3442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.5000e-004	8.3900e-003	4.8400e-003	0.0000		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	7.3170	7.3170	1.2000e-004	5.3000e-004	7.4769
Landscaping	2.9000e-004	9.0000e-005	8.1200e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0135	0.0135	2.0000e-005	0.0000	0.0139
Total	**0.3497**	**8.4800e-003**	**0.0130**	**0.0000**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**7.3304**	**7.3304**	**1.4000e-004**	**5.3000e-004**	**7.4907**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.2138	5.7000e-004	1.2000e-004	14.2634
Unmitigated	14.2138	5.7000e-004	1.2000e-004	14.2634

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.91474	14.2138	5.7000e-004	1.2000e-004	14.2634
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.2138**	**5.7000e-004**	**1.2000e-004**	**14.2634**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.91474	14.2138	5.7000e-004	1.2000e-004	14.2634
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.2138**	**5.7000e-004**	**1.2000e-004**	**14.2634**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.1076	6.3600e-003	0.0000	0.2665
Unmitigated	0.1076	6.3600e-003	0.0000	0.2665

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.53	0.1076	6.3600e-003	0.0000	0.2665
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**0.1076**	**6.3600e-003**	**0.0000**	**0.2665**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.53	0.1076	6.3600e-003	0.0000	0.2665
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**0.1076**	**6.3600e-003**	**0.0000**	**0.2665**

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	77.1720	0.0000	0.0000	77.1720

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	109	77.1720	0.0000	0.0000	77.1720
Total		**77.1720**	**0.0000**	**0.0000**	**77.1720**

Fallbrook Local Park

Construction GHG Emissions Summary

Year	Project Total
2021	241
2022	326
Project Total	567
30 Year-Amortization	**19**

$MTCO_2e$=Metric Tons Carbon Dioxide equivalents

Fallbrook Local Park
Construction GHG Analysis

Temporary Construction Trailer - Electricity							
Land Use	**Square Feet**	**Energy Use per year (kWh)**	**Estimated Project Construction Duration (years)**	**Total Energy Use (kWh)**	**Construction Office GHG Emissions Total**	**Electricity Emission Factor**	**Electricity Emission Factor**
General Office	1,000	12,990	0.5	6,726	2.11	**(MT CO2/MWh)**	**(lbs CO2/MWh)**
Note: CalEEMod 2016.3.2 used to estimate energy use for temporary construction office						0.31	690.11
						(MT CH4/MWh)	**(lbs CH4/MWh)**
						1.32E-05	0.029
						(MT N2O/MWh)	**(lbs N2O/MWh)**
						2.80E-06	0.00617

Fallbrook Local Park
Construction Energy Analysis
Construction Water Energy Estimates

Project Acres 6.8
Construction Duration (years) 0.5

Source	Construction Water Use per Day (Mgal)	Total Construction Water Use (Mgal)	Total Electricity Demand from water Demand (kWh)	Annual Electricity Demand from water Demand (kWh)
Project	0.020	3.325	43,297	83,617
CalEEMod Water Electricity Factors	**Electricity Intensity Factor To Supply (kWh/Mgal)**	**Electricity Intensity Factor To Treat (kWh/Mgal)**	**Electricity Intensity Factor To Distribute (kWh/Mgal)**	**Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)**
Project	9727	111	1272	1911

Construction Water GHG Emissions Total	Electricity Emission Factor	Electricity Emission Factor
13.60	**(MT CO2/MWh)**	**(lbs CO2/MWh)**
	0.31	690.11
	(MT CH4/MWh)	**(lbs CH4/MWh)**
	1.32E-05	0.029
	(MT N2O/MWh)	**(lbs N2O/MWh)**
	2.80E-06	0.00617

Sources:
Electricity Intensity Factors - California Emissions Estimator Model (CalEEMod). Adjusted to RPS of year 2023.
Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%.
Factor is therefore (20.94 GAL/SF/year) x (43,560 SF/acre) / (365 days/year) / (0.85) = 2,940 gallons/acre/day, rounded up to 3,000 gallons/acre/day.
(U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. “Guidelines for Estimating Unmetered Landscaping Water Use." July 2010. Page 12, Table 4 - Annual Irrigation Factor – Landscaped Areas with High Water Requirements).

Fallbrook Local Park

Total On-Road Emissions

314 Max construction days per year

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (MT/yr) Total CO2e
Site Preparation/Clearing	2021					
Total Haul Trips	0					
Hauling	0	15	8	20	15	0.00
Vendor	0	15	8	6.9	15	0.00
Worker	16	15	8	14.7	0	1.08
					Total	1.08
Grading/Excavation - 2021	2021					Ancillary Fa
Total Haul Trips	4286					
Hauling	100	10	8	20	15	204.40
Vendor	0	10	8	6.9	15	0.00
Worker	24	10	8	14.7	0	1.08
					Total	205.48
Grading Excavation - 2022	2022					
Total Haul Trips	4286					
Hauling	100	33	8	20	15	199.85
Vendor	0	33	8	6.9	15	0.00
Worker	24	33	8	14.7	0	3.48
					Total	203.33
Paving	2022					
Total Haul Trips	0					
Hauling	0	20	8	20	15	0.00
Vendor	4	20	8	6.9	15	1.08
Worker	20	20	8	14.7	0	1.76
					Total	2.83
Ancillary Facilities/Landscaping/Tra	2022					
Total Haul Trips	0					
Hauling	0	58	8	20	15	0.00
Vendor	0	58	8	6.9	15	0.00
Worker	24	58	8	14.7	0	6.11
					Total	6.11
Architectural Coating	2022					
Total Haul Trips	0					
Hauling	0	5	8	20	15	0.00
Vendor	0	5	8	6.9	15	0.00
Worker	8	5	8	14.7	0	0.18
					Total	0.18

Fallbrook Local Park

Total On-Road Emissions

314 Max construction days per year

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (MT/yr) Total CO2e	
Site Preparation/Clearing	2021						
Total Haul Trips	0						
Hauling	0	15	8	20	15	0.00	
Vendor	0	15	8	6.9	15	0.00	
Worker	16	15	8	14.7	0	1.08	
Grading/Excavation - 2021	2021						Ancillary
Total Haul Trips	4286						
Hauling	100	10	8	20	15	204.40	
Vendor	0	10	8	6.9	15	0.00	
Worker	24	10	8	14.7	0	1.08	
Grading Excavation - 2022	2022						
Total Haul Trips	4286						
Hauling	100	33	8	20	15	199.85	
Vendor	0	33	8	6.9	15	0.00	
Worker	24	33	8	14.7	0	3.48	
Paving	2022						
Total Haul Trips	0						
Hauling	0	20	8	20	15	0.00	
Vendor	4	20	8	6.9	15	1.08	
Worker	20	20	8	14.7	0	1.76	
Ancillary Facilities/Landscaping/	2022						
Total Haul Trips	0						
Hauling	0	58	8	20	15	0.00	
Vendor	0	58	8	6.9	15	0.00	
Worker	24	58	8	14.7	0	6.11	
Architectural Coating	2022						
Total Haul Trips	0						
Hauling	0	5	8	20	15	0.00	
Vendor	0	5	8	6.9	15	0.00	
Worker	8	5	8	14.7	0	0.18	

Fallbrook Local Park Running Emissions

	Running Emissions Factor (grams/mile)		
	CO2	CH4	N2O
2021Hauling	1546.96313	0.07388885	0.24557044
2021Vendor	1363.94864	0.0424745	0.19704638
2021Worker	304.86539	0.00431097	0.00670332
2022Hauling	1501.71125	0.07351278	0.23860987
2022Vendor	1324.56482	0.03983944	0.19097306
2022Worker	296.952463	0.00380823	0.00612832
	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Regional Emissions (MT/year)			
				CO2	CH4	N2O	CO2e
Site Preparation/Clearing	2021						
Total Haul Trips	0						
Hauling	0	15	8	0.00	0.00	0.00	0.00
Vendor	0	15	8	0.00	0.00	0.00	0.00
Worker	16	15	8	1.08	0.00	0.01	1.08
Grading/Excavation - 2021	2021						
Total Haul Trips	4286						
Hauling	100	10	8	165.76	0.20	7.63	173.59
Vendor	0	10	8	0.00	0.00	0.00	0.00
Worker	24	10	8	1.08	0.00	0.01	1.08
Grading Excavation - 2022	2022						
Total Haul Trips	4286						
Hauling	100	33	8	160.91	0.20	7.41	168.52
Vendor	0	33	8	0.00	0.00	0.00	0.00
Worker	24	33	8	3.46	0.00	0.02	3.48
Paving	2022						
Total Haul Trips	0						
Hauling	0	20	8	0.00	0.00	0.00	0.00
Vendor	4	20	8	0.73	0.00	0.03	0.76
Worker	20	20	8	1.75	0.00	0.01	1.76
Ancillary Facilities/Landsca	2022						
Total Haul Trips	0						
Hauling	0	58	8	0.00	0.00	0.00	0.00
Vendor	0	58	8	0.00	0.00	0.00	0.00
Worker	24	58	8	6.08	0.00	0.04	6.11
Architectural Coating	2022						
Total Haul Trips	0						
Hauling	0	5	8	0.00	0.00	0.00	0.00
Vendor	0	5	8	0.00	0.00	0.00	0.00
Worker	8	5	8	0.17	0.00	0.00	0.18

Fallbrook Local Park Idling Emissions

		Idling Emissions Factor (grams/minute)		
		CO2	CH4	N2O
2021Hauling	Hauling	458.018738	0.01128151	0.07237388
2021Vendor	Vendor	247.91511	0.00653649	0.03891692
2021Worker	Worker	0	0	0
2022Hauling	Hauling	465.725479	0.01129355	0.07360548
2022Vendor	Vendor	251.37989	0.00654459	0.03947347
2022Worker	Worker	0	0	0
	GWP	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Idling minutes per Day (miles)	Regional Emissions (MT/year) CO2	CH4	N2O	CO2e
Site Preparation/Clearing	2021							
Total Haul Trips	0							
Hauling	0	15	8	15	0.00	0.00	0.00	0.00
Vendor	0	15	8	15	0.00	0.00	0.00	0.00
Worker	16	15	8	0	0.00	0.00	0.00	0.00
Grading/Excavation - 2021	2021							
Total Haul Trips	4286							
Hauling	100	10	8	15	29.45	0.02	1.35	30.81
Vendor	0	10	8	15	0.00	0.00	0.00	0.00
Worker	24	10	8	0	0.00	0.00	0.00	0.00
Grading Excavation - 2022	2022							
Total Haul Trips	4286							
Hauling	100	33	8	15	29.94	0.02	1.37	31.33
Vendor	0	33	8	15	0.00	0.00	0.00	0.00
Worker	24	33	8	0	0.00	0.00	0.00	0.00
Paving	2022							
Total Haul Trips	0							
Hauling	0	20	8	15	0.00	0.00	0.00	0.00
Vendor	4	20	8	15	0.30	0.00	0.01	0.32
Worker	20	20	8	0	0.00	0.00	0.00	0.00
Ancillary Facilities/Landsca	2022							
Total Haul Trips	0							
Hauling	0	58	8	15	0.00	0.00	0.00	0.00
Vendor	0	58	8	15	0.00	0.00	0.00	0.00
Worker	24	58	8	0	0.00	0.00	0.00	0.00
Architectural Coating	2022							
Total Haul Trips	0							
Hauling	0	5	8	15	0.00	0.00	0.00	0.00
Vendor	0	5	8	15	0.00	0.00	0.00	0.00
Worker	8	5	8	0	0.00	0.00	0.00	0.00

Fallbrook Local Park

Construction Assumptions

Project Site Acreage 6.8

Project Summary

Land Use[1]	Sub Use	CalEEMod Landuse Type	Amount	Unit
	Play Area		0.80	acres
	Open Field		1.20	acres
	Off-Leash Dog Zone		0.50	acres
Community Park	Skate Elements	City Park	0.50	acres
	Multisport Courts		0.10	acres
	Trails and Paths		3,024	linear feet
	Comfort Station/Restrooms		400	square feet
Parking Lot		Parking Lot	68	spots

Notes

1 Total land use acreage is 6.8 acres. Any area not specified above is assumed to be open park space

2 Park is modeled as 6.8 acres in CalEEMod and includes parking area

Construction Schedule[4]

Phase Name	CalEEMod Phase Type	Start Date	End Date	Total Days	# of Workers per day	Total One-way Worker Trips per day	Trip Length	Vendor Trips per day	Total One-Way Vendor Trips	Trip Length	Total Haul Trucks	Total One-way Haul Trips	Trucks per day	Trip Length
Site Preparation/Clearing	Site Preparation	11/29/2021	12/18/2021	15	8	16	14.7	-	-	6.9	-	-	-	-
Grading/Excavation	Grading	12/19/2021	2/16/2022	43	12	24	14.7	-	-	6.9	2,143	4,286	50	-
Paving	Paving	2/17/2022	3/16/2022	20	10	20	14.7	2	4	6.9	-	-	-	-
Ancillary Facilities/Landscaping/Trail Construction	Grading	3/17/2022	6/6/2022	58	12	24	14.7	-	-	-	-	-	-	-
Architectural Coating	Architectural Coating	5/31/2022	6/6/2022	5	4	8	15.7	-	-	-	-	-	-	-

Notes: Phase durations were assumptions made on the size of the park and intesnity of work. Assumptions were based on a previous park construction project modeled

Construction Equipment

Phase Name	Equipment Type	Equipment Amount[1]	Hours per Day
Site Preparation/Clearing	Rubber Tired Dozers	2	8
	Tractors/Loaders/Backhoes	3	8
Grading/Excavation	Tractors/Loaders/Backhoes	1	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Loaders	2	8
Paving	Pavers	1	8
	Paving Equipment	1	8
	Rollers	1	8
Ancillary Facilities/Landscaping/Tra	Tractors/Loaders/Backhoes	2	8
	Cement and Mortar Mixers	1	8
	Compactor	1	8
	Graders	1	8
	Rollers	1	8
Architectural Coating	Air Compressor	1	6

Notes:

1 Equipment quantities were assumptions made on the size of the park and intensity of work. Assumptions were based on a previous park construction project modeled by ESA

Excavation

Land Use Excavation/ Grading Quantities[1]	Cut (cy)	Fill (cy)	Site Acreage	Grading Passes	Total Acres Graded
Excavation	30,000	552,521	6.8	3	20.4

Grading/Excavation	Cut (cy)	Fill (cy)
Entire Site Development	30,000	552,521
Total Volume	**30,000**	
Haul Truck Capacity (CY)	14	
Total Haul Trucks	2,143	
Total One-way Haul Trips	4,285.71	*Enter into CalEEMod*
Duration (days)	43	
Daily Haul Trucks	50	

Source: Construction data needs

Location	Area (sf)[1]	Elevation Difference (ft)[2]	Cut: Excavation Volume (cf)	Cut: Excavation Volume (cy)	Fill: Excavation Volume (cf)	Fill: Excavation Volume (cy)
Soccer Field/Accommodations	53,822	22	592,042	197,347	561,552	187,184
Parking Lot	58,299	30	874,485	291,495	829,449	276,483
Play Area	33,748	14	236,236	78,745	224,070	74,690
Sport Courts	8,960	10	44,800	14,933	42,493	14,164
Total Exacavation	**-**	**-**	**1,747,563**	**582,521**	**1,657,563**	**552,521**

Notes:

1. Areas taken from PD except for parking lot, which was estimated using Google Earth
2. Elevation difference was conservatively estimated using a topographical overlay of the project site

Concrete Estimates

Hardscape Demolition Volume		
Total Area(KSF)	19.7	
Thickness (ft)	0.5	*feet*
Debris Volume (CY)	370	*(rounded, estima*

Land Use	Concrete Volume (CY)	Concrete Truck Capacity (CY)[4]	Total Trucks Needed (Vendor Trips)
Project	370	10	37

Land Use	Total Trucks
Project	37
Duration (days)	20
Trucks per day	2

Notes:

1 Based on data needs provided by CWE

Fallbrook Local Park

Greenhouse Gas Emissions Summary

Project Operations GHG Emissions Summary at Buildout - 2022	
Category	**$MTCO_2e/yr$**
Mobile	108
Area	7.5
Electricity	3.1
Natural Gas	0.0
Waste	0.3
Water	14.3
Tree Planting	(4)
Construction	19
Project Subtotal	**148**

$MTCO_2e$=Metric Tons Carbon Dioxide equivalents

Fallbrook Local Park
Air Quality and GHG Assessment
Operational Mobile Emissions

Scenario	Year	Max Daily VMT	Criteria Pollutant Emission Factors (lb/mile)									
			ROG	NOx	CO	SOx	PM10 Road Dust	PM10	PM10 Total	PM2_5 Road Dust	PM2_5	PM2.5 Tota
Project	2022	795	3.32E-04	5.54E-04	2.69E-03	7.84E-06	6.61E-04	1.16E-04	7.77E-04	1.62E-04	5.04E-05	2.13E-04

Scenario	GHG Emissions (metric tons/mile)			
	CO2	CH4	N2O	CO2e
Project	3.65E-04	2.27E-08	1.89E-08	3.72E-04

Scenario	Criteria Pollutant Emissions (pounds/day)									
	ROG	NOx	CO	SOx	PM10 Road Dust	PM10	PM10 Total	PM2_5 Road Dust	PM2_5	PM2.5 Total
Project	0.26	0.44	2.14	0.01	0.53	0.09	0.62	0.13	0.04	0.17

Scenario	GHG Emissions (metric tons/year)			
	CO2	CH4	N2O	CO2e
Project	106.09	0.01	0.01	107.89

Source: Chen Ryan Associates, Fallbrook Community Park Transportation Impact Study, 2021

Region	(All)

Row Labels	Sum of ROG_TOTAL	Sum of NOx_TOTEX	Sum of CO_TOTEX	Sum of SOx_TOTEX	Sum of PM10_TOTAL	Sum of PM2.5_TOTAL	Sum of CO2_TOTEX	Sum of CH4_TOTEX	Sum of N2O_TOTEX	Sum of VMT
2022	16.65445461	27.80518082	134.8461321	0.392974169	5.835584166	2.527874226	40398.61462	2.505040703	2.090688015	100299748.7
Grand Total	**16.65445461**	**27.80518082**	**134.8461321**	**0.392974169**	**5.835584166**	**2.527874226**	**40398.61462**	**2.505040703**	**2.090688015**	**100299748.7**

Tons/Day

	Sum of ROG_TOTAL	Sum of NOx_TOTEX	Sum of CO_TOTEX	Sum of SOx_TOTEX	Sum of PM10_TOTAL	Sum of PM2.5_TOTAL	Sum of CO2_TOTEX	Sum of CH4_TOTEX	Sum of N2O_TOTEX	Sum of VMT
2022	16.65445461	27.80518082	134.8461321	0.392974169	5.835584166	2.527874226	40398.61462	2.505040703	2.090688015	100299748.7
Grand Total	16.65445461	27.80518082	134.8461321	0.392974169	5.835584166	2.527874226	40398.61462	2.505040703	2.090688015	100299748.7
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0

Emissions Factors

	lbs/mile						MT/mile			
	ROG	**NOx**	**CO**	**SOx**	**PM10**	**PM2_5**	**CO2**	**CH4**	**N2O**	**CO2e**
2017	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
2020	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
2022	0.000332094	0.000554442	0.002688863	7.836E-06	0.000116363	5.04064E-05	0.000365395	2.26574E-08	1.89097E-08	0.000371596

Appendix B

Biological Letter Report

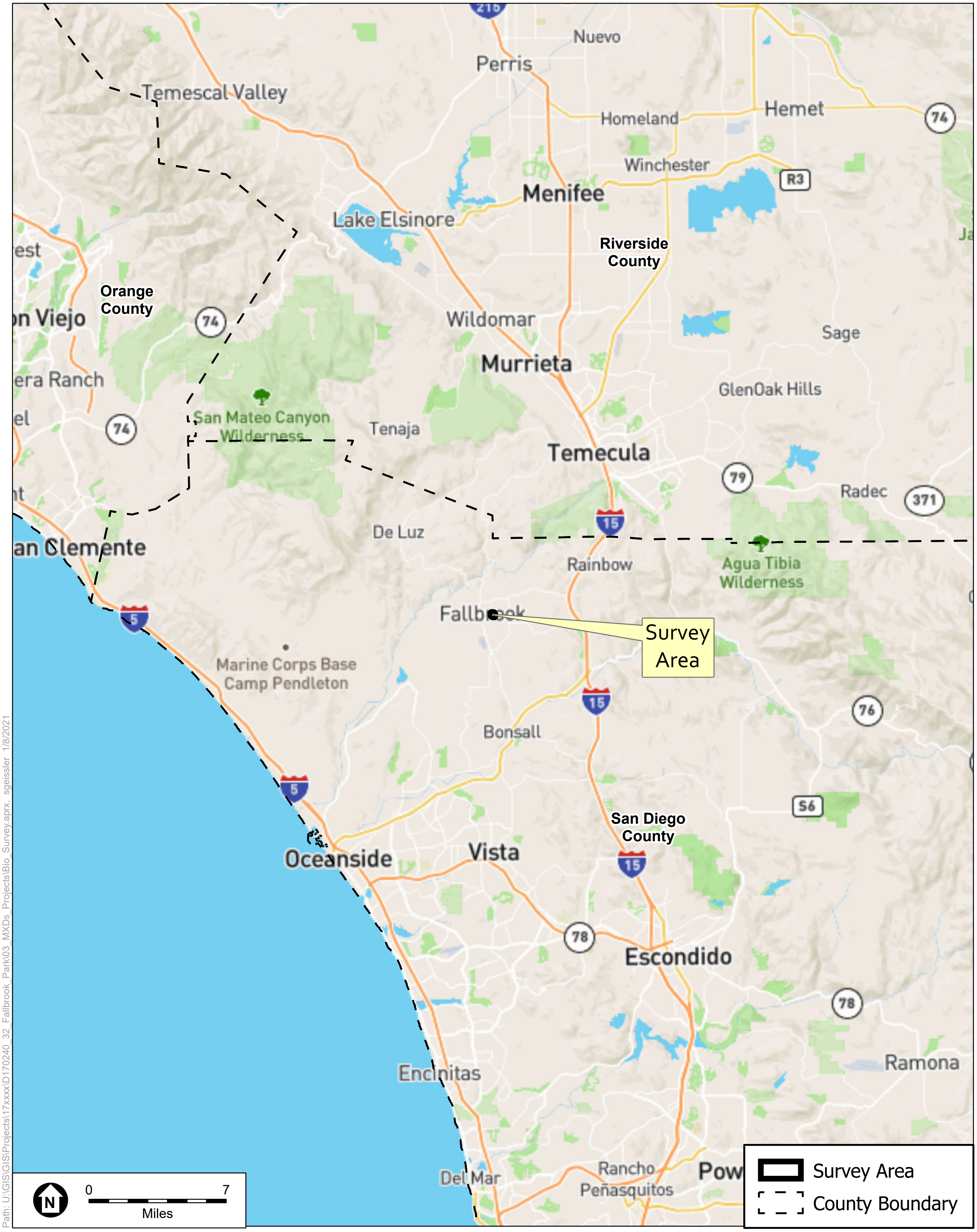
Report:	Biological Resources Letter Report
Project Name:	Fallbrook Local Park Project
Project Proponent:	County of San Diego Department of Parks & Recreation
Prepared for:	Lorrie Bradley, County of San Diego Department of Parks & Recreation, 5500 Overland Ave, San Diego, CA; lorrie.bradley@sdcountyca.gov; (619) 455-7721
Prepared by:	Jaclyn Catino-Davenport, Environmental Science Associates; jcatino-davenport@esassoc.com; (619) 719-4211
Prepared on:	May 14, 2021
Signature of Preparer:	Jaclyn Catino-Davenport

1. Summary

On behalf of the County of San Diego (County) Department of Parks and Recreation (DPR), ESA has prepared this Biological Resources Report for the proposed Fallbrook Local Park Project (project). The project is located on a former nursery site in the community of Fallbrook in unincorporated San Diego County (**Figure 1**). The project would provide new active and passive recreational opportunities, including a play area, open lawn area, off-leash dog zone, soft surface trails and native gardens, multi-use path, skate elements, and other associated amenities, including parking.

ESA biologists conducted a biological reconnaissance survey on December 1, 2020 within the project footprint and associated 100-foot buffer. Two vegetation community/land cover types were identified, disturbed habitat and urban/developed, neither of which are considered sensitive. No state or federally threatened and/or endangered plants or wildlife species were detected during the biological survey, though two County-sensitive wildlife species, red-shouldered hawk (*Buteo lineatus*; County Group 1) and western bluebird (*Sialia mexicana*; County Group 2), were observed on-site within the project footprint. An additional two special-status bird species, burrowing owl (*Athene cunicularia;* State Species of Special Concern) and white-tailed kite (*Elanus leucurus;* State Fully Protected), were determined to have a low potential to occur based on the presence of low-quality nesting habitat. Though the project footprint may provide foraging opportunities for urban-adapted raptors, the Biological Study Area (BSA) does not contribute significant foraging habitat due to its relatively small size (6.8 acres), lack of native or naturalized habitats (e.g. non-native grasslands), and lack of connectivity to other areas that would provide foraging habitat.

Impacts to disturbed habitat and urban/developed will occur as a result of the project, which would be considered less than significant and would not require mitigation. Potential impacts to migratory and nesting birds, including western bluebird and red-shouldered hawk, will be mitigated to a level of less than significant by pre-construction nesting bird surveys during the bird breeding season and avoidance of any active nests. Migratory and nesting birds are unlikely to be impacted outside of the bird breeding season due to the mobility of these species.



SOURCE: Open Street Map; ESA, 2021.

Fallbrook Local Park

Figure 1
Regional Location

ESA

2. Introduction, Project Description, Location, Setting

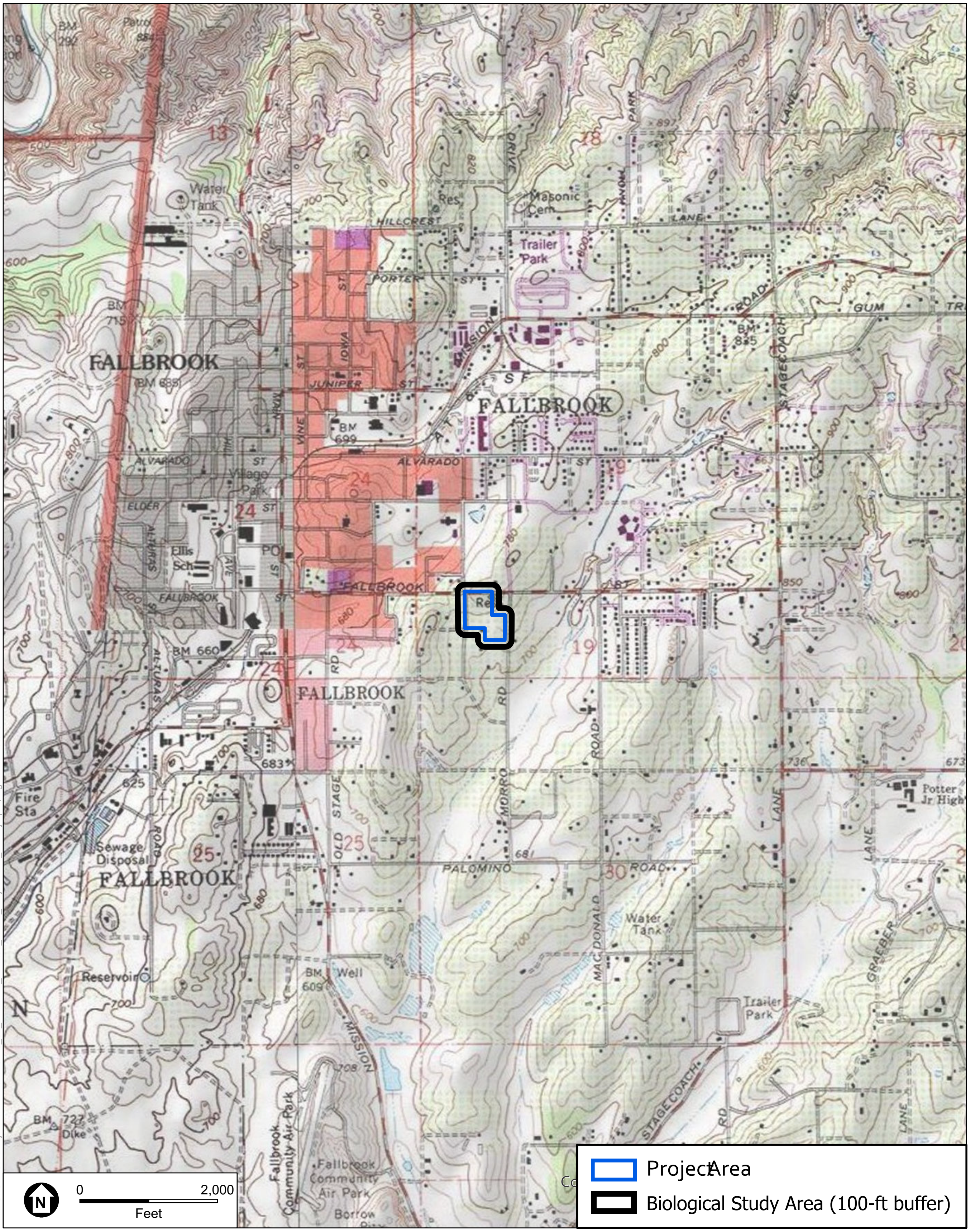
This report describes the results of the biological resources survey conducted for the Fallbrook Local Park Project conducted by ESA biologists Cailin Lyons and Jaclyn Catino-Davenport on December 1, 2020. The proposed project is located along East Fallbrook Street, between Golden Road and Morro Road, in the community of Fallbrook in unincorporated San Diego County (see Figure 1). The project would consist of a park separated into various areas dedicated to active and passive recreation, including a play area, open lawn area, off-leash dog zone, soft surface trails and native gardens, multi-use path, skate elements, and parking.

A 13.33-acre Biological Study Area (BSA), including the 6.8-acre project footprint and a 100-foot buffer, was evaluated to determine the current condition of the biological resources present within and adjacent to the project (**Figures 2** and **3**). The BSA occurs within Assessor's Parcel Number (APN) 105-841-35, and is located in Section 19 of Township 9 South, Range 3 West on the Bonsall and Temecula, CA 7.5-minute topographic quadrangles of the U.S. Geological Survey (USGS) 7.5-minute topographic map (see Figure 2). The project site is located in a former nursery site dominated by non-native vegetation scattered with ornamental fruit trees and coast live oak (*Quercus agrifolia* ssp. *agrifolia*). The project site is surrounded by a mix of residential and agricultural uses on all sides, including roads, an operating nursery, and a mix of high-density and rural residences.

This biological resource report was prepared for the County to (1) document existing biological resources within the project site; (2) evaluate the project site and the vicinity for the potential to support sensitive biological resources; (3) assess direct, indirect, and cumulative impacts to these biological resources; and (4) recommend measures to avoid, minimize, and/or mitigate significant impacts. This report provides the necessary biological data and background information required for environmental analysis according to federal, state and local rules and regulations including the California Environmental Quality Act (CEQA).

3. Regional Context

The project site occurs within a former nursery site bounded residential development and agriculture. The project site lies outside the boundaries of the County's Multiple Species Conservation Program (MSCP), but is within the boundary of the proposed North County MSCP. The North County MSCP will contribute to the conservation of sensitive species and habitats while providing a streamlined permitting process for landowners, agricultural operators, businesses, and residents in the unincorporated regions of northwestern San Diego County. Planning efforts for the North County MSCP are currently underway; however, the project site was not designated as a Pre-approved Mitigation Area in the 2009 Preliminary Public Review Draft (County of San Diego 2009). Furthermore, the project site is comprised entirely of disturbed habitat and is not adjacent to any other conserved lands. Therefore, the project site is not considered important in future preserve design efforts.

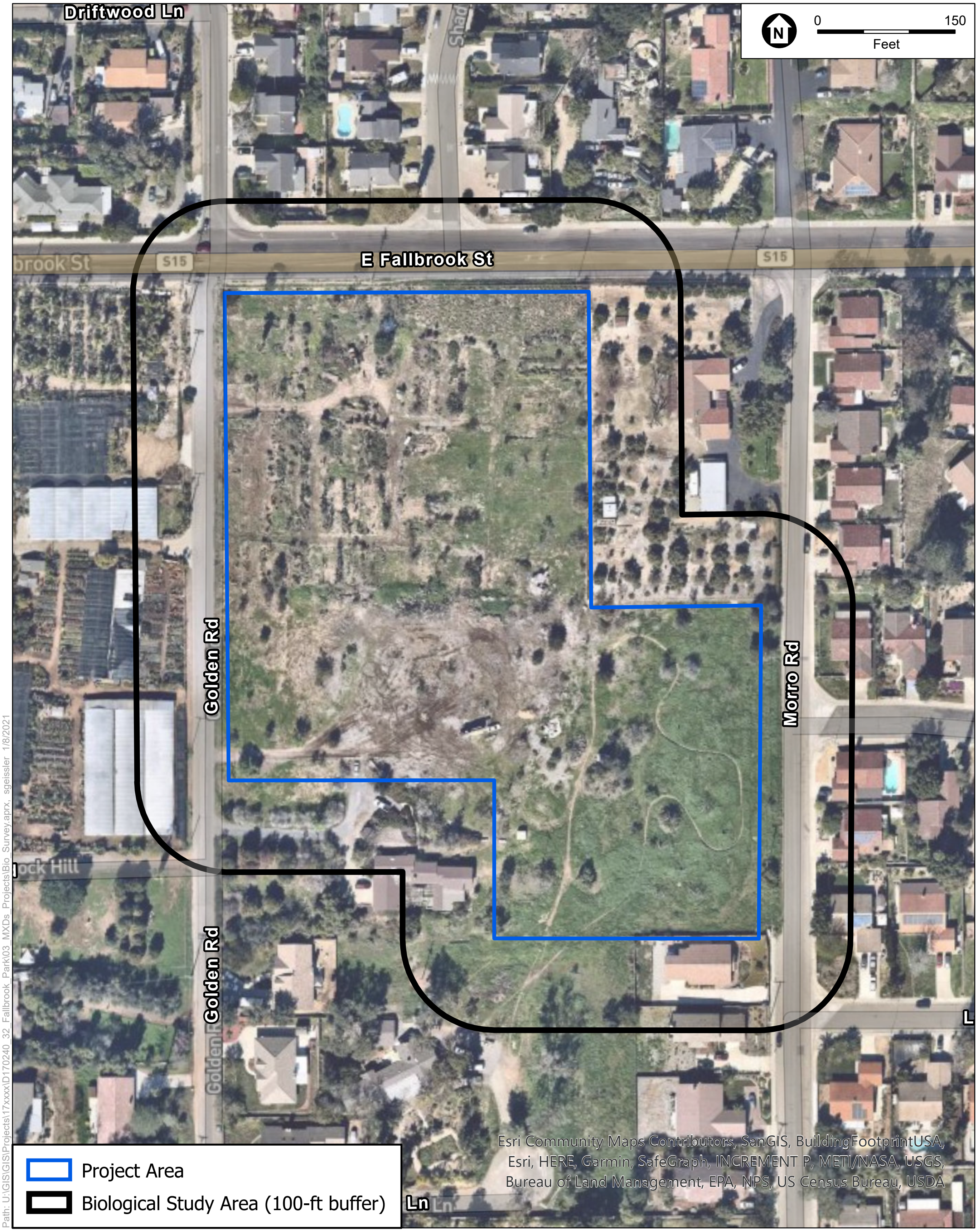


SOURCE: USGS Topographic Series (Temecula, Bonsall, CA).

Fallbrook Local Park

Figure 2
Project Vicinity

ESA



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SOURCE: Mapbox; ESA, 2021.

Fallbrook Local Park

Figure 3
Project Location

ESA

4. Vegetation Communities and Land Cover Types

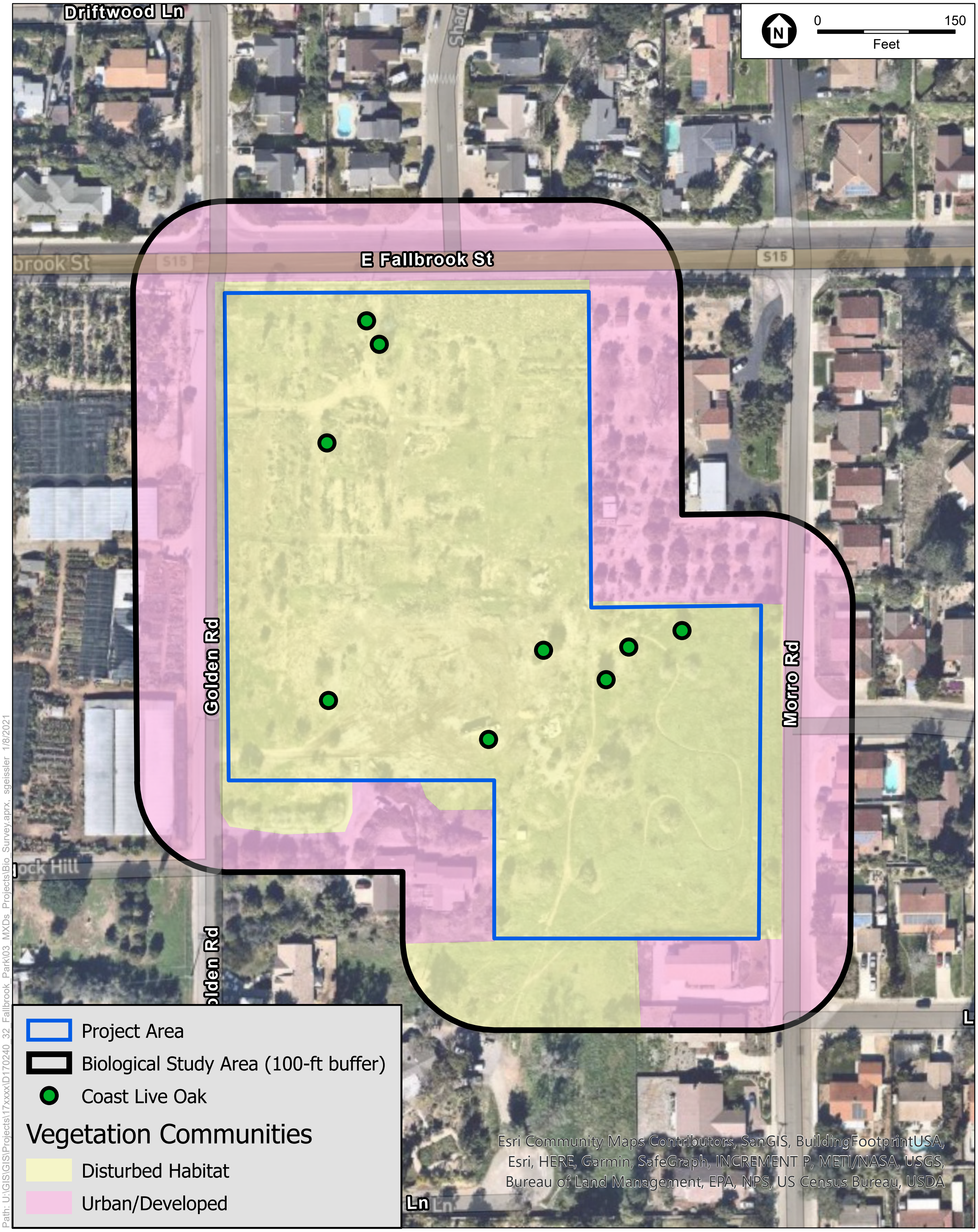
The BSA contains a total of two vegetation community/land cover types: disturbed habitat and urban/developed (**Table 1** and **Figure 4**). These classifications are not considered sensitive per the County's *Biological Resources Guidelines for Determining Significance and Report Format and Content Requirements* (County of San Diego 2010).

TABLE 1
VEGETATION COMMUNITIES/LAND COVER TYPES WITHIN THE BIOLOGICAL STUDY AREA

Vegetation Community/Land Cover Type	Acreage within Project Area	Acreage within 100-foot Buffer	Total Acreage Within the BSA
Disturbed Habitat (11300)	6.80	1.24	8.04
Urban/Developed (12000)	-	5.29	5.29
Total Acres	6.80	6.53	13.33

<u>Disturbed Habitat (11300).</u> Disturbed habitat consists of areas that have been physically disturbed and are no longer recognizable as a native vegetation community but continues to retain a soil substrate. Vegetation is nearly exclusively comprised of non-native species, including ornamentals or ruderal exotic species (Oberbauer et al. 2008). Within the BSA, the disturbed habitat comprises the entire project footprint and consists of dense non-native species, including short-pod mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), and non-native grasses. Scattered native and ornamental fruit trees occur throughout such as coast live oak, pecan (*Carya illinoinensis*), and avocado (*Persea americana*).

<u>Urban/Developed (12000).</u> Urban/Developed consist of areas that no longer support native vegetation due to physical alteration. This may include the construction of structures, hardscaping, pavement, and/or landscaping (Oberbauer et al. 2008). Within the BSA, the urban/developed land cover type consists primarily of roads and residences adjacent to the project footprint.



SOURCE: Mapbox; ESA, 2021.

Fallbrook Local Park

ESA

Figure 4
Biological Resources

5. Special-Status Species

Prior to conducting field surveys, a review of publicly available data was conducted to determine the potential for special-status species to occur within the BSA. The review included data provided by U.S. Fish and Wildlife Service (USFWS) (USFWS 2020a and 2020b), CNDDB (CDFW 2020), and local databases (SanBIOS 2020). During the field survey, habitats were assessed for their potential to support special-status species and all incidentally observed species were recorded. No focused special-status species surveys were conducted. All plant and wildlife species observed during the general survey are presented in **Appendix A** and **B** respectively. The occurrence potential of special-status species was evaluated based on the following criteria:

- **Present:** The species or vegetation community/habitat was observed within the project area and/or immediate vicinity during surveys, or the species has been previously reported within the project area.
- **High Potential:** The project area and/or immediate vicinity provide high quality or ideal habitat (i.e., soils, vegetation assemblage, and topography) for a particular species and/or there are known occurrences in the general vicinity of the project area.
- **Medium Potential:** The project area and/or immediate vicinity provides moderately suitable habitat for a particular species. For example, proper soils may be present, but the desired vegetation assemblage or density is less than ideal; or soils and vegetation are suitable, but the site is outside of the known elevation range of the species.
- **Low Potential:** The project area and/or immediate vicinity provides low quality habitat for a particular species, such as improper soils, disturbed or otherwise degraded habitat, improper assemblage of desired vegetation, and/or the site is outside of the known elevation range of the species.
- **Not Expected:** The project area and/or immediate vicinity does not provide suitable habitat necessary to support the species and/or the site is located outside of the known geographic range of the species.

Sensitive Plants

No special-status plant species were observed within the BSA at the time of the survey. Furthermore, no sensitive plants are anticipated to occur due to absence of suitable habitat, high levels of disturbance within the project boundary (e.g., visible soil disturbance and prevalence of non-native species), and former agricultural use. A comprehensive list of sensitive plant species evaluated for potential for occurrence within the BSA based on the records search results is presented in **Appendix C**, and includes those species with potential for occurrence based on species range and habitat conditions.

Though not considered special-status, a total of nine coast live oak trees were observed within the BSA (see Figure 4). The coast live oaks are relict from a natural population occurring prior to establishment of the nursery. Thus, the trees would be subject to the County's Heritage Tree Preservation Program, which is a program developed by DPR and focused on County parkland to evaluate the health of existing trees, diversity tree species and ensure no net loss of trees.

Sensitive Wildlife

Two special-status wildlife species were observed within the BSA: western bluebird and red-shouldered hawk. The project also has potential to support migratory and nesting birds, including white-shouldered kite and burrowing owl which have a low potential to occur based on the presence of low-quality habitat. A comprehensive list of sensitive wildlife species evaluated for potential for occurrence within the BSA based on the records search results is presented in **Appendix D**, and includes those species with potential for occurrence based on species range and habitat conditions.

Red-shouldered hawk. This species is a County Group 1 species and was observed flying overhead of the BSA. This species also has a high potential to nest within trees located in the disturbed habitat on-site.

Western bluebird. This species is a County Group 2 species. This species was observed within the BSA and has a high potential to nest in the mature trees with cavities in the disturbed habitat on-site.

White-tailed kite. This species is a CDFW fully protected species and a County Group 1 species. This species has a low potential to occur onsite due to the presence of marginal foraging habitat (e.g. abandoned orchard and farmland) with scattered, mature trees onsite which could support nesting.

Burrowing owl. This species is a state species of special concern and County Group 1 species. This species has a low potential to occur onsite due to the presence of low-quality habitat with suitable burrows. The BSA consists of fragmented, disturbed habitat that likely contains dense non-native throughout the majority of the year. However, at the time of surveys, areas of the disturbed habitat had been mowed, providing low-level vegetation. Suitable burrows and ground squirrel activity were noted within the BSA; though signs of burrowing owl activity such as pellets, whitewash, and/or feathers were not observed.

Nesting/Migratory Birds. The entire BSA also has potential to support migratory and nesting birds. Migratory and nesting birds are protected under the California Fish and Game Code and federal Migratory Bird Treaty Act.

6. Jurisdictional Wetlands and Waterways

The biological reconnaissance survey included an evaluation of potential waters and wetlands under the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA); the San Diego Regional Water Quality Control Board (RWQCB) under CWA Section 401; and CDFW under California Fish and Game Code Section 1600. No potential jurisdictional wetlands or waters were observed within the BSA.

7. Other Unique Features/Resources

No other unique features or natural resources occur within the BSA. No critical habitat is mapped on or near the BSA. The BSA is entirely surrounded by residential and agricultural development. Though localized wildlife movements may occur within the BSA, the BSA would not be considered a wildlife corridor or linkage, core wildlife area, or stepping stone due to its lack of connectivity with off-site areas of open space. Furthermore, the BSA consists of former nursery site and is comprised entirely of disturbed habitat and urban/developed, and contains no rock outcrops, areas for hill-topping, or sensitive soils that would contribute significant habitat for special-status species. The BSA may provide foraging opportunities for urban-adapted raptor species such as red-shoulder hawk, which was observed onsite, but does not contribute significant foraging habitat due to its relatively small size (6.8 acres), lack of native or naturalized habitats (e.g. non-native grasslands), and lack of connectivity to other areas that would provide foraging habitat.

8. Significance of Project Impacts and Proposed Mitigation

This section discusses impacts to biological resources that are expected to result from the project. Impacts were evaluated in accordance with the County's *Biological Resources Guidelines for Determining Significance and Report Format and Content Requirements* (County of San Diego 2010), which includes evaluation of potential direct, indirect, and cumulative impacts. Direct impacts include alteration, disturbance, or destruction of biological resources; indirect impacts include secondary effects from construction such as elevated noise and dust levels.

Vegetation Communities/Land Cover Types

The project would result in a total of 6.8 acres of permanent impacts to disturbed habitat (see Figure 4). Impacts to disturbed habitat are not considered significant; therefore, no mitigation would be required.

Sensitive Plants

Though not considered special-status, a total of nine coast live oak trees were observed within the BSA. The coast live oak trees would be subject to the County's Heritage Tree Preservation Program, which is a voluntary program developed by DPR and focused on County parkland to evaluate the health of existing trees, diversity tree species and ensure no net loss of trees. The project design would avoid impacts to the coast live oak trees onsite to the maximum extent practicable; however, should any coast live oak trees require removal, they would be replaced consistent with the Heritage Tree Program.

Sensitive Wildlife

Migratory & Nesting Birds. Direct impacts to migratory and nesting birds, including tree-nesting raptors (e.g., red-shouldered hawk) and western bluebird, could result from the accidental destruction of nests through removal of disturbed habitat, if construction were to occur during the general bird breeding season (January 15 and September 15). Direct impacts to migratory and nesting birds would be considered significant. To reduce these impacts to a level of less than significant, the following mitigation measure is recommended:

> **BIO-1: Nesting Season Avoidance or Pre-Construction Survey:** If construction initiation occurs between January 15 and September 15, a pre-construction nesting bird and raptor survey of the project area and an appropriate buffer of up to 500 feet shall be completed by a qualified biologist prior to vegetation removal. The pre-construction survey shall be conducted within three calendar days prior to the start of construction activities (including removal of vegetation). If any active nests are detected, the area shall be flagged and mapped on construction plans, along with a buffer, as recommended by the qualified biologist. The buffer area(s) established by the qualified biologist shall be avoided until the nesting cycle is complete or it is determined that the nest is no longer active. The qualified biologist shall be a person familiar with bird breeding behavior and capable of identifying the bird species of San Diego

County by sight and sound and determining alterations of behavior as a result of human interaction. Buffers shal be based on local topography and line of sight, species behavior and tolerance to disturbance, and existing disturbance levels, as determined appropriate by the qualified biologist.

Cumulative Impacts

While construction of the project could overlap with surrounding cumulative projects, due to the limited construction activities and relatively minor impacts that would be avoided/minimized through implementation of mitigation, the project would not contribute significantly to any potential cumulative impacts during construction. As a result of this evaluation, there is no substantial evidence that there would be substantive cumulative effects associated with this project. The BSA lacks native or naturalized habitats, and is isolated from other habitat patches or conserved lands. Therefore, the loss of 6.8 acres of disturbed habitat from the project is not anticipated to result in a significant cumulative impact to biological resources.

9. References

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11. Appendices

A – Plant Species Inventory
B – Wildlife Species Inventory
C – Special-Status Plant Species
D – Special-Status Wildlife Species

Appendix A
Plant Species Inventory

APPENDIX A: FLORAL COMPENDIUM

EUDICOTS

Scientific Name	Common Name
Anacardiaceae	**Sumac Family**
Schinus terebinthifolia	Brazillian peppertree
Asteraceae	**Aster Family**
Ambrosia psilostachya	western ragweed
Centaurea melitensis	tocalote/ Maltese star-thistle
Heterotheca grandiflora	telegraphweed
Brassicaceae	**Mustard Family**
Raphanus sativus	wild radish
Cactaceae	**Cactus Family**
Opuntia sp.	prickly pear
Pachycereus marginatus	Mexican fence post cactus
Chenopodiaceae	**Goosefoot Family**
Atriplex semibaccata	Australian saltbush
Salsola tragus	prickly Russian thistle
Convolvulaceae	**Morning-Glory Family**
Convolvulus arvensis	bindweed
Crassulaceae	**Stonecrop Family**
Crassula ovata	jade plant
Euphorbiaceae	**Spurge Family**
Croton setigerus	dove weed
Euphorbia sp.	spurge
Ricinus communis	castor bean
Fagaceae	**Oak Family**
Quercus agrifolia	coast live oak
Geraniaceae	**Geranium Family**
Erodium cicutarium	redstem filaree
Juglandaceae	**Walnut Family**
Carya illinoinensis	pecan
Lauraceae	**Laurel Family**
Persea americana	avocado
Myrsinaceae	**Myrsine Family**
Lysimachia arvensis	scarlet pimpernel

EUDICOTS

Scientific Name	Common Name
Solanaceae	**Nightshade Family**
Datura wrightii	Jimsonweed
Lycopersicon esculentum	tomato
Nicotiana glauca	tree tobacco

MONOCOTYLEDONS

Scientific Name	Common Name
Arecaceae	**Palm Family**
Washingtonia sp.	fan palm
Phoenix canariensis	Canary Island date palm
Poaceae	**Grass Family**
Avena fatua	wild oat
Pennisetum setaceum	crimson fountain grass

Appendix B
Wildlife Species Inventory

APPENDIX B: FAUNA COMPENDIUM

REPTILES

Scientific Name	Common Name	Status (Federal/State/Local)
LACERTILIA	**LIZARDS**	
Phrynosomatidae	**Zebratail, Earless, Horned, Spiny, Fringe-Toed Lizards**	
Uta stansburiana	Common side-blotched lizard	None/None/None

BIRDS

Scientific Name	Common Name	Status (Federal/State/Local) [1]
COLUMBIFORMES		
Columbidae	**Pigeons and Doves**	
Streptopelia decaocto	Eurasian collared-dove	None/None/None
Zenaida macroura	mourning dove	None/None/None
CAPRIMULGIFORMES		
Trochilidae	**Hummingbirds**	
Calypte anna	Anna's hummingbird	None/None/None
ACCIPITRIFORMES		
Accipitridae	**Hawks**	
Buteo lineatus	red-shouldered hawk	None/None/Group 1
FALCONIFORMES		
Falconidae	**Falcons and Caracaras**	
Falco sparverius	American kestrel	None/None/None
PASSERIFORMES		
Tyrannidae	**Tyrant Flycatchers**	
Sayornis nigricans	black phoebe	None/None/None
Tyrannus vociferans	Cassin's kingbird	None/None/None
Corvidae	**Jays and Crows**	
Corvus brachyrhynchos	American crow	None/None/None
Regulidae	**Kinglets**	
Regulus calendula	ruby-crowned kinglet	None/None/None
Turdidae	**Thrushes**	
Sialia mexicana	western bluebird	None/None/Group 2
Mimidae	**Thrashers**	
Mimus polyglottos	northern mockingbird	None/None/None

Bombycillidae	**Waxwings**	
Bombycilla cedrorum	cedar waxing	None/None/None
Ptilogonatidae	**Silky-flycatchers**	
Phainopepla nitens	phainopepla	
Fringillidae	**Finches**	
Haemorhous mexicanus	house finch	None/None/None
Passerellidae	**New World Sparrows**	
Zonotrichia leucophrys	white-crowned sparrow	None/None/None
Melozone crissalis	California towhee	None/None/None
Parulidae	**Wood Warblers**	
Setophaga coronata	yellow-rumped warbler	None/None/None

MAMMALS

Scientific Name	Common Name	Status (Federal/State/Local)
Leporidae	**Rabbits and Hares**	
Sylvilagus audubonii	Audubon's cottontail	None/None/None
Geomyidae	**Pocket Gophers**	
Thomomys bottae	Botta's pocket gopher	None/None/None

[1] County of San Diego Sensitive Species Lists
Group 1: Animals of high sensitivity (listed or specific natural history requirements)
Group 2: Animals declining but not in immediate threat of extinction or extirpation

* Non-native species

Appendix C
Special-Status Plant Species

APPENDIX C: SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR

Scientific Name	Common Name	Flowering Period	Federal	State	Local (CRPR/ Other)	Preferred Habitat	Distribution	Potential to Occur
ANGIOSPERMS (DICOTYLEDONS)								
Apiaceae	**Celery, Carrot, Parsley Family**							
Eryngium aristulatum var. *parishii*	San Diego button-celery	Apr.-Jun.	FE	SE	1B.1, Draft MSCP, County List A	Coastal scrub, valley and foothill grassland, vernal pools; grows within San Diego mesa hardpan, claypan vernal pools, southern interior basalt flow vernal pools. 20-620 meters.	San Diego and Riverside.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of suitable vernal pool habitat.
Asteraceae	**Sunflower Family**							
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's yellow pincushion	Jan.-Aug.	None	None	1B.1, County List A	Coastal bluff scrub (sandy), coastal dunes. 0-100 meters	Los Angeles, San Diego, Ventura, possibly Orange.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of suitable coastal bluff scrub and coastal dune habitat. This species has been reported within one mile of the BSA (County of San Diego 2020).
Ambrosia pumila	San Diego ambrosia	Apr.-Oct.	FE	None	1B.1, Draft MSCP, County List A	Lowland areas near major floodplains and valley bottoms. Alluvial soils near stream bottoms and open valleys. 20-415 meters.	Riverside, San Diego, and Baja California.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of alluvial soils and floodplain habitat.

Scientific Name	Common Name	Flowering Period	Federal	State	Local (CRPR/ Other)	Preferred Habitat	Distribution	Potential to Occur
Baccharis vanessae	Encinitas baccharis	Aug.-Nov.	FT	SE	1B.1, Draft MSCP, County List A	Chaparral, including Torrey-pine forest understory. 60-300 meters.	San Diego and Riverside.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of chaparral or Torrey pine habitat.
Ericaceae	**Heather Family**							
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	Dec.-Jun.	FE	None	1B.1	Rocky outcrops, slopes, ridges, or mesas within southern maritime chaparral. <100 meters.	San Diego and Baja California.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of southern maritime chaparral habitat.
Fagaceae	**Oak Family**							
Quercus engelmannii	Engelmann oak	Mar.-Jun.	None	None	4.2, Draft MSCP, County List D	Interior valleys and slopes, foothills, and woodlands. <1300 meters.	San Diego, Pasadena, central Orange, southern Riverside, and Baja California.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of woodland habitat. Additionally, this species is a conspicuous perennial tree that would have been observed within the BSA at the time of surveys if present.
Lamiaceae	**Mint Family**							
Acanthomintha ilicifolia	San Diego thornmint	Apr.-Jun.	FT	SE	1B.1, Draft MSCP, County List A	Heavy friable clay soils in the midst of chaparral, coastal sage scrub, and grasslands. 10–960 meters.	San Diego and Baja California.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of clay soils.

Scientific Name	Common Name	Flowering Period	Federal	State	Local (CRPR/ Other)	Preferred Habitat	Distribution	Potential to Occur
Polemoniaceae	**Phlox Family**							
Navarretia fossalis	spreading navarretia	Apr.-Jun.	FT	None	1B.1, Draft MSCP, County List A	Coastal sage scrub, wetland-riparian; occurs almost always under natural conditions in wetlands. 30 - 655 meters	Los Angeles, Riverside, San Diego.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of wetland habitat.
Polygonaceae	**Buckwheat Family**							
Chorizanthe orcuttiana	Orcutt's spineflower	Mar.-May	FE	SE	1B.1, Draft MSCP, County List A	Sandy soils and coastal openings in chaparral, coastal sage scrub, and closed-cone pine forest. 60-200 meters.	San Diego.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of chaparral, coastal scrub, and pine forest habitat.
ANGIOSPERMS (MONOCOTYLEDONS)								
Themidaceae	**Butcher's-Broom Family**							
Brodiaea filifolia	thread-leaved brodiaea	Mar.-Jun.	FT	SE	1B.1, Draft MSCP, County List A	Clay soils in coastal scrub, valley and foothill grassland, cismontane woodland, and vernal pools. 25 - 1120 meters.	Los Angeles, Orange, Riverside, San Diego, San Bernardino.	**Not Expected** This species was not observed and is not expected to occur within the BSA due to lack of clay soils.

Key to Species Listing Status Codes

FE	*Federally Endangered*	*SE*	*State Listed as Endangered*
FT	*Federally Threatened*	*ST*	*State Listed as Threatened*

California Rare Plant Rank (CRPR)

CRPR 1B.1	*Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California.*
CRPR 4.2	*Plants of limited distribution or infrequent throughout a broader area in California; moderately threated in California*
Draft MSCP	*Species proposed to be covered under the 2017 Draft North County MSCP Plan.*
County List A	*Plants rare, threatened, or endangered in California and elsewhere.*

Appendix D
Special-Status Wildlife Species

APPENDIX D: SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR

Common Name *Scientific Name*	Federal	State	Local	Preferred Habitat	Potential to Occur in the Study Area
AMPHIBIANS					
True Toads ***Bufonidae***					
arroyo toad *Anaxyrus californicus*	FE	SSC	Draft MSCP; County Group 1	Gravelly or sandy washes, stream and river banks, and arroyos where flow rates are great enough to keep silt and clay suspended. Found in desert wash, riparian scrub, riparian woodland, south coast flowing waters, and south coast standing waters. Shallow sandy pools bordered sand and gravel flood terraces are needed for breeding.	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable water sources onsite. This species has been reported within one mile of the BSA (County of San Diego 2020).
REPTILES					
Geckos ***Gekkonidae***					
San Diego banded gecko *Coleonyx variegatus abbotti*	None	SSC	County Group 1	Prefers rocky areas in coastal sage and chaparral habitats. Require friable soil for burrow and nest construction. In the desert, creosote bush habitat with large annual wildflower blooms preferred.	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable desert, coastal sage, and chaparral habitat. This species has been reported within one mile of the BSA (County of San Diego 2020).

Common Name *Scientific Name*	Federal	State	Local	Preferred Habitat	Potential to Occur in the Study Area
Whiptails & relatives ***Teiidae***					
Belding's orange-throated whiptail *Aspidoscelis hyperythra beldingi*	None	WL	County Group 2	Species requires intact habitat within chaparral, cismontane woodland, and coastal scrub plant communities. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food-termites.	**Not Expected** This species is not expected to occur within the BSA due to lack of intact chaparral, cismontane woodland, and coastal scrub habitats. This species has been reported within one mile of the BSA (CDFW 2020).
Legless Lizards ***Anniellidae***					
southern California legless lizard *Anniella stebbinsi*	None	SSC	County Group 2	Occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach/coastal dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat. Often can be found under surface objects such as rocks, boards, driftwood, and logs. Can also be found by gently raking leaf litter under bushes and trees. Sometimes found in suburban gardens in Southern California.	**Not Expected** This species is not expected to occur within the BSA due to lack of water sources that would provide perennial moisture. This species has been reported within one mile of the BSA (CDFW 2020).
Boas ***Boidae***					
rosy boa *Lichanura orcutti*	None	None	County Group 2	Rocky areas of chaparral, coastal sage scrub, semi-arid shrublands, rocky deserts, canyons, and riparian habitats. Attracted to water sources such as permanent and intermittent streams, but does not require permanent water.	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable rocky areas of chaparral, coastal sage scrub semi-arid shrublands, rocky deserts, canyons, and riparian habitats. This species has been reported within one mile of the BSA (County of San Diego 2020).

Common Name ***Scientific Name***	**Federal**	**State**	**Local**	**Preferred Habitat**	**Potential to Occur in the Study Area**
Egg-Laying Snakes ***Colubridae***					
San Diego ringneck snake *Diadophis punctatus similis*	None	None	County Group 2	Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, woodlands.	**Not Expected** This species is not expected to occur within the BSA due to lack of suitable most habitats. Additionally, the entire site is bordered by roads and residential development, and lacks connectivity to suitable habitats. This species has been reported within one mile of the BSA (County of San Diego 2020).
Vipers ***Viperiidae***					
red-diamond rattlesnake *Crotalus ruber*	None	SSC	County Group 2	Known to occur in chaparral, Mojavean desert scrub, and Sonoran desert scrub communities. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks, or surface cover objects.	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable rocky areas and dense vegetated habitats. This species has been reported within one mile of the BSA (County of San Diego 2020).
BIRDS					
Ducks, Geese, and Swans ***Anatidae***					
snow goose (winter) *Anser caerulescens*	None	None	County Group 2	Prefers habitats with combine fresh and brackish water with low grass or succulent leaves on which to graze, typically associated with a flock of Canada goose. Rarely occurs in coastal wetlands.	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable water habitat. This species has been reported within one mile of the BSA (County of San Diego 2020).

Common Name *Scientific Name*	**Federal**	**State**	**Local**	**Preferred Habitat**	**Potential to Occur in the Study Area**
Hawks, Kites, Harriers, & Eagles ***Accipitridae***					
red-shouldered hawk *Buteo lineatus*	None	None	County Group 1	Prefers mature lowland forests with open water and clearings nearby. Inhabits oak, riparian, and eucalyptus woodland. Nests in a variety of trees including oaks, eucalyptus, palms, and peppertrees.	**Present** This species was observed flying overhead of the BSA during the 2020 survey.
white-tailed kite *Elanus leucurus*	None	FP	County Group 1	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes nest to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Low** The BSA contains marginal foraging habitat (abandoned orchard and farmland) with scattered, mature trees onsite which could support nesting. This species has been reported within one mile of the BSA (County of San Diego 2020).
True Owls ***Strigidae***					
burrowing owl *Athene cunicularia*	None	SSC	Draft MSCP; County Group 1	Inhabits coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, annual and perennial grasslands, bare ground, and disturbed habitats characterized by low-growing vegetation. A subterranean nester dependent upon burrowing mammals, particularly the California ground squirrel.	**Low** The BSA contains fragmented, disturbed habitat with areas of mowed vegetation. Suitable burrows were observed onsite, however, suitable burrows had no signs (white wash, pellets).
Vireos ***Vireonidae***					
least Bell's vireo *Vireo bellii pusillus*	FE	SE	Draft MSCP; County Group 1	Known to occur in riparian forest, scrub, and woodland habitats. Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Highly territorial and nests primarily in willow, mule fat, or mesquite habitats.	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable riparian habitat. This species has been reported within one mile of the BSA (CDFW 2020, USFWS 2020).

Common Name ***Scientific Name***	**Federal**	**State**	**Local**	**Preferred Habitat**	**Potential to Occur in the Study Area**
Thrushes ***Turdidae***					
western bluebird *Sialia mexicana*	None	None	County Group 2	Inhabits oak, riparian, and conifer woodlands but can also occupy urbanized areas with mature trees and wide lawns.	**Present** This species was observed and documented within the BSA during the 2020 survey.
Blackbirds ***Icteridae***					
tricolored blackbird *Agelaius tricolor*	None	ST; SSC	Draft MSCP; County Group 1	Known to occur in freshwater marsh, marsh, swap, and wetland. Highly colonial species, most numerous in Central Valley and vicinity. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable marsh and wetland habitat. This species has been reported within one mile of the BSA (CDFW 2020).
Mammals					
Evening Bats ***Vespertilionidae***					
pallid bat *Antrozous pallidus*	None	SSC	Draft MSCP; County Group 2	Occurs in a wide variety of habitats including chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grasslands. Most common in open, dry habitats with rocky areas for roosting. For roosting, prefers rocky outcrops, cliffs and crevices with access to open habitats for foraging. Roosts must protect species from high temperatures. Very sensitive to disturbance of roosting sites.	**Not Expected** Though the disturbed habitat within the BSA provides suitable foraging habitat, this species is not expected to roost within the BSA due to lack of rocky areas, cliffs, and crevices. This species has been reported within one mile of the BSA (County of San Diego 2020).

Common Name *Scientific Name*	Federal	State	Local	Preferred Habitat	Potential to Occur in the Study Area
western red bat *Lasiurus blossevillii*	None	SSC	County Group 2	Prefers edges or habitat mosaics that have trees for roosting and open areas for foraging. Requires nearby water source. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Not found in desert areas.	**Not Expected** Though the disturbed habitat within the BSA provides suitable foraging habitat, this species is not expected to roost within the BSA due to lack of a nearby water source and forest and/or woodland habitat. This species has been reported within one mile of the BSA (County of San Diego 2020).
Yuma myotis *Myotis yumanensis*	None	None	County Group 2	Occurs in lower montane coniferous forest, riparian forest, riparian woodland, and upper montane coniferous forest. Roosts in buildings, mines, caves, or crevices, but has also been seen roosting in abandoned swallow nests and under bridges.	**Not Expected** This species is not expected to occur within the BSA due to lack of foraging habitat (over water sources such as ponds, streams, and stock tanks) and roosting habitat (suitable mines, caves, crevices, buildings, and bridges). This species has been reported within one mile of the BSA (County of San Diego 2020).
Free-Tailed Bats ***Molossidae***					
pocketed free-tailed bat *Nyctinomops femorosaccus*	None	SSC	County Group 2	Inhabits pinyon-juniper woodlands, riparian scrub, Sonoran desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree woodland, and palm oasis. Typically roosts in caves and rocky outcrops; prefers cliffs in order to obtain flight speed. Feeds on insects flying over bodies of water or arid desert habitats to capture prey.	**Not Expected** This species is not expected to occur within the BSA due to lack of suitable desert habitats and roosting habitat (caves, rocky outcrops, and cliffs). This species has been reported within one mile of the BSA (County of San Diego 2020).
Kangaroo rats, Pocket mice, & Kangaroo mice ***Heteromyidae***					
Dulzura pocket mouse *Chaetodipus californicus femoralis*	None	SSC	County Group 2	Slopes covered with chaparral and live oaks.	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable chaparral habitat onsite.

Common Name *Scientific Name*	**Federal**	**State**	**Local**	**Preferred Habitat**	**Potential to Occur in the Study Area**
Stephens' kangaroo rat *Dipodomys stephensi*	FE	ST	Draft MSCP; County Group 1	Inhabits annual and perennial grassland habitats, but may occur in coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas. Known to occur in sparse perennial vegetation with firm soil, "neither hard nor sandy."	**Not Expected** This species is not expected to occur within the BSA due to the lack of suitable grassland habitat (previously high vegetative cover dominated by non-native weeds), visible kangaroo rat burrows, and connectivity from the BSA to areas of known suitable habitat.
Cats & relatives ***Felidae***					
mountain lion *Puma concolor*	None	SC	Draft MSCP; County Group 2	Prefers large, unfragmented habitats such as mountains, forests, and deserts.	**Not Expected** This species is not expected to occur within the BSA due to the lack of connectivity from the BSA to other large, undisturbed, native habitat.

Key to Species Listing Status Codes

FE	*Federally Endangered*	*SE*	*State Listed as Endangered*
FT	*Federally Threatened*	*ST*	*State Listed as Threatened*
		SC	*State Candidate for Listing*
		FP	*State Fully Protected*
		WL	*State Watch List*

Draft MSCP *Species proposed to be covered under the 2017 Draft North County MSCP Plan.*

County Group 1 *Listed as threatened or endangered or has very specific natural history requirements that must be met*

County Group 2 *Not common but not so rare that extirpation or extinction is imminent without immediate action*

Appendix E
Burrowing Owl Report

ESA

550 West C Street
Suite 750
San Diego, CA 92101
619.719.4200 phone
619.719.4201 fax

esassoc.com

June 30, 2021

Ms. Lorrie Bradley
County of San Diego, Department of Parks and Recreation
5510 Overland Avenue, Suite 410
San Diego, CA 92123

Subject: Results of 2021 Focused Burrowing Owl Surveys for the Fallbrook Park Project, Unincorporated Community of Fallbrook, San Diego County, California

Dear Ms. Bradley:

This report summarizes the methodology and findings of focused burrowing owl (*Athene cunicularia*; BUOW) surveys conducted for the proposed Fallbrook Park Project (project). The project is located in the unincorporated community of Fallbrook in northern San Diego County, and would provide new active and passive recreational opportunities, including a play area, open field, off-leash dog zone, soft surface trails and native gardens, multiuse path, skate elements, multisport courts, and other associated amenities, including parking. The surveys were conducted in accordance with California Department of Fish and Wildlife (CDFW) *Staff Report on Burrowing Owl Mitigation* (2012), and included a habitat assessment and breeding season surveys to determine presence/absence of this species.

Location and Site Description

The project is located along East Fallbrook Street, between Golden Road and Morro Road, in the community of Fallbrook in unincorporated San Diego County. Regionally, the project is located west of Interstate 15, east of Camp Pendleton Marine Corps Base and Naval Weapons Station Fallbrook Annex, south of the Riverside County boundary, and north of the San Luis Rey River as shown in **Figure 1**, *Regional Map*. The project is located in Section 19 of Township 9 South, Range 3 West on the Bonsall and Temecula, CA 7.5-minute topographic quadrangles of the U.S. Geological Survey (USGS) 7.5-minute topographic map as shown in **Figure 2**, *Vicinity Map*. The project is located in a former nursery site dominated by non-native vegetation scattered with ornamental fruit trees and coast live oak (*Quercus agrifolia* ssp. *agrifolia*).

The area assessed includes the 6.8-acre project footprint, plus a 150-meter (m) buffer (survey area). The survey area generally comprises of agricultural, urban, and rural development. Topography within the survey area generally ranges from relatively flat to gently sloping, with sloping occurring from north to south. Soil in the survey area consists of mainly sandy loam with some Placentia sandy loam (USDA 2021). Slopes in the survey area range from 2 to 30 percent gradients, with a majority of the survey area consisting of gently sloping terrain. The survey area is immediately adjacent to a mix of residential and agricultural uses on all sides, including paved roads, an operating nursery, and a mix of high-density and rural residences.

Background

BUOW is a state species of special concern and suitable habitat for this species generally consists of short, sparse vegetation with few shrubs and may include annual and perennial grasslands, deserts, and scrub characterized by low-growing vegetation. This species may also occur in some agricultural areas, weedy fields, vacant lots and pastures. Underground burrows or other cavities are required for nesting. This species uses burrows dug by other species and man-made structures such as culverts, pipes, and debris piles. The nesting season begins as early as February and continues through August, with peak nesting occurring between April and July. The wintering season extends from September 1 through January 31, with peak wintering occurring from December 1 through January 31.

Survey Methodology

Environmental Science Associates (ESA) biologists conducted a BUOW habitat assessment and four breeding season surveys following the guidelines provided in the CDFW *Staff Report on Burrowing Owl Mitigation*. Prior to the start of surveys, a search for BUOW occurrences was completed through publicly available databases, including the California Natural Diversity Database (CNDDB), U.S. Fish & Wildlife Service Information for Planning and Consultation database, and SanBIOS (CDFW 2020; USFWS 2020; SanBIOS 2020). No burrowing owl observations have been documented within 1-mile of the project area but are known to occupy the area to the west within the Naval Weapons Station Fallbrook Annex approximately.

The surveys were conducted and led by ESA biologists Jaclyn Catino-Davenport, and assisted by Adrienne Lee, Rosa Calvario, and Anna Millar within survey area. All surveys were conducted between morning civil twilight and 9:00 AM during suitable weather conditions. Survey dates, times, and weather conditions are presented in **Table 1**, *Survey Data,* below. The surveys consisted of four separate site visits with one visit between February 15 and April 15, and three visits at least three weeks apart between April 15 and July 15, with one of these visits after June 15. The habitat assessment was conducted concurrently with the first breeding season survey. During the habitat assessment, the entire survey area was evaluated for the presence of suitable BUOW breeding habitat (e.g. short or sparse vegetation for at least a portion of the year, with burrows, burrow surrogates or fossorial mammal dens). Areas supporting high-density residential development were determined to be unsuitable for breeding BUOW and excluded from the survey area; however, the edges of these areas were scanned during surveys. Meandering transects were conducted throughout all suitable habitat during the habitat assessment and breeding season surveys. Transects were spaced 7 m to 20 m apart throughout suitable habitat, and walked in a zig-zag fashion to allow for 100 percent visibility. In addition, binoculars were utilized to visual scan the survey area at intervals along each transect spaced no more than 100 m apart, including inaccessible off-site properties within the survey buffer. Burrows and potential burrow surrogates such as culverts, pipes, and debris piles were mapped using GPS during the habitat assessment and visually inspected for BUOW sign (e.g. pellets, whitewash, feathers, decoration, etc.) during each breeding season survey.

TABLE 1
SURVEY INFORMATION

Date	Time	Wind (mph) (start/end)	Temperature (F) (start-end)	Weather (start-end)	Surveyors
02/18/2021	0615-0846	3-7/6-10	48°-55°	0% Cloud Cover – 0% Cloud Cover	Jaclyn Catino-Davenport, Adrienne Lee
04/19/2021	0635-0835	0.8-3.6.5/0-8	61°-72°	0% Cloud Cover – 0% Cloud Cover	Jaclyn Catino-Davenport, Rosa Calvario
05/17/2021	0559-0712	1.2-3/0.9-2.5	57.7°-58.5°	100% Cloud Cover – 100% Cloud Cover	Jaclyn Catino-Davenport, Rosa Calvario
06/16/2021	0549-0737	0-4/0-2	64°-70°	35% Cloud Cover – 60% Cloud Cover	Jaclyn Catino-Davenport, Anna Millar

Survey Results

Habitat Assessment

The survey area contains a total of two vegetation communities and land cover types: disturbed habitat and urban/developed (**Figure 3**). Suitable habitat for BUOW within the project boundary and surrounding 150-m buffer consists only of disturbed habitat and is described further below.

Disturbed habitat. Disturbed habitat consists of areas that have been physically disturbed and are no longer recognizable as a native vegetation community but continues to retain a soil substrate. Vegetation is nearly exclusively comprised of non-native species, including ornamentals or ruderal exotic species (Oberbauer et al. 2008). Disturbed habitat comprises the entire project footprint and consists of dense non-native species, including short-pod mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), and non-native grasses. Scattered native and ornamental fruit trees occur throughout such as coast live oak, pecan (*Carya illinoinensis*), and avocado (*Persea americana*).

Breeding Season Surveys

No BUOW were observed within the survey area during the four breeding season surveys conducted. Although some natural ground squirrel burrows were identified on site, none of the burrows exhibited evidence of use by BUOW (e.g., presence of feathers, whitewash, pellets, etc.). Potential burrow surrogates such as debris piles where also inspected but no evidence of use by BUOW was observed. A complete list of avian and other wildlife species observed is included in **Attachment A**.

Incidental Observations

Additional species detected during the survey are included in Attachment A. Only one incidentally-observed special-status species was seen, the federal candidate monarch (*Danaus plexippus*). This species was detected flying through the project area during the last survey.

Conclusion

This species was determined to have a low potential to occur on the project site due to the presence of low-quality habitat with suitable burrows and mowed vegetation. The project site is isolated and surrounded by mostly rural and residential development limiting the possibility of the site being occupied by this species in the future.

Please contact Jaclyn Catino-Davenport (JCatino-Davenport@esassoc.com) at (619) 719-4211 with any questions or comments regarding the findings described in this letter report.

Sincerely,

Jaclyn Catino-Davenport

Jaclyn Catino-Davenport
Managing Biologist

References

California Department of Fish and Game (CDFW). 2020. California Natural Diversity Database. *California Department of Fish and Game, Biogeographic Data Branch*. Sacramento, CA. Accessed December 2020.

——. 2012. Staff Report on Burrowing Owl Mitigation.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," Robert F. Holland, Ph.D., October 1986.

SanBIOS. 2020. GIS data from the Regional Data Warehouse, a partnership between SanGIS and SANDAG. Accessed December 2020.

U.S. Department of Agriculture (USDA) 2021. Web Soil Survey. Soil Map. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed May 10, 2021.

U.S. Fish and Wildlife Service (USFWS). 2020. Information for Planning and Consultation (IPaC) online tool. Accessed at https://ecos.fws.gov/ipac/location/index on December 2020.

Attachments

Figure 1: Regional Map
Figure 2: Vicinity Map
Figure 3: Vegetation Communities
Figure 4: 2021 Burrowing Owl Survey Results

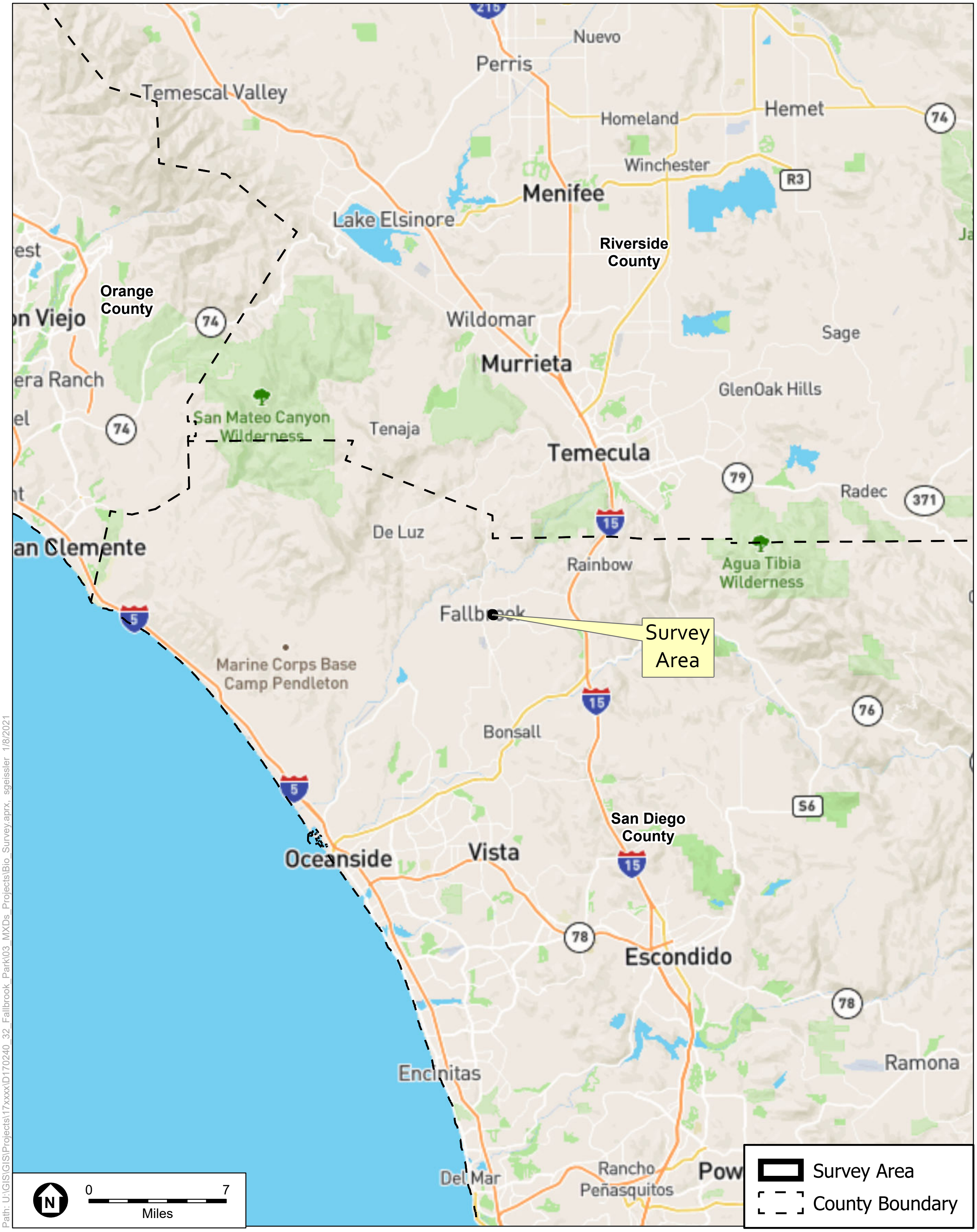
Attachment A: Fauna Compendium
Attachment B: CNDDB Forms

Certification Statement

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Jaclyn Catino-Davenport

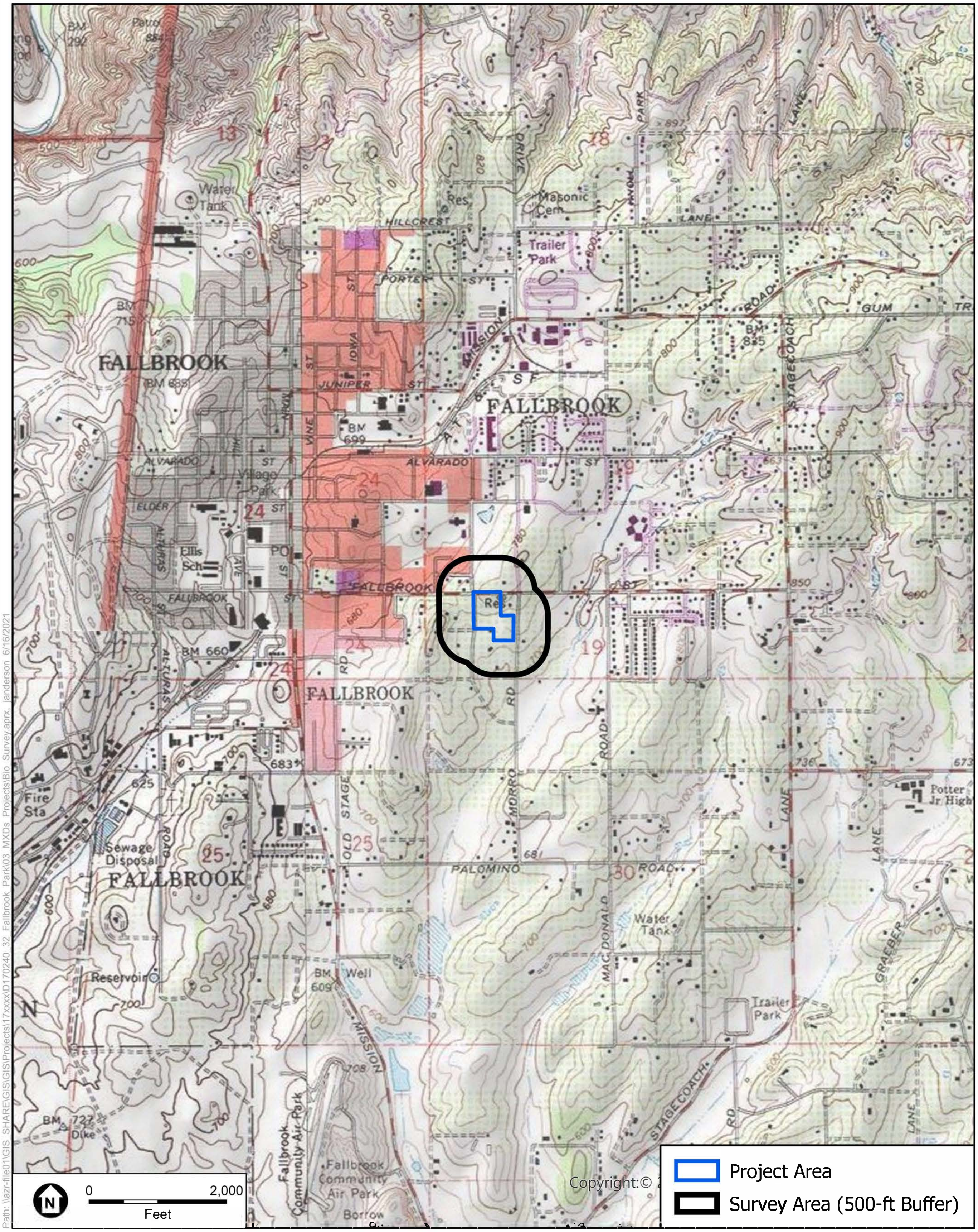
Jaclyn Catino-Davenport
Managing Biologist



SOURCE: Open Street Map; ESA, 2021.

Fallbrook Local Park

Figure 1
Regional Location



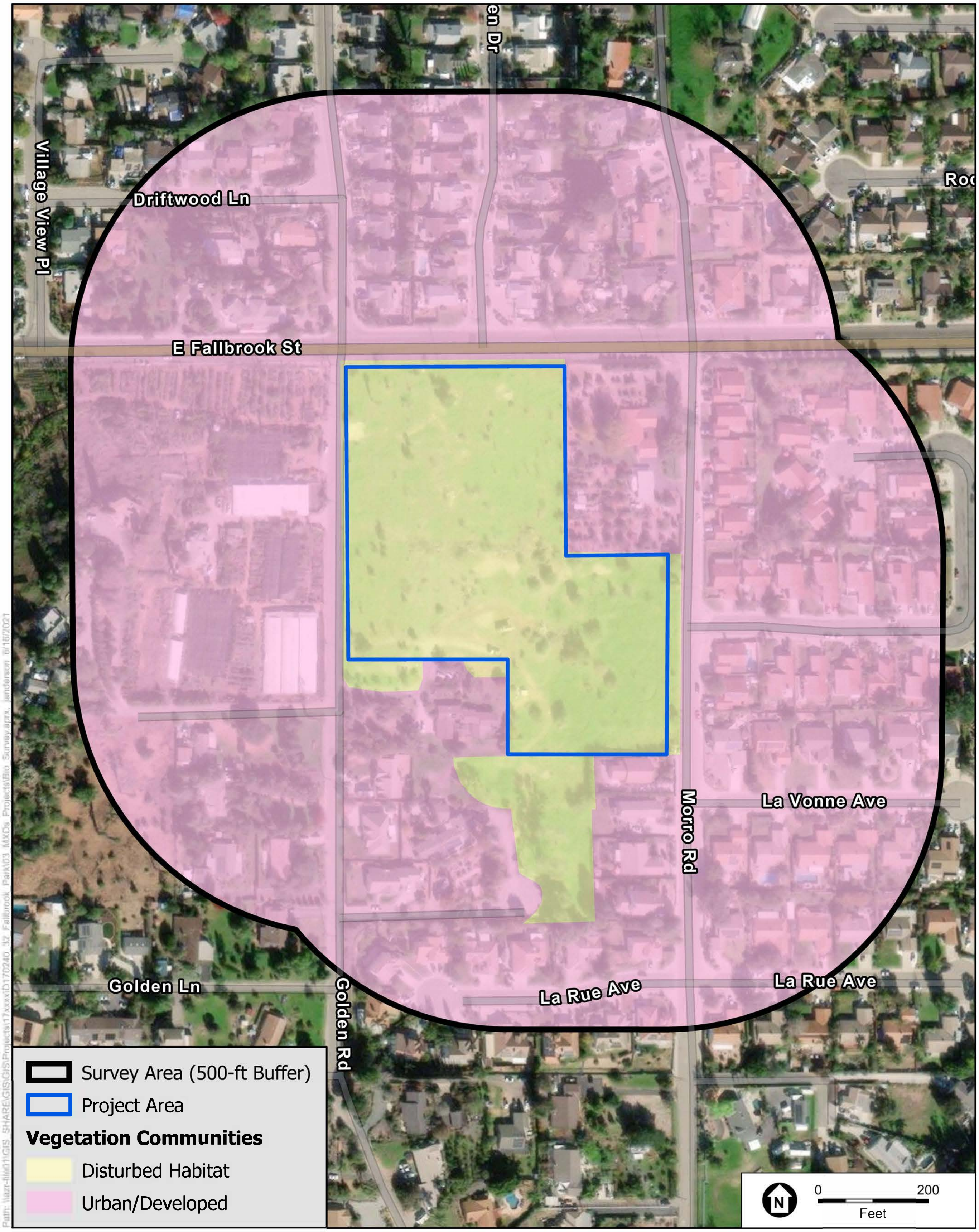
Path: \\azr-file01\GIS_SHARE\GIS\GIS\Projects\17xxxx\D170240_32_Fallbrook_Park\03_MXDs_Projects\Bio_Survey.aprx, janderson 6/16/2021

SOURCE: 7.5 minute USGS Topographic Series (Temecula, Bonsall, CA).

Fallbrook Local Park

Figure 2
Project Vicinity

ESA



SOURCE: Mapbox; ESA, 2021.

Fallbrook Local Park

Figure 3
Vegetation Communities

ESA

SOURCE: Mapbox; ESA, 2021.

Fallbrook Local Park

Figure 4
2021 Burrowing Owl Survey Results

Attachment A
Fauna Compendium

ESA

FAUNA COMPENDIUM

INVERTEBRATES

Scientific Name	Common Name	Status (Federal/State/Local)[1]
Class: Gastropoda	**Snails and Slugs**	
Cornu apsersum	brown garden snail	None/None/None
Insecta (Order Hymenoptera)	**Ants, Bees, and Wasps**	
Apis mellifera	European honey bee	None/None/None
Insecta (Order Lepidoptera)	**Butterflies and Moths**	
Danaus plexippus	monarch	FC/None/Group 2

REPTILES

Scientific Name	Common Name	Status (Federal/State/Local)[1]
LACERTILIA	**LIZARDS**	
Phrynosomatidae	**Zebratail, Earless, Horned, Spiny, Fringe-Toed Lizards**	
Sceloporus occidentalis	western fence lizard	None/None/None

BIRDS

Scientific Name	Common Name	Status (Federal/State/Local) [1]
GALLIFORMES		
Phasianidae	**Pheasants**	
* *Pavo cristatus*	Indian peafowl	None/None/None
COLUMBIFORMES		
Columbidae	**Pigeons and Doves**	
* *Columba livia*	rock pigeon	None/None/None
* *Streptopelia decaocto*	Eurasian collared-dove	None/None/None
Zenaida macroura	mourning dove	None/None/None
CAPRIMULGIFORMES		
Trochilidae	**Hummingbirds**	
Calypte anna	Anna's hummingbird	None/None/None
Selasphorus sasin	Allen’s hummingbird	None/None/None

BIRDS

Scientific Name	Common Name	Status (Federal/State/Local)[1]
PELECANIFORMES		
Ardeidae	**Herons and Egrets**	
Ardea herodias	great blue heron	None/None/Group 2
ACCIPITRIFORMES		
Accipitridae	**Hawks**	
Buteo lineatus	red-shouldered hawk	None/None/Group 1
PICIFORMES		
Picidae	**Woodpeckers**	
Picoides nuttallii	Nuttall's woodpecker	None/None/None
FALCONIFORMES		
Falconidae	**Falcons and Caracaras**	
Falco sparverius	American kestrel	None/None/None
PASSERIFORMES		
Tyrannidae	**Tyrant Flycatchers**	
Sayornis nigricans	black phoebe	None/None/None
Tyrannus vociferans	Cassin’s kingbird	None/None/None
Corvidae	**Jays and Crows**	
Aphelocoma californica	California scrub-jay	None/None/None
Corvus brachyrhynchos	American crow	None/None/None
Corvus corax	common raven	None/None/None
Aegithalidae	**Bushtits**	
Psaltriparus minimus	bushtit	None/None/None
Troglodytidae	**Wrens**	
Thryomanes bewickii	Bewick's wren	None/None/None
Sturnidae	**Starlings**	
* *Sturnus vulgaris*	European starling	None/None/None
Mimidae	**Thrashers**	
Mimus polyglottos	northern mockingbird	None/None/None
Turdidae	**Thrushes**	
Sialia mexicana	western bluebird	None/None/MSCP, Group 2
Bombycillidae	**Waxwings**	
Bombycilla cedrorum	cedar waxwing	None/None/None
Ptiliogonatidae	**Silky-flycatchers**	
Phainopepla nitens	phainopepla	None/None/None
Passeridae	**Old World Sparrows**	
* *Passer domesticus*	house sparrow	None/None/None
Fringillidae	**Finches**	
Haemorhous mexicanus	house finch	None/None/None
Spinus psaltria	lesser goldfinch	None/None/None

BIRDS

Scientific Name	Common Name	Status (Federal/State/Local) [1]
Passerellidae	**New World Sparrows**	
Spizella passerina	chipping sparrow	None/None/None
Zonotrichia leucophrys	white-crowned sparrow	None/None/None
Melospiza melodia	song sparrow	None/None/None
Melozone crissalis	California towhee	None/None/None
Icteridae	**Orioles, Grackles, and Cowbirds**	
Icterus cucullatus	hooded oriole	None/None/None
Agelaius phoeniceus	red-winged blackbird	None/None/None
Molothrus ater	brown-headed cowbird	None/None/None

MAMMALS

Scientific Name	Common Name	Status (Federal/State/Local)
Leporidae	**Rabbits and Hares**	
Sylvilagus audubonii	Audubon's cottontail	None/None/None
Sciuridae	**Squirrels, Marmots, and Prairie Dogs**	
Otospermophilus beecheyi	California ground squirrel	None/None/None
Carnivora	**Carnivores**	
* *Felis cactus*	Feral cat	None/None/None

[1] FE: Federally Endangered
FT: Federally Threatened
FC: Federal Candidate Species
SE: State Endangered
WL: California Department of Fish and Wildlife Watch List
FP: California Department of Fish and Wildlife Fully Protected
SSC: California Department of Fish and Wildlife Species of Special Concern

County of San Diego Sensitive Species Lists
Group 1: Animals of high sensitivity (listed or specific natural history requirements) (County)
Group 2: Animals declining but not in immediate threat of extinction or extirpation (County)

* Non-native species

Attachment B
CNDDB Forms

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDB@wildlife.ca.gov

For Office Use Only
Source Code: ____ Quad Code: ____
Elm Code: ____ Occ No.: ____
EO Index: ____ Map Index: ____

Date of Field Work (mm/dd/yyyy): 06/16/2021

Clear Form | Print Form

California Native Species Field Survey Form

Scientific Name: *Danaus plexippus*

Common Name: Monarch

Species Found? (●) Yes ( ) No ____ If not found, why?

Total No. Individuals: 1 Subsequent Visit? ( ) Yes (●) No

Is this an existing NDDB occurrence? ____ Yes, Occ. # [X] No [ ] Unk.

Collection? If yes: ____ Number ____ Museum / Herbarium

Reporter: Jaclyn Catino-Davenport
Address: 550 West C Street Suite 750, San Diego CA 92101
E-mail Address: jcatino-davenport@esassoc.com
Phone: 619-719-4211

Plant Information
Phenology: ____ % vegetative ____ % flowering ____ % fruiting

Animal Information
1 # adults ____ # juveniles ____ # larvae ____ # egg masses ____ # unknown
[ ] wintering [ ] breeding [ ] nesting [ ] rookery [ ] burrow site [ ] lek [X] other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)
Morro Road and Ave Campana, Fallbrook California

County: San Diego Landowner / Mgr: County of San Diego, Department of Parks & Recreation
Quad Name: Temecula Elevation: 750
T____ R____ Sec____, ____¼ of ____ ¼, Meridian: H( ) M( ) S( ) Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec____, ____¼ of ____ ¼, Meridian: H( ) M( ) S( ) GPS Make & Model: ____
DATUM: NAD27 ( ) NAD83 ( ) WGS84 (●) Horizontal Accuracy: 10 meters/feet
Coordinate System: UTM Zone 10 ( ) UTM Zone 11 ( ) *OR* Geographic (Latitude & Longitude) (●)
Coordinates: 33.374862, -117.241150

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Individual flying through the project area

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ( ) Excellent (●) Good ( ) Fair ( ) Poor
Immediate AND surrounding land use: rural and urban development
Visible disturbances: area mowed recently
Threats: ____
Comments:

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): ____
[ ] Compared with specimen housed at: ____
[ ] Compared with photo / drawing in: ____
[ ] By another person (name): ____
[X] Other: by qualified biologist

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[ ]
Habitat	[ ]	[ ]	[X]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? (●) yes ( ) no

Appendix C

Cultural Resources Memorandum

PUBLIC VERSION

Report:	Cultural Resources Assessment
Project Name:	Fallbrook Local Park
Project Number(s):	*D201700240.32*
Project Proponent:	County of San Diego, Department of Parks and Recreation
Prepared for:	Lorrie Bradley, County of San Diego Department of Parks and Recreation, 5500 Overland Ave, Suite 410, San Diego, CA 92123-1239; lorrie.bradley@sdcountyca.gov; (619) 455-7721
Prepared by:	Monica Strauss, M.A., RPA, Environmental Science Associates; mstrauss@esassoc.com; (818) 919-0485
Signature of Preparer:	

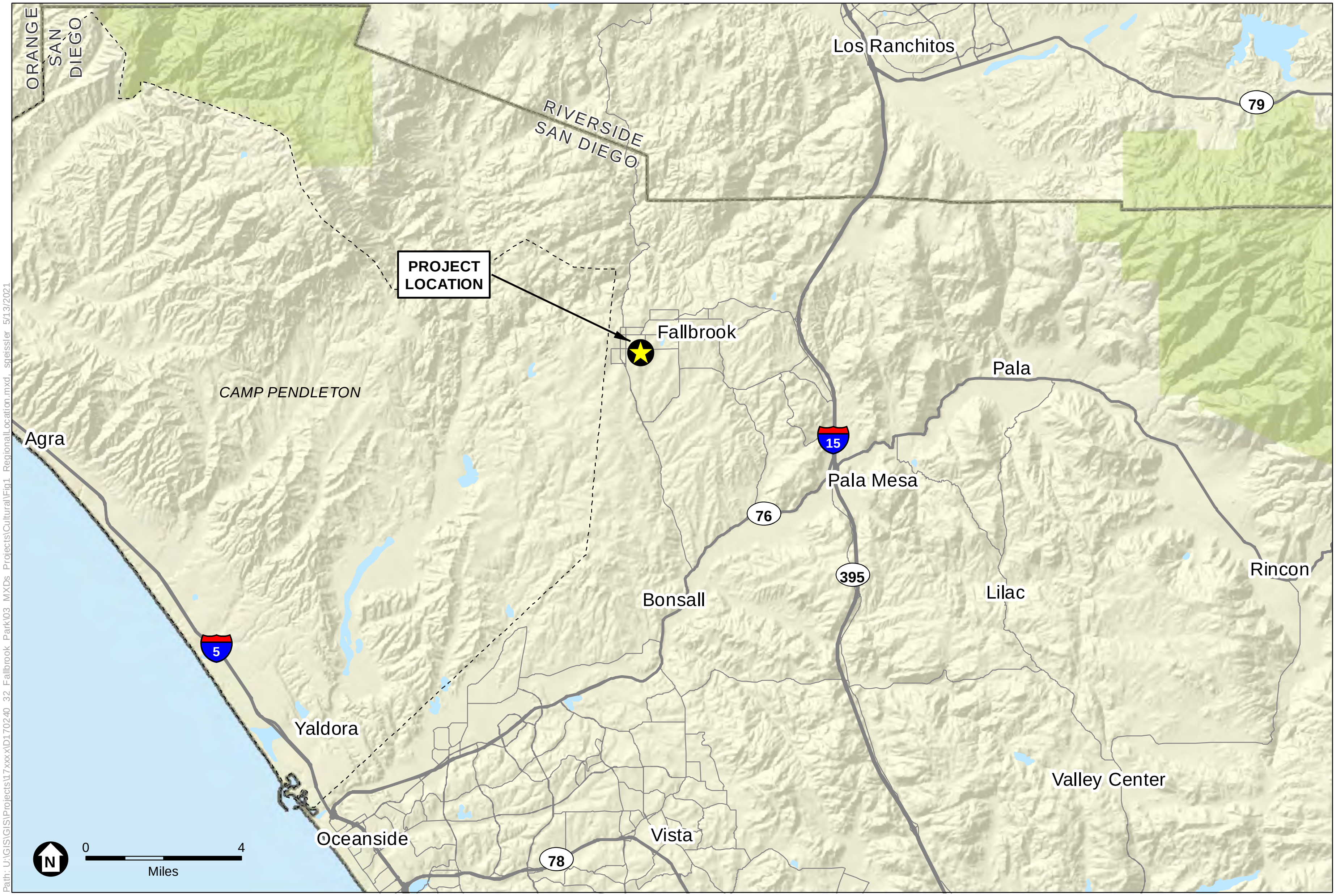
Introduction

On behalf of the County of San Diego, Department of Parks and Recreation (DPR), Environmental Science Associates (ESA) conducted a cultural resources assessment for the proposed Fallbrook Local Park Project (proposed project). The proposed project is located in northwestern San Diego County, California, in the unincorporated community of Fallbrook. This project proposes the construction of a new community park within Fallbrook.

This memo report presents the results of the cultural resources assessment, which included archival research, field survey, and impacts analysis. The study was conducted according to appropriate state and local laws, regulations, and guidelines, including, primarily, the California Environmental Quality Act (CEQA).

Project Location

The proposed project is located in northwestern San Diego County within the central portion of the unincorporated community of Fallbrook (**Figure 1**). The proposed project is located in Section 19 of Township 9 South, Range 3 West on the Bonsall and Temecula, CA 7.5-minute topographic quadrangles (**Figure 2**). Specifically, the 6.3-acre proposed project site is located within Assessor's Parcel Number (APN) 105-841-35, and is bounded by East Fallbrook Street to the north, Golden Road to the west, Morro Road to the east, and Rosemere Lane to the south (**Figure 3**).

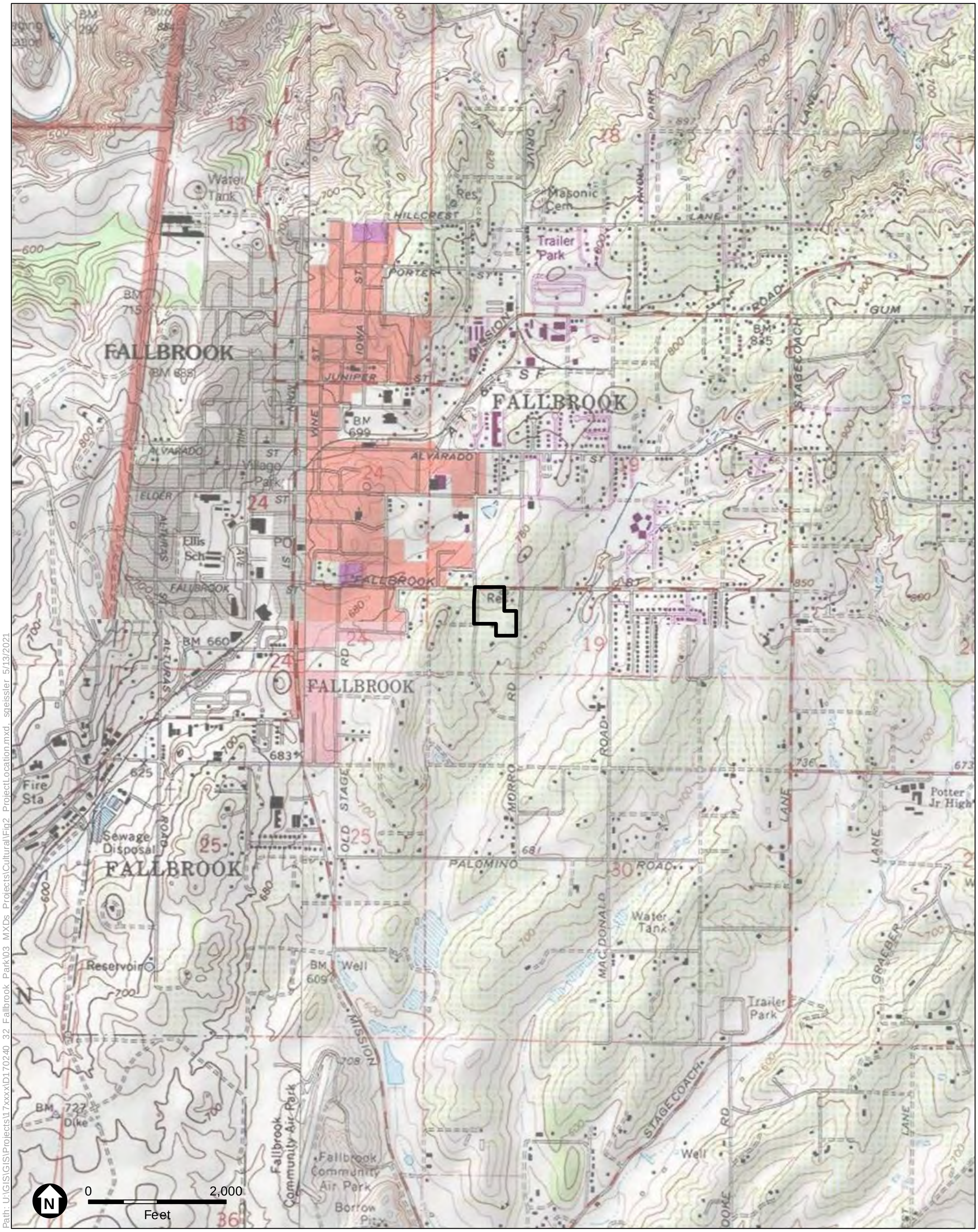


SOURCE: ESA, 2020; SanGIS

Fallbrook Local Park

Figure 1

Regional Vicinity



TOPO QUADS: Bonsall and Temecula, CA 7.5-minute

Fallbrook Local Park

Figure 2
Project Location

ESA

SOURCE: ESA, 2020;ESRI, 2020

Fallbrook Local Park

Figure 3
Project Boundaries

ESA

Project Description

The proposed project would construct a 6.8-acre local park in the community of Fallbrook. Implementation of the proposed project would provide new active and passive recreational opportunities for residents of all ages, interests, and abilities. The proposed project would expand recreation resources in the community of Fallbrook and would be operated and maintained by the County of San Diego Department of Parks and Recreation (DPR). As shown in **Figure 4**, the project site is separated into various components dedicated to different recreational activities, including a play area, open lawn areas, off-leash dog zone, soft surface trails and native gardens, multi-use path, skate elements, and other associated amenities, including parking.

Project Components

Access, Circulation, and Parking

Vehicular access to the project site would be from a single entry-point at the northern boundary along East Fallbrook Street, as shown on Figure 4. The entrance would allow ingress and egress for both pedestrians and vehicles. The entrance point would lead to a proposed parking lot within the center of the property. The parking lot would include a one-way drive aisle, with parking stalls around the east and west peripheries and inner portion of the parking lot. Additional pedestrian access to the project site would be available from Morro Road.

The parking lot would provide a total of 68 parking stalls, including three ADA accessible stalls and five bicycle parking spots. The project would incorporate pervious surfaces for the parking stalls, as well as additional green infrastructure in the center of the parking lot, including a bioretention swale, rain garden, and infiltration basin.

Play Area

The play area would be located in the southeast portion of the project site, located southeast of the proposed parking lot and west of Morro Road. The play area would be approximately 0.8 acres (33,748 square feet [sf]) in size and would contain two separate play elements for children ages 2-5 and children ages 5-12, which could accommodate 20 and 30 children at each apparatus a time, respectively. In addition, there would be additional amenities for multiple ages, including swings, climbing boulders, and stepping logs, which could accommodate 15 children. The play area would provide traditional play elements within landscaping features to provide for recreation experiences that are integrated with nature. Outdoor seating would be provided around the periphery of the play area.

Open Lawn Area

The open lawn area would be located directly west of the proposed parking lot and east of Golden Road. The open lawn area would be approximately 1.2 acres (53,822 sf) in size, and could accommodate youth soccer, along with a variety of other passive uses. It is anticipated that a total of 18 players would be on the field at one time, with capacity for up to 40 additional spectators. The proposed open lawn area would be used primarily for localized soccer practices and is not anticipated to be used for large regional tournaments. No stadium lighting would be provided at the open lawn area.

Off-Leash Dog Zone

The off-leash dog zone would be approximately 0.5-acre (22,040 sf) in size, and would be surrounded by galvanized or vinyl coated chain-link fencing at a minimum of six feet above finished grade. The off-leash dog zone would have separate areas for small and large dogs, which would be segmented by fencing. The surface of the off-leash dog zone is anticipated to be composed of decomposed granite. Seating, trash cans, water fountains, and shade structures would be constructed at various areas to accommodate dogs and owners.

Multi-use Path, Soft Surface Trails, and Native Gardens

The project would incorporate 2,430 linear feet of a multi-use path, which would line the perimeter of the project site. The approximately half-mile loop around the site would include opportunities for pedestrians, cyclists, and other users. The multi-use path would be partially shaded with a variety of shade trees and other landscaping elements. Pedestrian access to the multi-use path would be provided via Morro Road and East Fallbrook Street.

Soft surface trails and native gardens would extend from the proposed multi-use path in three different locations, and would provide an additional 594 linear feet of recreation opportunities. The soft surface trails would be composed of stabilized decomposed granite. The first location would be along the northern portion of the project site, west of the proposed parking lot entrance. The proposed native gardens would surround the soft surface trails and contain native, drought-resistant plant species. The second proposed soft surface trail is directly north of the proposed play Area, east of the proposed parking lot. An additional soft surface trail and native garden would be located at the southwestern most boundary of the project site, directly west of the off-leash dog zone.

Skate Elements

The proposed skate elements would be located in the northwestern portion of the project site, and would be partially surrounded by the proposed multi-use Path. The skate elements would be paved and would be approximately 0.5-acre (20,160 sf) in size. The proposed skate elements would be designed for users of all ages and skill levels. Bench seating and planters would be located within the southeastern portion. Additionally, shaded seating areas would be incorporated around the perimeter of the skate elements. The skate elements would be fenced from the rest of the park, and would be accessed by its own entry gate. It is anticipated that up to 100 skaters and spectators would be permitted at a single time.

FINAL CONCEPT PLAN

NEW LOCAL PARK IN FALLBROOK

LEGEND

P **PARKING: 68 STALLS**
one-way circulation, ingress + egress off E. Fallbrook St.
pervious surface for stalls, bioretention swale

1 **ADA PARKING: 3 STALLS**

2 **BIKE PARKING: 5 SPOTS**

3 **SHADED PICNIC AREA**

4 **COMFORT STATION**
restrooms + drinking fountains and bottle filler

5 **GREEN INFRASTRUCTURE**
bioretention swale -> rain garden -> infiltration basin

6 **PLAY**
33,748 square feet | ~ .8 acre
2-5 + 5-12 shaded, traditional play
nature play integrated into adjacent field/ basin

7 **OPEN FIELD**
53,822 square feet | ~ 1.2 acres

8 **OFF-LEASH DOG ZONE**
22,040 square feet | ~ .5 acre

9 **SOFT SURFACE TRAILS + NATIVE GARDENS x 3**
594 linear feet of trail

10 **MULTIUSE PATH**
2,430 linear feet | ~ .5 mile loop

11 **SKATE ELEMENTS**
20,160 square feet | ~ .5 acre

12 **PLANTERS | BENCH SEATING**

13 **PASSIVE RECREATION AREA**
soft surface trail, interpretive signage, native garden, seating

14 **TRASH ENCLOSURE**

+ **EXISTING TREES: 11**
PROPOSED TREES: 111

SAN/17XXX/D170240.32 - COSD DPR 557744_TO 32 Fallbrook Park/05 Graphics-GIS-Modeling

SOURCE: County of San Diego Parks and Recreation, 2021

Figure 4
Conceptual Site Plan

Ancillary Facilities and Green Infrastructure

The proposed project would include a shaded picnic area that would be located directly east of the open lawn area and west of the parking lot. The shaded picnic Area would include concrete pavement, picnic tables, multiple barbeque grills, and a shade structure. Several smaller picnic tables and seating areas consisting of one or more tables would be situated at various locations within the park.

The project would include the construction of a comfort station, which would be located southwest of the parking lot and would contain a restroom facility, drinking fountains, and a bottle filler. The comfort station would be an estimated 20 feet by 20 feet in size, and would include nighttime security lighting. Lighting would be directional and shielded to reduce off-site light and glare to the extent practicable, in compliance with the County Code of Regulatory Ordinances. Other strategic night lighting may be integrated in other locations on the project site for security and safety purposes based on the recommendations of the Sheriff's Department. Any additional lighting would also be directional and shielded downward.

The project would construct a trash enclosure located in the northern portion of the parking lot. In addition, waste receptacles would be installed in proximity to public use areas throughout the project site.

As detailed above, the proposed parking lot would be designed with pervious surfaces for each parking stall. The project would also incorporate a bioretention swale, rain garden, and infiltration basin within the center of the parking lot, which would drain and filter stormwater for percolation into local soils.

There are currently nine existing oak trees located on the project site. In addition, there are multiple nut trees, palms, and ornamental trees, which may be removed based on final project design. In addition, the project would plant approximately 109 additional trees, which would be located throughout the project site.

Project Construction

Construction of the project is anticipated to occur over a 7-month period, beginning in Fall 2021 and ending in Summer 2022. Construction activities would consist of clearing, grubbing, mass grading, rough grading, and fine grading operations. The proposed open lawn area would be graded to a level surface, while other recreational components would utilize the existing slope, including, but not limited to, the proposed skate elements and off-leash dog zone. The equipment used would include, but not be limited to, rubber-tired dozers, tractors/loaders/backhoes, excavators, graders, loaders, pavers, rollers, and cement and mortar mixers.

The County of San Diego DPR has developed standard operating procedures and BMPs for construction. **Table 1** lists these procedures, which are considered project design features of the proposed project.

TABLE 1 PROJECT DESIGN FEATURES

Project Design Features (PDFs)	Responsible Party
PDF-CUL-1 (Retention of a Qualified Archaeologist): Prior to the start of ground-disturbing activities, DPR shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior 2012) to carry out PDF-CUL-2 and PDF-CUL-4.	County of San Diego DPR

Project Design Features (PDFs)	Responsible Party
PDF-CUL-2 (Construction Worker Cultural Resources Sensitivity Training): Prior to the start of ground-disturbing activities, construction personnel shall be trained in the identification of cultural resources. Prior to earth moving activities, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures be to enacted in the event of an inadvertent discovery of archaeological resources or human remains. DPR shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.	County of San Diego DPR
PDF-CUL-3 (Inadvertent Discoveries of Archaeological Resources): In the event of the unanticipated discovery of archaeological materials, the contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by a qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with DPR on the significance of the resource. If it is determined that the discovered archaeological resource constitutes a historical resource under CEQA, avoidance and preservation in place is the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Cultural Resources Treatment Plan shall be prepared and implemented by a qualified archaeologist in consultation with DPR that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource. DPR shall consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered.	County of San Diego DPR
PDF-CUL-4 (Inadvertent Discoveries of Human Remains): If human remains are encountered, the contractor shall halt work in the vicinity (within 100 feet) of the find and contact the San Diego County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the California Native American Heritage Commission (NAHC) will be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98 (as amended by Assembly Bill 2641). The NAHC will designate a Most Likely Descendent (MLD) for the remains per PRC Section 5097.98. Until the landowner has conferred with the MLD, the contractor shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials.	County of San Diego DPR

SCIC Records Search

A records search for the project was conducted on October 30, 2020, by staff at the California Historical Resources Information System (CHRIS) South Coastal Information Center (SCIC) housed at San Diego State University. The records search included a review of all previously recorded cultural resources and previous studies within a 1-mile radius of the proposed project. It is important to note, too, that, due to restrictions imposed by the SCIC's response to the COVID-19 pandemic, an in-person records search was not possible and the SCIC provided baseline results only. This included a map of cultural resources studies, copies of studies covering the proposed project site, and California Department of Parks and Recreation 523 forms for resources within the search area. Items not provided included a map of resources locations and details on studies within the search area but outside the proposed project site. The records search is included in **Confidential Appendix A**.

Previous Studies

The records search results indicate 41 cultural resources studies have been conducted within a 1-mile radius of the proposed project site (**Table 2**). Approximately 30 percent of the 1-mile records search radius has been included in previous cultural resources surveys. None of the 41 previous studies overlap the proposed project site, indicating it has not been previously subject to cultural resources survey.

TABLE 2 PREVIOUS CULTURAL RESOURCE STUDIES

Author	SCIC # (SD-)	Title	Date
Becker, Mark S., Dave Iversen, Sarah Stringer-Bowsher, and Michelle Dalope	14096	*Final Archaeological Survey for the Santa Margarita River Conjunctive Use Project, Marine Corps Base Camp Pendleton, San Diego County, California*	2012
Bonner, Wayne H. and Kathleen A. Crawford	15554	*Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate SD06236A (Pac Bell/Stagecoach) 717 South Stagecoach Lane, Fallbrook, San Diego County, California*	2013
Bonner, Wayne H., Sarah A. Williams, and Kathleen A. Crawford	15553	*Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SD06236A (Pac Bell/Stagecoach) 717 South Stagecoach Lane, Fallbrook, San Diego County, California*	2013
Caterino, David	09516	*The Cemeteries and Gravestones of San Diego County: An Archaeological Study*	2005
Chmiel, Karoline A.	16678	*ETS 29807 - Cultural Resources Survey for Path to Pole P316791, Fallbrook, San Diego County, California - IO 7074264*	2015
Clevenger, Joyce and Kathleen A. Crawford	06448	*Historic Properties Overview and Evaluation for the Naval Ordinance Center, Pacific Division, Fallbrook Detachment, San Diego County, California*	1997
Cook, John R.	08655	*Archaeological Reconnaissance of the 40-acre Cerrito Vista Project Fallbrook, California*	1977
Cooley, Theodore	06447	*Cultural Resources Inventory and Survey Report for the Naval Weapons Station (WPNSTA) Seal Beach, Detachment, Fallbrook, CA*	2000
Cooley, Theodore	06252	*Final Report of Historic Properties Inventory of Three Napalm Sites on the Naval Ordnance Center, Pacific Division, Fallbrook Detachment, Fallbrook, California*	1996
De Barros, Philip	10764	*Cultural Resources Survey and Evaluation of 11.41 acres for Tentative Parcel Map 21010, APN 106-051-023, at 1224 Pepper Tree Lane, Fallbrook, San Diego County, California*	2007
Fink, Gary	01391	*The Archaeology of the Fallbrook Street Extension*	1973
Fink, Gary R.	05768	*Historic Property Survey Mission Road, Fallbrook*	1977
Fink, Gary R.	10480	*Archaeological Survey, Potter Street Improvements, Fallbrook, California Project No. UJ0235*	1977

Author	SCIC # (SD-)	Title	Date
Fulton, Phil	15666	*Cultural Resource Assessment Class III Inventory, Verizon Wireless Services, Reche Facility, City of Fallbrook, San Diego County, California*	2014
Fulton, Phil	16867	*Cultural Resource Assessment Class III Inventory Verizon Wireless Services Reche Facility City of Fallbrook, San Diego County, California*	2015
Fulton, Phil	15143	*Cultural Resource Assessment Class III Inventory Verizon Wireless Services Reche Facility City of Fallbrook, San Diego County, California*	2014
Hass, Hanna and Robert Ramirez	14912	*BHA, Inc., Dougherty Citrus Inc., Project 420 West Dougherty Street, Fallbrook Cultural Resources Study*	2014
Hunt, Kevin P. and Brian F. Smith	08860	*An Archaeological Survey for the Crest Subdivision Project, Fallbrook, San Diego County, California*	2000
Joyner, Kathie and Anna Noah	07458	*Fallbrook Drainage and Flood Control*	1989
Kwiatkowski, Heather	11979	*Cultural Resources Survey Report for TPM 21144: Hagerty/Grajeck Minor Subdivision APN 105-800-63*	2008
Kwiatkowski, Heather	12151	*Negative Cultural Resources Survey Report for Sapien TM 5562 APN 106-011-61*	2009
Loftus, Shannon	12874	*AT&T Site SD0663 Fallbrook Downtown 550 East Ivy Fallbrook, San Diego County, California 92028*	2010
McGinnis, Patrick	17501	*Letter Report: 37458 - Cultural Resources Investigation for Avocado Substation Modification, Fallbrook, San Diego County, California - Internal Order #2200521888*	2018
Mooney, Brian F. and Associates	05210	*Cultural Resources Reports Study for the Fallbrook Water Reclamation Project Appendix A*	1991
Neiswnder, Sheila	07111	*A Description of Artifact from a Luiseno Site near Fallbrook, California*	1975
Pletka, Nicole	08037	*Cultural Resource Assessment AT&T Wireless Services Facility No. 20036, San Diego County, California*	2002
Pletka, Nicole	08228	*Cultural Resources Assessment AT&T Wireless Services Facility No. 20036B Fallbrook, San Diego County, California*	2003
Polhemus, Mary	11561	*The Ellis-John House, 230 West Alvarado Street, Fallbrook, California*	2007
Price, Harry J. Jr.	01711	*Fourth Addendum Archaeological Survey Report for a Proposed Access Road on Interstate 15 in Rainbow Valley (11-SD-15 P.M. 51.2-53.6) 11203-144811*	1982
Reddy, Setha N.	11460	*A Programmatic Approach for National Register Eligibility Determination of Prehistoric Sites within the Southern Coast Archaeological Region, California*	2007
Roberts, Ted, Shelby G. Castels, Justin Castells, and Rachael Nixon	17670	*Cultural Resources Survey Report for the AES Fallbrook Project, Fallbrook, California PDS-MPA-18-010*	2018
Rosen, Marty, Karen C. Krafts, and Alan Willis	02801	*Negative Archaeological Survey Report for Four Lan Alignment for State Route 76, San Diego County*	1993
Shalom, Diane	11676	*Cultural Resources Survey Report No: Carston TPM21124, Log No. 08-02-004 - Negative Findings*	2008
Shalom, Diane	11917	*Cultural Resources - Negative Findings Ferraro TPM 20833, Log No. ER 04-020-20*	2008
U.S Department of the Navy	10496	*Final Results of the Condition Assessment, Site Monitoring, and Effects Treatment Program*	2006
U.S. Department of the Navy, Shannon Davis, Don Laylander, and ASM Affiliates, Inc.	14053	*Integrated Cultural Resources Management Plan for Naval Weapons Station Seal Beach Detachment Fallbrook, San Diego County, California*	2012
Willhite, Brenton E.	18235	*Archaeological Monitoring for 2019 Wood Pole Inspections, Distribution, Fallbrook, San Diego, California (SDG&E ETS # 34618, Pangis Project # 1401.117)*	2019
Wills, Carrie D. and Sarah A. Williams	16853	*Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SD07846A (Fallbrook Community Center) 341 Heald Lane, Fallbrook, San Diego County, California*	2015
Wright, Gail	08351	*Negative Cultural Resources Survey Report for STP 02-069; Log No. 03-01-003; Fallbrook Self Storage APN 104-161-37 & 39 Negative Findings*	2003

Author	SCIC # (SD-)	Title	Date
Wright, Gail	09174	*Cultural Resources Survey Report for TM5391, Log No. 04-02-038 - Constant Creek Subdivision, APN 106-011-62-00*	2004
Wright, Gail	05477	*Negative Cultural Resources Report for STP 03-004, Log. No. 03-02-002-COVO AUTO REPAIR; APN 104-350-10*	2003

Previously Recorded Resources

The records search results indicate 10 cultural resources have been previously recorded within a 1-mile radius of the proposed project site (**Table 3**). Of the 10 cultural resources, one is a historic-period archaeological site (P-37-011235), and nine are historic architectural resources (P-19-028323 [single family residence], -029054 [single family residence], -033557 [Highway 395], -033759 [single family residence], -035155 [public utility building], -036022 [ancillary building], -036023 [single family residence], -036024 [single family residence], and -037636 [single family residence]). None of these 10 resources are located within or immediately adjacent to the proposed project site.

TABLE 3 PREVIOUSLY RECORDED CULTURAL RESOURCES

Primary # (P-37-)	Permanent Trinomial (CA-SDI-)	Other Identifier	Description	Date Recorded	Eligibility Status	Distance from Project
011235	CA-SDI-011235	-	Historic-period archaeological site: remnants of erosion control structures	1989	Not evaluated	4,525 feet
028323	-	Heald Residence	Historic architectural resource: single family residence constructed in 1938	2007	May be NRHP eligible	4,660 feet
029054	-	205 West Mission Road	Historic architectural resource: single family residence constructed in the 1880s	2008	Not evaluated	4,225 feet
033557	-	Highway 395	Historic architectural resource: highway	2013, 2015, 2017, 2018	Recommended NRHP and CRHR eligible	3,765 feet
033759	021220	420 E. Dougherty Street	Historic architectural resource: single family residence constructed in the late 1940s	2014	Recommended NRHP and CRHR ineligible	4,230 feet
035155	-	-	Historic architectural resource: public utility building	2013	Recommended NRHP ineligible	5,260 feet
036022	-	-	Historic architectural resource: ancillary building constructed in the 1940s	2014	Not evaluated	2,700 feet
036023	-	-	Historic architectural resource: single family residence constructed in the 1920s	2014	Not evaluated	3,625 feet
036024	-	Denarde House	Historic architectural resource: single family residence constructed in the 1920s	2014	Not evaluated	2,280 feet
037636	-	1405 E. Mission Road	Historic architectural resource: single family residence constructed in 1956	2017	Recommended CRHR ineligible	4,420 feet

In addition to the 10 previously recorded resources, the SCIC identified 104 historic addresses within the 1-mile records search radius. Of these 104 historic addresses, one (462 Golden Road) is located within the northwestern portion of the proposed project site. A review of the California Office of Historic Preservation's (OHP) Built Environment Resources Directory (BERD) indicates the address is associated with the Mrs. Erle Stanley Gardner House built in 1930 (OHP, 2020). Mrs. Erle Stanly Gardner, or Agnes Jean Bethel, was the second wife of Erle Stanley Gardner, the author and creator of Perry Mason series of novels. Ms. Gardner moved from Temecula to Fallbrook following Erle Stanley's death in 1970 and lived there until her passing in 2003. The BERD indicates the resource is listed in a local register (NRHP Status Code 5S1) under Criteria A and C for association with significant events and representative of a construction method and/or high artistic value, respectively. However, in reviewing the San Diego County Local Register of Historical Resources, this resource does not appear on the list. Additionally, after an extensive desktop review, no materials could be found providing a description of the resource or details regarding its listing in a local register.

Native American Heritage Commission Outreach

The California Native American Heritage Commission (NAHC) maintains a confidential Sacred Lands File (SLF), which contains sites of traditional, cultural, or religious value to the Native American community. ESA contacted the NAHC on October 30, 2020, to request a search of the SLF. The NAHC responded to the request in a letter dated December 15, 2020. The results of the SLF search were negative, indicating no known Native American cultural resources are located in the vicinity of the project (**Confidential Attachment B**). The NAHC also provided a list of Native American tribal organizations and individuals who may have an interest in the project.

Historic Map and Aerial Photograph Review

Historic maps and aerial photographs were examined to provide historical information about the historic land uses of the proposed project site. Available topographic maps include the 1901 San Luis Rey 60-minute quadrangle, the 1942 Temecula 15-minute quadrangle, the 1948 Temecula and Bonsall 7.5-minute quadrangles, and the 1968 Temecula and Bonsall 7.5-minute quadrangles. Historic aerial photographs were available for the years 1938, 1946, 1953, 1964, 1974, 1976, 1980, 1989, 1994, 2003, and 2016 (historicaerials.com, 2020; UCSB, 2020).

The 1901 and 1942 topographic maps show the project site as being bounded by paved roads to the north and east, and a dirt road to the west. The 1948 and 1968 topographic maps depict an orchard within the proposed project site and two structures, one located immediately northeast of the project site and one located south of the project site, are also shown.

The 1938 aerial photograph shows a newly planted orchard within the proposed project site, as well as what appears to be a residential building with an associated ancillary building immediately northeast of the project site (707 Morro Road). The 1946 photograph shows a mature orchard within the project site as well as the structures depicted in the 1938 photograph. The 1953 and 1964 photographs show the addition of a small structure just south of the proposed project. The 1974 photograph shows the residential building located immediately northeast of the proposed project as it is depicted in the 1938 photograph, but by 1976 the building's configuration has changed indicating that it was subject to a dramatic remodel or that the original building was demolished and a second building was constructed. Similarly, the structures south of the project site depicted in the 1953 and 1964 photographs appears to have been reconfigured by 1974, and sometime between 1980 and 1989 the structure looks to have been replaced by a residential building. The 1980 photograph depicts construction of a residential development north of the proposed project site and by 1989 residential subdivisions are depicted north, northeast, and east of the proposed project site. The 1994 and 2003 photographs show the orchard located within the proposed project site is in decline as indicated by the diminished number of trees and by 2016 very few trees are left and a plant nursery is depicted in the proposed project site's northwestern quadrant.

In sum, land uses within the proposed project site primarily included orchard cultivation from as early as the 1930s; however, by the early 2000s the orchards were in decline and by 2016 it appears many of the trees were been removed. Just outside the project site, a residential building located at 707 Morro Road was present since at least 1938, and appears to have been remodeled or demolished and replaced sometime between 1974 and 1976. Given the age of the building as indicated by the historic aerial photographs it appears to meet the OHP's minimum 45-year-old threshold for consideration as a cultural resource.

Subsurface Archaeological Sensitivity

A desktop review of geologic maps and soils data was conducted to assess the potential for subsurface archaeological deposits within the proposed project site. A review of geologic maps indicates Cretaceous-age (145.5 to 65.5 million years ago) undivided Tonalite (map unit Kt), a bedrock unit comprised of horneblend-biotite tonalite, is mapped at surface in the proposed project site (Tan and Kennedy, 2000; Tan et al., 2007).

Soils mapping indicates three types of soils are present in the project site including: Fallbrook sandy loam, 2 to 5 percent slopes; Fallbrook sandy loam, 15 to 30 percent slopes; and Fallbrook-Vista sandy loams, 9 to 15 percent slopes (NRCS, 2020). The Fallbrook sandy loam soil types are comprised of residuum weathered from granodiorite, a bedrock material, form on backslopes, and extend to depths of 12-28 inches before contacting bedrock. The Fallbrook-Vista sandy loam soil type is comprised of grus (particles of sand and gravel) derived from granodiorite and/or quartz-diorite, form on side slopes, and extend to depths of 12-28 inches before contacting bedrock.

As noted in the historic map and aerial review, the entire proposed project site operated as an orchard for much of the 20th century and was subject to disturbances associated with the planting and removal of trees, and plowing and discing of the soils. These activities would have disrupted and displaced the relatively shallow soils at surface within the proposed project site.

The Cretaceous age of the undifferentiated Tonalite mapped at surface in the proposed project site indicates this geologic unit was deposited long before human settlement of North American. This coupled with the relatively shallow depths of soil in the proposed project site as well as previous disturbances associated with past agricultural activities, indicates the proposed project site has a low potential to contain intact subsurface archaeological deposits. Therefore, it is unlikely that proposed project ground disturbance would encounter intact subsurface archaeological deposits during project implementation.

Field Survey

A cultural resources survey of the project site was conducted on December 1, 2020 by ESA cultural resources staff, Michael Vader, B.A., and Pechanga Band of Luiseño Indians tribal monitor, Cody Schlater. The survey was aimed at identifying archaeological resources within or immediately adjacent to the proposed project site and to assess potential indirect visual impacts to the residential building located 707 Morro Road identified as part of the historic map and aerial review just northeast of the proposed project.

Relatively flat accessible areas with visible ground surface were subject to systematic pedestrian survey using transect intervals spaced no more than 15 meters (approximately 50 feet) apart. Archaeological sites were defined as consisting of one or more cultural features or three or more artifacts (45 years old or older) within an approximate 25-square-meter area. Fewer than three artifacts within 25-square-meter area were considered isolates. Newly recorded resources were assigned temporary numbers, photographed, and documented on California Department of Parks and Recreation 523 forms. All California Department of Parks and Recreation 523 forms are included in **Confidential Appendix C**.

The proposed project site is comprised of gently sloping hills with a generally southeast trending incline. Vegetation consisted of low lying, recently mowed seasonal grasses as well as a number of tree species including olive, avocado, pepper, oak, and fan palms (**Figure 5**). The olive and avocado trees are likely remnants of the project site's past use as an orchard. Ground surface visibility ranged from 25-50 percent based on the density of ground cover. Disturbances noted within the project site included brush piles, low-lying earthen berms or push piles, evidence of disking, extensive rodent burrowing, and a large square-shaped excavation with approximate dimensions 10 feet square by 6 feet deep. The excavation looked as if it was used as a local club house for neighborhood children and the sidewalls appeared to consist of a homogenous loamy silt. The entirety of the project site was subject to systematic survey. No evidence of the historic address identified by the SCIC at 462 Golden Road (Mrs. Erle Stanly Gardner House) was identified during the survey.

As a result of the survey, two prehistoric isolates (ESA-Fallbrook-ISO-001P and -002P) were documented in the the proposed project site (**Figure 6, Confidential Attachment D**). The two isolates both consist of single pieces of fine grain metavolcanic debitage within an open field (**Figure 7**). Given the degree of past disturbance, it is difficult to discern if the isolated artifacts represent lithic reduction or if they are the result of fracture associated with past discing and plowing of the project site when it was an operating orchard.

The residence at 707 Morro Road identified as part of the historic map and aerial photograph just northeast of the proposed project was photographed from the proposed project site. The portions of the residence facing the proposed project site include the western and southern elevations, which are the back and side portions of the building. These are located approximately 100 feet and 160 feet from the proposed project's boundary. The area between the proposed project site's margin and the residence include a back and side yard landscaped with a number of mature trees and shrubs that obscure direct views from the proposed project site (**Figure 8**).

Overview of northern portion of proposed project area (view to west)

Overview of southern portion of proposed project area (view to west)

SOURCE: ESA, 2020

Figure 5
Survey Photos

Figure 6 Isolate Locations

(See Confidential Attachment D)

Detail of ESA-Fallbrook-ISO-001P

Detail of ESA-Fallbrook-ISO-002P

SOURCE: ESA, 2020

Figure 7
Isolate Photos

Overview of residence at 707 Morro Road, western elevation (view to SE)

Overview of residence at 707 Morro Road, southern elevation (view to north)

SOURCE: ESA, 2020

Figure 8
707 Morro Road Photos

Impacts Assessment

The following paragraphs describe the potential for direct and indirect impacts the proposed project could have on known and unknown cultural resources within and immediately adjacent to (within 100 feet of) the proposed project site. The direct impacts discussion is structured around the resources identified within the proposed project site as a result of the archival research and cultural resources survey, as well as the potential for the project to directly impact unknown subsurface archaeological deposits. The indirect impacts discussion focuses on the potential for the project to result in visual impacts to the residential building located 707 Morro Road identified as a result of the historic map and aerial review within approximately 100 feet of the project's northeastern boundary.

Direct Impacts

The SCIC records search indicates the presence of a historic address within the northwestern portion of the proposed project site. The address (462 Golden Road) is identified in the OHP's BERD as being associated with the Mrs. Erle Stanley Gardner House built in 1930 (OHP, 2020). The BERD indicates the resource is listed in a local register (NRHP Status Code 5S1) under Criteria A and C. However, in reviewing the San Diego County Local Register of Historical Resources, this resource does not appear on the list. Additionally, after an extensive desktop review, no materials could be found providing a description of the resource or details regarding its listing in a local register. No evidence of the historic address was identified as a result of the historic maps and aerial photograph review or the cultural resources survey. Therefore, it is presumed the historic address was incorrectly mapped and the resource does not exist within the proposed project site, therefore no impacts to this identified resource would occur as a result of project implementation.

As a result of the cultural resources survey two prehistoric isolates (ESA-Fallbrook-ISO-001P and -002P) were identified in the proposed project site. Due to their isolated nature and lack of clear cultural context, isolates are generally considered not to be significant resources. As such, the two isolates documented within the proposed project site do not qualify historical resources pursuant to CEQA, and no further work is recommended for these resources.

The subsurface archaeological sensitivity analysis indicates the undifferentiated Tonalite geologic unit mapped at surface within the proposed project site was deposited during the Cretaceous period, well before human settlement of North America, and is not conducive to the burial and preservation of archaeological deposits. The age of the unit coupled with the relatively shallow soils and past disturbances associated with past agricultural activities indicates the proposed project site has a low potential to contain intact subsurface archaeological deposits. Therefore, the proposed project is not likely to directly impact unknown subsurface archaeological deposits.

Indirect Impacts

As a result of the historic topographic map and aerial review and cultural resources survey a residence meeting the OHP's 45-year-old consideration as a residential building located at 707 Morro Road was identified within 100 feet of the proposed project's northeastern boundary. The residence has not been previously documented as a cultural resource, nor has it been previously evaluated. Therefore, it has the potential to qualify as a historical resource pursuant to CEQA.

Construction of the proposed project would occur in direct view of the building's western and southern elevations, which constitute the back and side portions of the residence, and could result in indirect visual impacts to the building's integrity of setting and feeling. When the building was first constructed in the 1930s, the area around it was largely rural and used for agricultural purposes. However, the construction of residential subdivisions immediately east and north of the building during the 1980s have affected the building's visual setting and integrity, turning its surroundings from rural agricultural to residential. The proposed project's park would simply add to the existing residential setting. Moreover, the direct views of the proposed project from the residential building's western and southern elevations are obscured by landscaping within the residential parcel which includes mature trees and shrubs. These views would be further obscured by proposed project landscaping, including trees along the boundary between the proposed project parcel and the residential parcel. Therefore, no visual impacts affecting the integrity of the residential building will be introduced by proposed project implementation and no further work is recommended.

Summary and Recommendations

As a result of the archival research one historic address at 462 Golden Road (Mrs. Erle Stanly Gardner House) was identified by the SCIC records search, two prehistoric isolates (ESA-Fallbrook-ISO-001P and -002P) were identified as a result of the survey, and a residenital building at 707 Morro Road, within 100 feet of the proposed project's northeastern boudnary was identified as a result of the historic map and aerial review. No evidence of a building associated with the historic address identified by the SCIC could be found as a result of archival research or the cultural resources survey. Therefore, it is presumed the historic address was incorrectly mapped and the resource does not exist within the proposed project site, therefore no impacts to this identified resource would occur as a result of project implementation.

The two isolates identified in the propsed project site do not qualify as historical resources pursuant to CEQA due to their isolated nature and lack of data potenial. Therefore, impacts to these two resources are not considered significant and no further work is recommended.

The proposed project would not result in indirect visual impacts to the residence identifed as part of the historic map and aerial review at 707 Morro Road located, within 100 feet of the proposed project's northeastern boundary. The building's integrity of setting and feeling have been previously altered when residential subdivisions were consturcted north and east of the bulding in the 1980s. Construction of the proposed park woud simply add to the current residential setting of the building. Furthermore, existing mature landscaping within the residential parcel as well as landscaping to be installed as a result of the proposed project would obscure direct views of the proposed park from the building's western and southern elevations.

The subsurface archaeological sensitivity assessment indicates the proposed project has low sensitivity for the presence of intact subsurface archaeological deposits. Therefore, it is unlikely that proposed project implementation would encounter subsurface archaeological deposits that qualify as historical reosurces or unique archaeological resources. However, in the unlikely even that subsurface archaeological deposits are encountered, they may qualify as significant resources. As such, the County would be required to implement PDF-CUL-1 through PDF-CUL-4, as detailed above in Table 1, which includes the retention of a qualified archaeologist, cultural resources sensitivity training, and inadvertent discovery protcols. Implementation of the these PDFs would reduce potential project impacts to uknown subsurface archaeolgoical resources, should they be present, to less than signficiant.

Confidential Attachments

A – Records Search Results (Confidential – Bound Separately)
B – Native American Heritage Commission Correspondence
C – California Department of Parks and Recreation 523 Forms (Confidential – Bound Separately)
D – Confidential Figures (Confidential – Bound Separately)
Figure 6. Isolate Location Map

References

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Kennedy, Michael P. and Siang S. Tan. 2007. Geologic Map of the Oceanside 30’ x 60’ Quadrangle, California. USGS Digital Database.

Natural Resources Conservation Service (NRCS). 2020. Web Soil Service. Electronic resource, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed December 14, 2020.

Tan, Siang S., and Michael P. Kennedy, 2000, Geologic Map of the Temecula 7.5’ Quadrangle, San Diego and Riverside Counties, California. USGS Digital Database.

University of California, Santa Barbara (UCSB). 2020. Air Photos FrameFinder. Electronic resource, http://mil.library.ucsb.edu/ap_indexes/FrameFinder/, access December 14, 2020.

U.S. Department of the Interior, National Park Service. 2012, *Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation (As Amended and Annotated),* www.nps.gov/history/local- law/arch_stnds_0.htm, accessed December 14, 2020.

ATTACHMENT A

Records Search Results (Confidential – Bound Separately)

ATTACHMENT B

Native American Heritage Commission Correspondence

ESA
626 Wilshire Boulevard
Suite 1100
Los Angeles, CA 90017
213.599.4300 phone
213.599.4301 fax
www.esassoc.com

October 30, 2020

Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
FAX- 916-373-5471

Subject: **Sacred Lands File search request for the Fallbrook Local Park Project (D201700240.32)**

To whom it may concern:

Environmental Science Associates (ESA) has been retained by the San Diego County Department of Parks and Recreation (County) to conduct a cultural resources assessment for the Fallbrook Local Park Project (Project) in support of an ISMND being prepared pursuant to the California Environmental Quality (CEQA). The Project proposes the construction of a 6.8-acre park with amenities including picnic areas, a skate park, multi-use paths, playground equipment, nature play, a dog park, fitness stations, basketball courts, and a multi-sue field. As depicted in the attached map, the Project area is located in the unincorporated community of Fallbrook within San Diego County, in Section 19 of Township 9 South, Range 3 West on the Bonsall and Temecula, CA 7.5-minute topographic quadrangle.

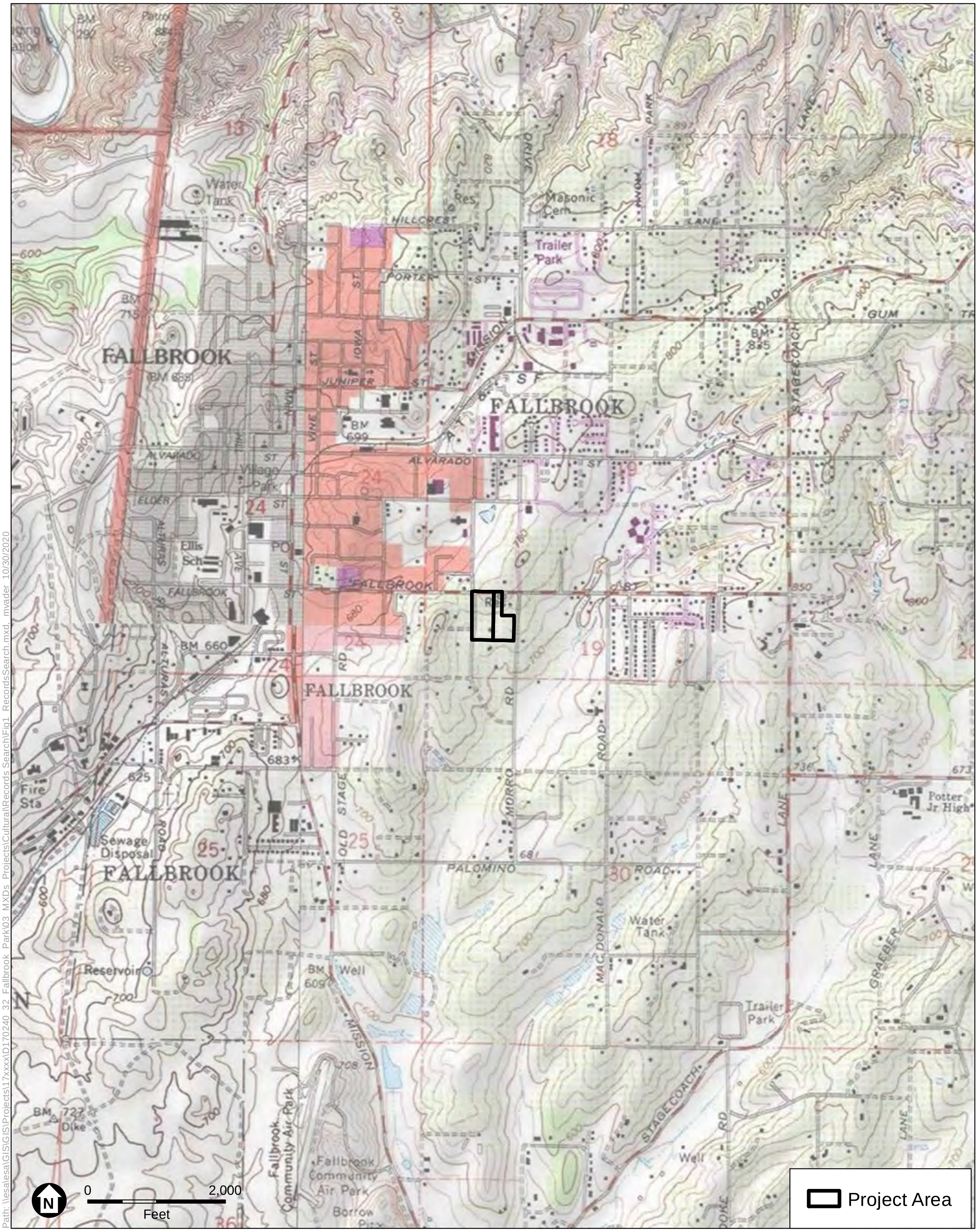
In an effort to provide an adequate appraisal of all potential effects to cultural resources that may result from the proposed Project, ESA is requesting that a records search be conducted for sacred lands or traditional cultural properties that may exist within the Project area.

Thank you for your time and cooperation regarding this matter. To expedite the delivery of search results, please fax them to 619.719.4201, or email them to mvader@esassoc.com. Please contact me at 619.241.9238 or at mvader@esassoc.com if you have any questions.

Sincerely,

M. Va

Michael Vader
Cultural Resources



Path: \\esalesa\GIS\GIS\Projects\17xxxx\D170240_32_Fallbrook_Park\03_MXDs_Projects\Cultural\Records Search\Fig1_RecordsSearch.mxd, mvader 10/30/2020

TOPO QUADS: Bonsall and Temecula 7.5-minute

Fallbrook Park

Figure 1
Records Search Map

ESA

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

December 15, 2020

Michael Vader
ESA

Via Email to: mvader@esassoc.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Fallbrook Local Park Project, San Diego County

Dear Mr. Vader:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measures.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
San Diego County
12/15/2020

Juaneno Band of Mission Indians Acjachemen Nation - Belardes
Matias Belardes, Chairperson
32161 Avenida Los Amigos — Juaneno
San Juan Capisttrano, CA, 92675
Phone: (949) 293 - 8522
kaamalam@gmail.com

La Jolla Band of Luiseno Indians
Fred Nelson, Chairperson
22000 Highway 76 — Luiseno
Pauma Valley, CA, 92061
Phone: (760) 742 - 3771

Pala Band of Mission Indians
Shasta Gaughen, Tribal Historic Preservation Officer
PMB 50, 35008 Pala Temecula Rd. — Cupeno, Luiseno
Pala, CA, 92059
Phone: (760) 891 - 3515
Fax: (760) 742-3189
sgaughen@palatribe.com

Pauma Band of Luiseno Indians
Temet Aguilar, Chairperson
P.O. Box 369 — Luiseno
Pauma Valley, CA, 92061
Phone: (760) 742 - 1289
Fax: (760) 742-3422
bennaecalac@aol.com

Pechanga Band of Luiseno Indians
Mark Macarro, Chairperson
P.O. Box 1477 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6000
Fax: (951) 695-1778
epreston@pechanga-nsn.gov

Rincon Band of Luiseno Indians
Bo Mazzetti, Chairperson
One Government Center Lane — Luiseno
Valley Center, CA, 92082
Phone: (760) 749 - 1051
Fax: (760) 749-5144
bomazzetti@aol.com

Rincon Band of Luiseno Indians
Cheryl Madrigal, Tribal Historic Preservation Officer
One Government Center Lane — Luiseno
Valley Center, CA, 92082
Phone: (760) 297 - 2635
crd@rincon-nsn.gov

San Luis Rey Band of Mission Indians
San Luis Rey, Tribal Council
1889 Sunset Drive — Luiseno
Vista, CA, 92081
Phone: (760) 724 - 8505
Fax: (760) 724-2172
cjmojado@slrmissionindians.org

Soboba Band of Luiseno Indians
Scott Cozart, Chairperson
P. O. Box 487 — Cahuilla, Luiseno
San Jacinto, CA, 92583
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

This list is current only as of the date of this document. 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 Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Fallbrook Local Park Project, San Diego County.

ATTACHMENT C

California Department of Parks and Recreation
523 Forms (Confidential – Bound Separately)

ATTACHMENT D

Confidential Figures (Confidential – Bound Separately)

Appendix D
Site Assessment and Mitigation Program Letter

ESA

County of San Diego

ELISE ROTHSCHILD
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 505-6700 or (800) 253-9933 Fax: (858) 514-6583
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

December 19, 2019

Ms. Mary Niez
County of San Diego
Department of Parks and Recreation
5500 Overland Avenue, #410
San Diego, California 92123

Dear Ms. Niez:

DEH2019-LSAM-000591 - COFD7717-00004
FALLBROOK ACTIVE PARK – BARR RANCH
530 GOLDEN ROAD, FALLBROOK 92028
APNS: 105-841-02-00 AND 03-00 (MINUS 1 ACRE INCLUDING THE HOUSE)

On December 9, 2019, the Department of Environmental Health (DEH), Site Assessment and Mitigation Program (SAM), received a *Request for Review of Transaction Screen and Phase I & II Assessment Information* from the Department of Parks and Recreation (DPR) requesting SAM's review and comments regarding the above-referenced parcels. DPR proposes the acquisition of approximately 6.8 acres of vacant land for active park use (herein referred to as the "Site").

SAM staff reviewed the Transaction Screen Questionnaires, the United States Environmental Protection Agency's Cleanup in My Community (CIMC) database, the State Water Resources Control Board's GeoTracker geographic information system, the Department of Toxic Substances Control EnviroStor database, the County of San Diego Accela database, and the County of San Diego Geographic Information System (GIS) to determine if there are environmental impacts or potential environmental impacts to the Site.

FINDINGS

TRANSACTION SCREEN QUESTIONNAIRE (TSQ)

TSQs were completed by Mr. Jonathan Reich, Managing Member of the Barr Ranch LLC, and Mr. Jake Enriquez, Region Manager for DPR. Only unanswered questions and responses of "Yes" on each TSQ will be discussed further. Mr. Reich answered "No" to all questions but did not answer Questions 22, 23, and 24. Mr. Enriquez answered "No" to all questions but did not answer Questions 22, 23, and 24.

Question 22 asked the following: *Do any of the following Federal government record systems list the property or any property within the circumference of the* area *note below:*

National Priorities List (NPL) - within 1.0 mile?

CERCLIS List - within 0.5 mile?

RCRA CORRACTS Facilities- within 1.0 mile?

RCRA non-CORRACTS TSD Facilities - within 0.5 mile?

Question 23 asked the following: *Do any of the following state record systems list the property or any property within the circumference of the area note below:*

List maintained by state environmental agency of hazardous waste sites identified for investigation or remediation that is the state agency equivalent to NPL - within 1.0 mile?

List maintained by state environmental agency of sites identified for investigation or remediation that is the state equivalent to CERCLIS- within 0.5 mile?

Leaking Underground Storage Tank (LUST) List- within 0.5 mile?

Solid Waste/Landfill Facilities- within 0.5 mile?

In relation to Questions 22 and 23 on the TSQ, SAM searched the CIMC, GeoTracker, and EnviroStor databases and verified that neither the Site nor properties within the specified circumferences are listed in the following Federal government record systems and their California equivalents: National Priorities List (1.0 mile), CERCLIS List (0.5 mile), RCRA CORRACTS Facilities (1.0 mile), and RCRA non-CORRACTS TSD Facilities (0.5 mile). SAM verified that there are no Waste/Landfill Facilities within 0.5 miles of the Site. There are five closed LUST or other environmental cases within 0.5 miles of the Site:

1. H32803-001 – Home Savings Bank of America, 1002 S. Main Avenue, Fallbrook. According to the closure summary for the case, groundwater beneath the Site was not impacted; therefore, no further inquiry regarding this question is necessary.

2. H32801-001 – East Bros Grove Serv (Back Lot), 218 E. Aviation Road, Fallbrook. According to the closure summary for the case, groundwater beneath the Site was not impacted; therefore, no further inquiry regarding this question is necessary.

3. H29202-001 – Kragen Auto Parts #1163, 812 Main Street, Fallbrook. According to the closure summary for the case, groundwater beneath the Site was not impacted; therefore, no further inquiry regarding this question is necessary.

4. H20440-001 – East Bros Grove Service Co., 112 E. Aviation Road, Fallbrook. According to the closure summary for the case, groundwater beneath the Site was not impacted; therefore, no further inquiry regarding this question is necessary.

5. H20440-002 – East Bros Grove Service Co., 112 E Aviation Road, Fallbrook. According to the closure summary for the case, groundwater beneath the Site was not impacted; therefore, no further inquiry regarding this question is necessary.

Question 24 asked the following: *Based upon a review of fire insurance maps or consultation with the local fire department serving the property, all as specified in the guide, are any buildings or other improvements on the property or on an adjoining property identified as having been used for an industrial use or uses likely to lead to contamination of the property?*

Question 24 relates to information contained in fire department records. No further inquiry regarding this question is necessary.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S CIMC DATABASE

The Site and adjoining properties are not listed on the CIMC database. There is one facility within one mile of the Site listed under the Toxic Release Inventory System. The Site is Grayson Controls Fallbrook Division. The address is unknown, but the facility was located between a half and one mile from the Site.

No further inquiry regarding the CIMC database is necessary.

STATE OF CALIFORNIA GEOTRACKER DATABASE

SAM searched the GeoTracker database and neither the Site nor properties within the specified circumference area are on the State agency equivalent to the NPL or CERCLIS. There are five closed LUST cases or other environmental cases within 0.5 miles of the Site that were discussed above.

Based on our review of these cases, no further inquiry regarding the GeoTracker database is necessary.

STATE OF CALIFORNIA ENVIROSTOR DATABASE

SAM searched the EnviroStor database and the Site is not on the State agency equivalent to the NPL, LUST or CERCLIS, and there are no solid waste/landfill facilities within 0.5 miles of the Site. There are five closed LUST or other environmental cases within 0.5 miles of the Site that were discussed above.

Based on our information, no further inquiry regarding the EnviroStor database is necessary.

COUNTY OF SAN DIEGO ACCELA DATABASE SEARCH

SAM's research of available databases indicates that there are no "Open" or "Closed" SAM cases, water supply well permits, or Hazardous Materials Division permits associated with the Site or on parcels adjacent to the Site.

No further inquiry regarding the Accela database is necessary.

COUNTY OF SAN DIEGO GIS SEARCH

The Site is open space. Adjacent properties are residential.

RECOMMENDATIONS

Based on the information reviewed regarding this due diligence environmental evaluation, SAM recommends no further investigation of the Site at this time.

LIMITATIONS

This letter does not relieve current or future property owners and/or facility operators of any liability under the California Health and Safety Code or Water Code for past, present, or future operations at the subject property. This letter does not relieve the current or future property owners and/or facility operators of the responsibility to clean up existing, additional, or previously unidentified conditions at the subject property which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Should the proposed use of the subject property change, the recommendations presented in this letter will no longer be valid and the subject property must be reevaluated accordingly.

If you have any questions, please do not hesitate to contact me at (858) 505-6969.

Sincerely,

James Clay

JAMES CLAY, Environmental Health Specialist III
Site Assessment and Mitigation Program

Appendix E
Noise Calculations

Roadway Traffic Noise - Existing

Street	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL) Existing	Existing with Project	Increase over Existing	Significant Impact?
Fallbrook St w/o Potter St/Golden Rd	Residential/Commercial	70.0	70.0	0.0	No
Fallbrook St between Potter St/Golden Rd and Shady Glen Dr	Residential	69.7	69.7	0.0	No
Fallbrook St between Shady Glen Dr and Morro Rd	Residential	69.6	69.7	0.0	No
Fallbrook St e/o Morro Rd	Residential	69.4	69.4	0.0	No
Potter St n/o Fallbrook St	Residential	58.3	58.3	0.0	No
Golden Rd s/o Fallbrook St	Residential/Commercial	52.1	52.1	0.0	No
Shady Glen Dr n/o Fallbrook St	Residential	51.9	52.0	0.1	No
Morro Rd n/o Fallbrook St	Residential	50.4	50.4	0.0	No
Morro Rd s/o Fallbrook St	Residential	55.8	55.8	0.0	No

Roadway Traffic Noise - Future

Street	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL) Near Term (2022)	Near Term (2022) with Project	Increase over Existing	Significant Impact?
Fallbrook St w/o Potter St/Golden Rd	Residential/Commercial	70.1	70.2	0.1	No
Fallbrook St between Potter St/Golden Rd and Shady Glen Dr	Residential	69.8	69.8	0.1	No
Fallbrook St between Shady Glen Dr and Morro Rd	Residential	69.7	69.8	0.1	No
Fallbrook St e/o Morro Rd	Residential	69.5	69.5	0.1	No
Potter St n/o Fallbrook St	Residential	58.6	58.6	0.0	No
Golden Rd s/o Fallbrook St	Residential/Commercial	52.9	52.9	0.0	No
Shady Glen Dr n/o Fallbrook St	Residential	52.1	52.7	0.6	No
Morro Rd n/o Fallbrook St	Residential	50.4	50.4	0.0	No
Morro Rd s/o Fallbrook St	Residential	55.9	55.9	0.0	No

Roadway Traffic Noise - Cumulative

Street	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL) Existing	Future Year (2025) with Project	Increase over Existing	Significant Impact?	Project Increment
Fallbrook St w/o Potter St/Golden	Residential/Commercial	70.0	70.2	0.1	No	0.1
Fallbrook St between Potter St/Go	Residential	69.7	69.8	0.1	No	0.1
Fallbrook St between Shady Glen	Residential	69.6	69.8	0.1	No	0.1
Fallbrook St e/o Morro Rd	Residential	69.4	69.5	0.1	No	0.1
Potter St n/o Fallbrook St	Residential	58.3	58.6	0.2	No	0.0
Golden Rd s/o Fallbrook St	Residential/Commercial	52.1	52.9	0.8	No	0.0
Shady Glen Dr n/o Fallbrook St	Residential	51.9	52.7	0.8	No	0.6
Morro Rd n/o Fallbrook St	Residential	50.4	50.4	0.0	No	0.0
Morro Rd s/o Fallbrook St	Residential	55.8	55.9	0.1	No	0.0

TRAFFIC NOISE ANALYSIS TOOL

Fallbrook Local Park
Existing
Chen Ryan
Associates

	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Fallbrook St w/o Potter St/Golden Rd	Hard	30	40	35	35	1278	27	14	69.7	70.0
Fallbrook St between Potter St/Golden Rd and Shady Glen Dr	Hard	30	40	35	35	1177	25	13	69.4	69.7
Fallbrook St between Shady Glen Dr and Morro Rd	Hard	30	40	35	35	1168	25	13	69.3	69.6
Fallbrook St e/o Morro Rd	Hard	30	40	35	35	1114	23	12	69.1	69.4
Potter St n/o Fallbrook St	Hard	30	25	25	25	234	5	3	58.0	58.3
Golden Rd s/o Fallbrook St	Hard	30	25	25	25	47	1	1	51.8	52.1
Shady Glen Dr n/o Fallbrook St	Hard	30	25	25	25	44	1	1	51.6	51.9
Morro Rd n/o Fallbrook St	Hard	30	25	25	25	15	1	1	50.1	50.4
Morro Rd s/o Fallbrook St	Hard	30	25	25	25	115	3	2	55.5	55.8

TRAFFIC NOISE ANALYSIS TOOL

Fallbrook Local Park
Existing + Project
Chen Ryan
Associates

	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Fallbrook St w/o Potter St/Golden Rd	Hard	30	40	35	35	1282	27	14	69.7	70.0
Fallbrook St between Potter St/Golden Rd and Shady Glen Dr	Hard	30	40	35	35	1181	25	13	69.4	69.7
Fallbrook St between Shady Glen Dr and Morro Rd	Hard	30	40	35	35	1173	25	13	69.4	69.7
Fallbrook St e/o Morro Rd	Hard	30	40	35	35	1119	24	12	69.1	69.4
Potter St n/o Fallbrook St	Hard	30	25	25	25	234	5	3	58.0	58.3
Golden Rd s/o Fallbrook St	Hard	30	25	25	25	47	1	1	51.8	52.1
Shady Glen Dr n/o Fallbrook St	Hard	30	25	25	25	46	1	1	51.7	52.0
Morro Rd n/o Fallbrook St	Hard	30	25	25	25	15	1	1	50.1	50.4
Morro Rd s/o Fallbrook St	Hard	30	25	25	25	115	3	2	55.5	55.8

TRAFFIC NOISE ANALYSIS TOOL

Fallbrook Local Park
Near Term (2022)
Chen Ryan Associates

	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Fallbrook St w/o Potter St/Golden Rd	Hard	30	40	35	35	1318	28	14	69.8	70.1
Fallbrook St between Potter St/Golden Rd and Shady Glen Dr	Hard	30	40	35	35	1214	26	13	69.5	69.8
Fallbrook St between Shady Glen Dr and Morro Rd	Hard	30	40	35	35	1201	25	13	69.4	69.7
Fallbrook St e/o Morro Rd	Hard	30	40	35	35	1149	24	12	69.2	69.5
Potter St n/o Fallbrook St	Hard	30	25	25	25	244	6	3	58.3	58.6
Golden Rd s/o Fallbrook St	Hard	30	25	25	25	53	2	1	52.6	52.9
Shady Glen Dr n/o Fallbrook St	Hard	30	25	25	25	48	1	1	51.8	52.1
Morro Rd n/o Fallbrook St	Hard	30	25	25	25	15	1	1	50.1	50.4
Morro Rd s/o Fallbrook St	Hard	30	25	25	25	120	3	2	55.6	55.9

TRAFFIC NOISE ANALYSIS TOOL

Fallbrook Local Park
Near Term (2022) + Project
Chen Ryan Associates

	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Fallbrook St w/o Potter St/Golden Rd	Hard	30	40	35	35	1322	28	14	69.9	70.2
Fallbrook St between Potter St/Golden Rd and Shady Glen Dr	Hard	30	40	35	35	1218	26	13	69.5	69.8
Fallbrook St between Shady Glen Dr and Morro Rd	Hard	30	40	35	35	1206	25	13	69.5	69.8
Fallbrook St e/o Morro Rd	Hard	30	40	35	35	1154	24	12	69.2	69.5
Potter St n/o Fallbrook St	Hard	30	25	25	25	244	6	3	58.3	58.6
Golden Rd s/o Fallbrook St	Hard	30	25	25	25	53	2	1	52.6	52.9
Shady Glen Dr n/o Fallbrook St	Hard	30	25	25	25	50	2	1	52.4	52.7
Morro Rd n/o Fallbrook St	Hard	30	25	25	25	15	1	1	50.1	50.4
Morro Rd s/o Fallbrook St	Hard	30	25	25	25	120	3	2	55.6	55.9

Summary

File Name on Meter	R1
File Name on PC	SLM_0004983_LxT_Data_099.01.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Fallbrook Local Park
Job Description	
Note	

Measurement

Description	
Start	2020-12-01 08:13:58
Stop	2020-12-01 08:28:58
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-12-01 08:08:22
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamp	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	144.7 dB		
	A	**C**	**Z**
Under Range Peak	**100.9**	97.9	102.9 dB
Under Range Limit	**49.9**	47.9	55.9 dB
Noise Floor	36.8	37.4	45.0 dB

Results

LAseq	68.6 dB	
LASE	98.1 dB	
EAS	722.281 µPa²h	
EAS8	23.113 mPa²h	
EAS40	115.565 mPa²h	
LApeak (max)	2020-12-01 08:21:15	94.3 dB
LASmax	2020-12-01 08:21:16	78.6 dB
LASmin	2020-12-01 08:19:29	45.0 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s
LCseq	72.3 dB	
LAseq	68.6 dB	
LCseq - LAseq	3.8 dB	
LAIeq	70.2 dB	
LAeq	68.6 dB	
LAIeq - LAeq	1.6 dB	

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	68.6					
LS(max)	78.6	2020/12/01 8:21:16				
LS(min)	45.0	2020/12/01 8:19:29				
LPeak(max)	94.3	2020/12/01 8:21:15				

# Overloads	0
Overload Duration	0.0 s

Summary	
File Name on Meter	R2
File Name on PC	SLM_0004983_LxT_Data_100.01.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Fallbrook Local Park
Job Description	
Note	

Measurement	
Description	
Start	2020-12-01 08:30:21
Stop	2020-12-01 08:45:21
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-12-01 08:08:20
Post Calibration	None
Calibration Deviation	---

Overall Settings				
RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.7 dB			
	A	**C**	**Z**	
Under Range Peak	**100.9**	97.9	102.9	dB
Under Range Limit	**49.9**	47.9	55.9	dB
Noise Floor	36.8	37.4	45.0	dB

Results		
LASeq	45.7 dB	
LASE	75.3 dB	
EAS	3.750 µPa²h	
EAS8	120.007 µPa²h	
EAS40	600.033 µPa²h	
LApeak (max)	2020-12-01 08:44:52	102.5 dB
LASmax	2020-12-01 08:44:52	65.4 dB
LASmin	2020-12-01 08:34:00	36.4 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s
LCSeq	61.1 dB	
LASeq	45.7 dB	
LCSeq - LASeq	15.3 dB	
LAIeq	52.8 dB	
LAeq	45.7 dB	
LAIeq - LAeq	7.1 dB	

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	45.7					
LS(max)	65.4	2020/12/01 8:44:52				
LS(min)	36.4	2020/12/01 8:34:00				
LPeak(max)	102.5	2020/12/01 8:44:52				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R3
File Name on PC	SLM_0004983_LxT_Data_101.01.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Fallbrook Local Park
Job Description	
Note	

Measurement

Description	
Start	2020-12-01 08:48:10
Stop	2020-12-01 09:03:10
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-12-01 08:08:20
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamp	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	144.7 dB		
	A	**C**	**Z**
Under Range Peak	**100.9**	97.9	102.9 dB
Under Range Limit	**49.9**	47.9	55.9 dB
Noise Floor	36.8	37.4	45.0 dB

Results

LASeq	51.4 dB	
LASE	80.9 dB	
EAS	13.791 µPa²h	
EAS8	441.317 µPa²h	
EAS40	2.207 mPa²h	
LApeak (max)	2020-12-01 08:58:20	82.4 dB
LASmax	2020-12-01 08:56:44	69.0 dB
LASmin	2020-12-01 08:54:31	37.6 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	61.9 dB
LASeq	51.4 dB
LCSeq - LASeq	10.5 dB
LAIeq	53.3 dB
LAeq	51.4 dB
LAIeq - LAeq	1.9 dB

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	51.4					
LS(max)	69.0	2020/12/01 8:56:44				
LS(min)	37.6	2020/12/01 8:54:31				
LPeak(max)	82.4	2020/12/01 8:58:20				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R4
File Name on PC	SLM_0004983_LxT_Data_102.01.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Fallbrook Local Park
Job Description	
Note	

Measurement

Description	
Start	2020-12-01 09:05:54
Stop	2020-12-01 09:20:54
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-12-01 08:08:20
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamp	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	144.7 dB		
	A	**C**	**Z**
Under Range Peak	**100.9**	97.9	102.9 dB
Under Range Limit	**49.9**	47.9	55.9 dB
Noise Floor	36.8	37.4	45.0 dB

Results

LASeq	40.5 dB	
LASE	70.1 dB	
EAS	1.126 µPa²h	
EAS8	36.021 µPa²h	
EAS40	180.105 µPa²h	
LApeak (max)	2020-12-01 09:08:30	77.0 dB
LASmax	2020-12-01 09:07:53	49.7 dB
LASmin	2020-12-01 09:19:11	36.5 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s
LCSeq	55.9 dB	
LASeq	40.5 dB	
LCSeq - LASeq	15.4 dB	
LAIeq	43.7 dB	
LAeq	40.5 dB	
LAIeq - LAeq	3.2 dB	

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	40.5					
Ls(max)	49.7	2020/12/01 9:07:53				
Ls(min)	36.5	2020/12/01 9:19:11				
LPeak(max)	77.0	2020/12/01 9:08:30				

# Overloads	0
Overload Duration	0.0 s

Summary	
File Name on Meter	R5
File Name on PC	SLM_0004983_LxT_Data_103.01.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Fallbrook Local Park
Job Description	
Note	

Measurement	
Description	
Start	2020-12-01 09:25:36
Stop	2020-12-01 09:40:36
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-12-01 08:08:20
Post Calibration	None
Calibration Deviation	---

Overall Settings			
RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamp	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	144.7 dB		
	A	**C**	**Z**
Under Range Peak	**100.9**	97.9	102.9 dB
Under Range Limit	**49.9**	47.9	55.9 dB
Noise Floor	36.8	37.4	45.0 dB

Results		
LAseq	51.0 dB	
LASE	80.5 dB	
EAS	12.493 µPa²h	
EAS8	399.771 µPa²h	
EAS40	1.999 mPa²h	
LApeak (max)	2020-12-01 09:36:47	88.4 dB
LASmax	2020-12-01 09:39:34	67.8 dB
LASmin	2020-12-01 09:27:44	32.6 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s
LCseq	59.7 dB	
LAseq	51.0 dB	
LCseq - LAseq	8.7 dB	
LAIeq	54.0 dB	
LAeq	50.8 dB	
LAIeq - LAeq	3.2 dB	

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	50.8					
LS(max)	67.8	2020/12/01 9:39:34				
LS(min)	32.6	2020/12/01 9:27:44				
LPeak(max)	88.4	2020/12/01 9:36:47				

# Overloads	0
Overload Duration	0.0 s

Appendix F
LMA Memorandum

Fallbrook Community Park

REGISTERED PROFESSIONAL ENGINEER
PHUONG H. NGUYEN
TR 2660
EXP. 03/31/2022
TRAFFIC
STATE OF CALIFORNIA

RevisedLocal Mobility Analysis

July 2021

Prepared by

C+R

3900 Fifth Avenue, Suite 310
San Diego, CA 92103

ES.1 Project Setting

The Proposed Project will construct a new 6.8-acre local park within the Fallbrook Community Planning Area of the Unincorporated portions of the County of San Diego. The Proposed Project is located on Fallbrook Street, between Golden Road and Morro Road and approximately ¼ mile from the Fallbrook Community Center. The project site previously served as a nursery and is adjacent to rural residential and agricultural uses. Potential amenities included within the Proposed Project include picnic areas, skate park elements, multi-use path, playground equipment, nature play, a dog park, fitness stations, a basketball court, and a multi-use field.

Trip generation rates for the Proposed Project were derived from SANDAG's *(not so) Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region* (April 2002). Trip generation calculations are provided in Chapter 3. The Proposed Project is anticipated to generate a total of 136 daily trips, including 6 trips (3-in / 3-out) during the AM peak hour and 11 trips (5-in / 6-out) during the PM peak hour.

Access to the Proposed Project will be via a new driveway that would be constructed as the south leg of the intersection of Shady Glen Road and East Fallbrook Street. The Proposed Project driveway will be configured to provide one inbound lane and one outbound lane.

The following three (3) intersections were analyzed in the study:

<u>Intersections</u>

1. Potters Street / Golden Road & Fallbrook Street (SSSC)
2. Shady Glen Road & Fallbrook Street (SSSC)
3. Morro Road & Fallbrook Street (SSSC)

ES.2 Analysis Summary

Although a Local Mobility Analysis (LMA) is not required per the recently adopted County of San Diego Transportation Study Guidelines (TSG), to address community concerns regarding traffic, this LMA serves to evaluate the effect the Proposed Project will have on the surrounding local transportation network as well as determine if additional improvements to the transportation network will be needed. LMA results are discussed in Chapters 4 and 5 of this report. Consistent with the County of San Diego TSG, level of service (LOS) D is considered acceptable for roadway segments and intersections. **Table ES.1** displays the intersection LOS results for each of the study scenario analyzed.

Table ES.1 Summary of Intersection LOS Results

#	Intersection	Control Type	Peak Hour	Existing		Near-Term		Near-Term with Project	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	Potters Street / Golden Road & Fallbrook Street	SSSC	AM	27.0	D	30.0	D	30.0	D
			PM	51.5	**F**	65.2	**F**	65.2	**F**
2	Shady Glen Road & Fallbrook Street	SSSC	AM	13.6	B	13.9	B	21.9	C
			PM	14.1	B	14.5	B	23.7	C
3	Morro Road & Fallbrook Street	SSSC	AM	25.4	D	27.2	D	27.4	D
			PM	38.4	**E**	41.8	**E**	42.6	**E**

Notes:
Bold letter indicates substandard LOS E or F.
SSSC = Side-Street Stop-Controlled. For SSSC, the delay shown is the worst delay experienced by any of the approaches (minor street).

As shown in Table ES.1, the following two (2) study intersections are projected to operate at substandard LOS E or F under Near-Term Year 2022 Base with Project conditions:

1. *Potters Street/Golden Road & Fallbrook Street* – LOS F during the PM peak hour.
3. *Morro Road & Fallbrook Street* – LOS E during the PM peak hour.

Based on the standards outlined in Section 2.4, the addition of Proposed Project traffic would not cause substantial traffic effects. The substandard operations described above are primarily due to the existing high volumes of traffic in the eastbound and westbound directions, causing delays for the minor movements along Potter Street, Golden Road, and Morro Road. To improve level of service operations, the project applicant may consider installing stops signs or traffic signals along the corridor. Evaluation of all-way stop-control guidelines and traffic signal warrant analyses is provided in Section 5.5 of this report.

ES.3 Site Access

The Proposed Project will be located south of Fallbrook Street, east of Golden Road, and west of Morro Road, within the unincorporated community of Fallbrook, in San Diego County. Project access will be provided via the following one (1) driveway:

- Shady Glen Road / Project Driveway & Fallbrook Street – This driveway would be constructed as the south leg of the existing intersection of Shady Glen Road and Fallbrook Street and would allow for full-access with one inbound lane and one outbound lane.

As shown in Table ES.1, the project driveway is projected to operate at LOS D or better during both the AM and PM peak hours with the addition of Proposed Project traffic under Near-Term Year 2022 Base with Project conditions. However, due to community concerns regarding existing traffic conditions along Fallbrook Street, intersection control modifications at this intersection were evaluated.

Table ES.2 compares the intersection LOS and average vehicle delay results for three types of intersection control: (1) side-street stop-control, (2) all-way stop-control, (3) traffic signal.

Table ES.2 Intersection Control Evaluation – Peak Hour Intersection LOS Results

#	Intersection	Control Type	AM Peak Hour		PM Peak Hour	
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
2	Shady Glen Road / Project Driveway & Fallbrook Street	SSSC	21.9	C	23.7	C
		AWSC	24.4	C	36.6	**E**
		Signalized	14.4	B	16.4	B

Notes:
Bold letter indicates substandard LOS E or F.
SSSC = Side-Street Stop-Controlled. For SSSC, the delay shown is the worst delay experienced by any of the approaches.
AWSC = All-Way Stop-Controlled. For AWSC, the delay shown is the average delay for all approaches.

As shown in Table ES.2, only the all-way stop-control option would result in substandard LOS operations, which would occur during the PM peak hour. To better understand traffic operations for each type of intersection control, a queue analysis was conducted and the 95th percentile queues were compared. Given the proximity of the project driveway to the intersections of Potters Street/Golden Road & Fallbrook Street and Morro Road & Fallbrook Street, it was deemed appropriate to evaluate the eastbound and westbound approaches to identify queues at the project driveway that extend past these intersections. Table ES.3 displays the 95th percentile queues for the three types of intersection control under evaluation.

Table ES.3 Intersection Control Evaluation – Queue Analysis Results

#	Intersection	Turning Movement	Available Storage Length	Peak Hour	SSSC 95th Queue	SSSC Excess	AWSC 95th Queue	AWSC Excess	Signalized 95th Queue	Signalized Excess
2	Shady Glen Road / Project Driveway & Fallbrook Street	EBL	175	AM	0	0	0	0	25	0
				PM	25	0	25	0	25	0
		EBT	175	AM	0	0	225	**50**	200	**25**
				PM	0	0	350	**175**	250	**75**
		WBL	300	AM	0	0	0	0	25	0
				PM	0	0	0	0	25	0
		WBT	300	AM	0	0	250	0	225	0
				PM	0	0	300	0	250	0

As shown in Table 6.2, the options of all-way stop-control and traffic signal would cause eastbound queues that extend past the intersection of Potters Street/Golden Road & Fallbrook Street. Due to these extensive queues, "Keep Clear" zones would have to be implemented to prevent traffic from blocking the intersection of Potters Street/Golden Road & Fallbrook Street.

Based on these preliminary results and taking into consideration community concerns regarding existing traffic conditions, it is concluded that all-way stop-control may not align with community expectations. However, a traffic signal would result in extensive queue for the eastbound approach. Thus, due to vertical sight distance concerns and the extensive queue, a signal is not recommended for this intersection. In order to increase pedestrian awareness, a Rectangular Rapid-Flashing Beacons (RRFB) and high visibility crosswalk is recommended at the intersection of Shady Glen Road / Project Driveway & Fallbrook Street. The RRFB and high visibility crosswalk should be designed to the County of San Diego standards.

Table of Contents

List of Tables

List of Figures

Appendices

Appendix A	Traffic Counts & Growth Calculations
Appendix B	Excerpt of County of San Diego Transportation Study Guidelines
Appendix C	Peak Hour Intersection Capacity Worksheets Existing Conditions
Appendix D	Peak Hour Intersection Capacity Worksheets Near-Term Year 2022 Base Conditions
Appendix E	Peak Hour Intersection Capacity Worksheets Near-Term Year 2022 Base with Project Conditions
Appendix F	All-Way Stop-Control Warrant and Traffic Signal Warrant Analyses
Appendix G	County of San Diego Active Transportation Plan
Appendix H	Fallbrook Community Trails and Pathway Plan

1.0 Introduction

Consistent with the recently adopted County of San Diego Traffic Study Guidelines (TSG), the Proposed Project is exempt from conducting a Local Mobility Analysis (LMA) since it will not likely generate more than 250 vehicle trips. However, to address community concerns regarding traffic, this LMA serves to evaluate the effect the Proposed Project will have on the surrounding local transportation network as well as determine if additional improvements to the transportation network will be needed.

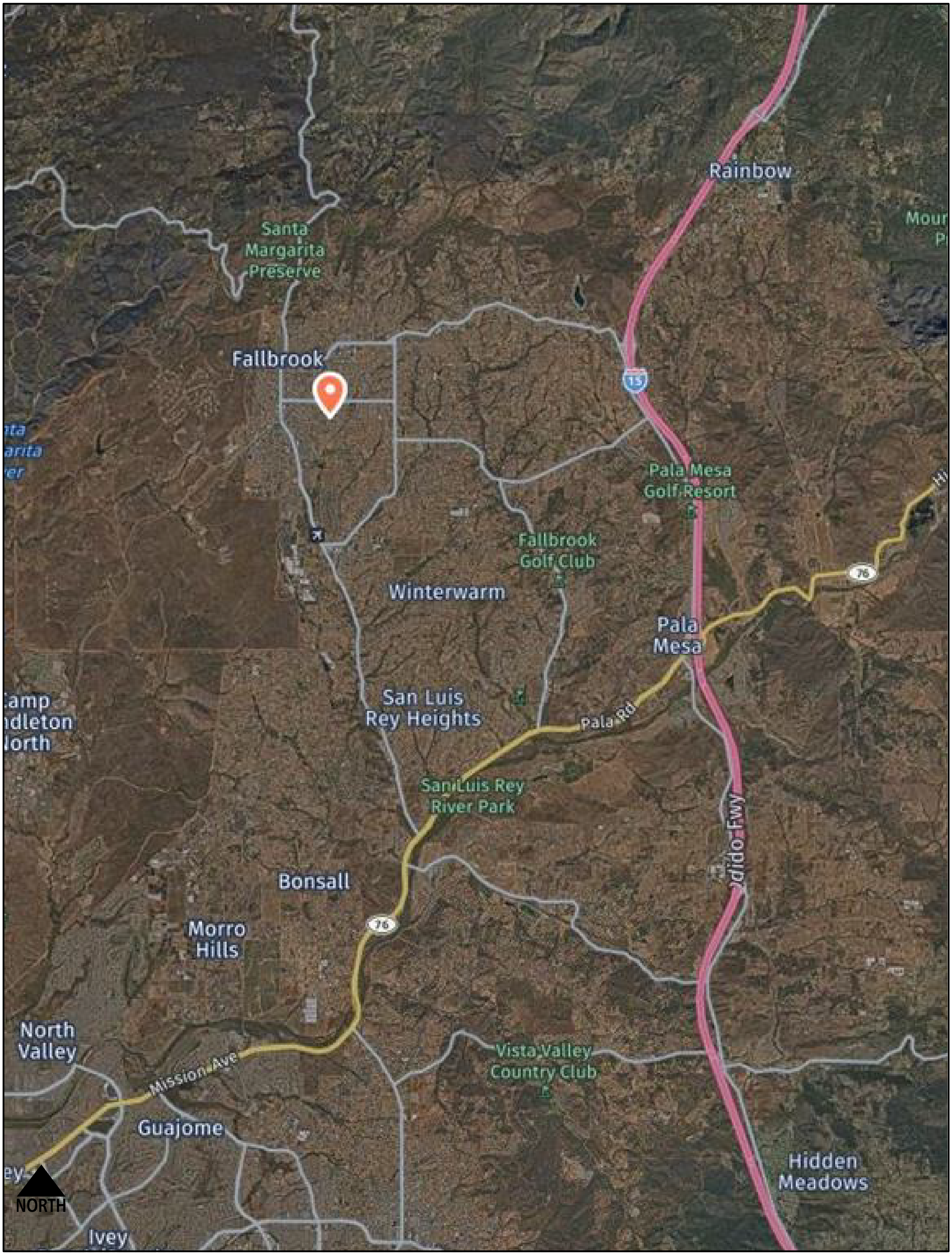
1.1 Project Background

The Proposed Project will construct a new 6.8-acre local park within the Fallbrook Community Planning Area of the Unincorporated portions of the County of San Diego. The Proposed Project is located on Fallbrook Street, between Golden Road and Morro Road and approximately ¼ mile from the Fallbrook Community Center. The project site previously served as a nursery and is adjacent to rural residential and agricultural uses. Potential amenities within the Proposed Project include picnic areas, skate park elements, multi-use path, playground equipment, nature play, dog park, fitness stations, basketball court, and multi-use field. **Figure 1.1** displays the Proposed Project's location.

Access to the Proposed Project is proposed via a new driveway that would be constructed as the south leg of the intersection of Shady Glen Road and East Fallbrook Street. The project driveway would be configured to provide one inbound lane and one outbound lane. **Figure 1.2** displays the Proposed Project site plan.

Table 1.1 Project Amenities

Amenity	Linear Feet	Total Area (Square Feet)
Play Area	-	33,748
Open Field	-	53,822
Off-Leash Dog Zone	-	22,040
Soft Surface Trails and Native Gardens	594	-
Multiuse Path	2,430	-
Skate Elements	-	20,160
Multisport Courts	-	8,960
Total	3,024	134,122



Fallbrook Community Park
Local Mobility Analysis
CHEN RYAN

Figure 1.1
Project Regional Location

Figure 1.2
Proposed Project Site Plan

1.2 Report Organization

Following this introduction chapter, this report is organized into the following sections:

2.0 *Analysis Methodology* – This chapter describes the methodologies and standards utilized to analyze the intersection traffic conditions.

3.0 *Project Description* – This chapter describes the Proposed Project including project trip generation, trip distribution, trip assignment, and study area.

4.0 *Existing Conditions* – This chapter describes and evaluates the existing transportation network. The operations of the vehicular facilities within the study area are evaluated and substandard facilities are identified. Level of Service (LOS) analysis results are also provided for existing vehicular traffic conditions.

5.0 *Near-Term Year 2022 Base Traffic Conditions* – This chapter describes and evaluates the effect in which near-term developments, that are anticipated to contribute trips within the project study area, will have on the surrounding network. Since no near-term developments were identified in the vicinity of the Proposed Project, an annual growth rate was used to estimate traffic volumes for the year 2022, the Proposed Project's opening year. LOS analysis results are provided for Near-Term Year 2022 Base and Near-Term Year 2022 with Project vehicular traffic conditions. The necessary features recommended to improve any identified substandard facilities to acceptable levels are also provided.

6.0 *Site Access and Parking* – This chapter addresses site access, including the results of a sight distance analysis conducted for the project driveway, as well as parking provided.

7.0 *Pedestrian, Bicycle, Transit, and Trail Assessment* – This chapter discusses the Proposed Project site's alternative transportation modes (walking, bicycling, and transit).

2.0 Analysis Methodology

This LTA was performed in accordance with the requirements of the recently adopted County of San Diego TSG. Detailed information on roadway and intersection analysis methodologies, standards, and thresholds are discussed in the following sections.

2.1 Level of Service Definition

Level of Service (LOS) is a quantitative measure describing operational conditions within a traffic stream, and the motorist's and/or passengers' perception of operations. A LOS definition generally describes these conditions in terms of such factors as delay, speed, travel time, freedom to maneuver, interruptions in traffic flow, queuing, comfort, and convenience. **Table 2.1** describes generalized definitions of the various LOS categories (A through F) as applied to roadway operations.

Table 2.1 Level of Service Definitions

LOS Category	Definition of Operation
A	This LOS represents a completely free-flow condition, where the operation of vehicles is virtually unaffected by the presence of other vehicles and only constrained by the geometric features of the highway and by driver preferences.
B	This LOS represents a relatively free-flow condition, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.
C	At this LOS the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles.
D	At this LOS, the ability to maneuver is notably restricted due to traffic congestion, and only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
E	This LOS represents operations at or near capacity. LOS E is an unstable level, with vehicles operating with minimum spacing for maintaining uniform flow. At LOS E, disruptions cannot be dissipated readily thus causing deterioration down to LOS F.
F	At this LOS, forced or breakdown of traffic flow occurs, although operations appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

Source: Highway Capacity Manual 6th Edition

2.2 Peak Hour Intersection Level of Service Standards and Thresholds

This section presents the methodologies used to perform peak hour intersection capacity analysis for signalized intersections and unsignalized intersections. The following assumptions were utilized in conducting all intersection level of service analysis:

- *Peak Hour Factor*: Based on existing peak hour counts conducted in October 2020 by National Data & Surveying Services (NDS) and included in **Appendix A**.

2.2.1 Signalized Intersection Analysis

The analysis of signalized intersections utilized the operational analysis procedure as outlined in the Highway Capacity Manual (HCM) 6th Edition signalized intersection analysis methodology. This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane (VPHPL) as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage trucks) and shared lane movements (i.e. through and right-turn movements originating from the same lane). The LOS criteria used for the analysis of signalized intersections are described in Table 2.2, identifying the thresholds of control delays and the associated LOS. The computerized analysis of intersection operations was performed utilizing the Synchro Version 10 traffic analysis software by Trafficware Ltd.

Table 2.2 Signalized Intersection LOS Operational Analysis

Average Stopped Delay Per Vehicle	Level of Service (LOS) Characteristics
≤10	*LOS A* describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
>10 – 20	*LOS B* describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
>20 – 35	*LOS C* describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
>35 – 55	*LOS D* describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.
>55 – 80	*LOS E* is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences.
>80	*LOS F* describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the LOS D capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.

Source: Highway Capacity Manual 6th Edition

2.2.2 Unsignalized Intersection Analysis

Unsignalized intersections, including side street and all way stop controlled intersections, were analyzed using the Highway Capacity Manual 6th Edition unsignalized intersection analysis methodology. The Synchro Version 10 traffic analysis software supports this methodology and was utilized to produce LOS results. The LOS for a side street stop controlled (SSSC) intersection is determined by the computed control delay and is defined for each minor movement. **Table 2.3** summarizes the LOS criteria for unsignalized intersections.

Table 2.3 LOS Criteria for Stop-Controlled Unsignalized Intersections

Average Stopped Delay Per Vehicle (sec/veh)	LOS
<10	A
>10 to <15	B
>15 to <25	C
>25 to <35	D
>35 to <50	E
>50	F

Source: Highway Capacity Manual 6th Edition

2.3 Determination of Study Area

The County of San Diego TSG require that the project study area include roadways and intersections based on the consistency with the General Plan, forecasted daily project trips, and the criteria listed in Table 2.4.

Table 2.4 Project Study Area Requirements

	Focused LMA	Full LMA
Land Use Consistent with General Plan	**250-499 Daily Trips** Site Access driveways and intersections that receive 50% or more of the total peak hour project generated trips (25 trip minimum) or have known operational concerns	**500 or greater Daily Trips** Site Access driveways and intersections where at least 50 project peak hour trips are added or have known operational concerns (if the project does not contribute 50 peak hour trips total to any intersection, then the study intersections will be intersections that receive 50% or more of the total peak hour project generated trips)
Land Use Inconsistent with General Plan	N/A	**250 or greater Daily Trips** Site Access driveways and intersections where at least 25 project peak hour trips are added or have known operational concerns

Note:
A roadway segment assessment may be appropriate and requested by County staff.

2.4 Determination of Need for Improvements

If a project is determined to cause a substantial traffic effect, then it is required to improve traffic operations to the extents feasible per the recommendations in the County of San Diego TSG. An excerpt of the recommended improvements to be considered is provided in Appendix B.

3.0 Project Traffic

This section describes the Proposed Project including the project's trip generation, trip distribution, and trip assignment.

3.1 Project Description

The Proposed Project will construct a new 6.8-acre local park within the Fallbrook Community Planning Area of the Unincorporated portions of the County of San Diego. The Proposed Project is located on Fallbrook Street, between Golden Road and Morro Road and approximately ¼ mile from the Fallbrook Community Center. The project site previously served as a nursery and is adjacent to rural residential and agricultural uses. Potential amenities proposed by the Proposed Project include picnic areas, skate park elements, multi-use path, playground equipment, nature play, dog park, fitness stations, basketball court, and multi-use field.

3.2 Project Trip Generation, Distribution, and Assignment

3.2.1 Project Trip Generation

Trip generation rates for the Proposed Project were derived from SANDAG's *(not so) Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region* (April 2002). It should be noted the Proposed Project would primarily serve the local community of Fallbrook, however, as a conservative approach Regional Park was selected for trip generation purposes. Although the project site previously served as a nursery, the project site is currently inactive open space; therefore, no existing trips were credited towards the project's net vehicle trip generation.

Table 3.1 displays the projected daily, as well as AM and PM peak hour, project trip generation.

Table 3.1 Project Trip Generation

Land Use	Units	Trip Rate	ADT	AM Peak Hour					PM Peak Hour				
				%	Trips	Split	In	Out	%	Trips	Split	In	Out
Regional Park	6.8 acres	20 / acre	136	4%	6	5:5	3	3	8%	11	5:5	5	6

Source: SANDAG (not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002

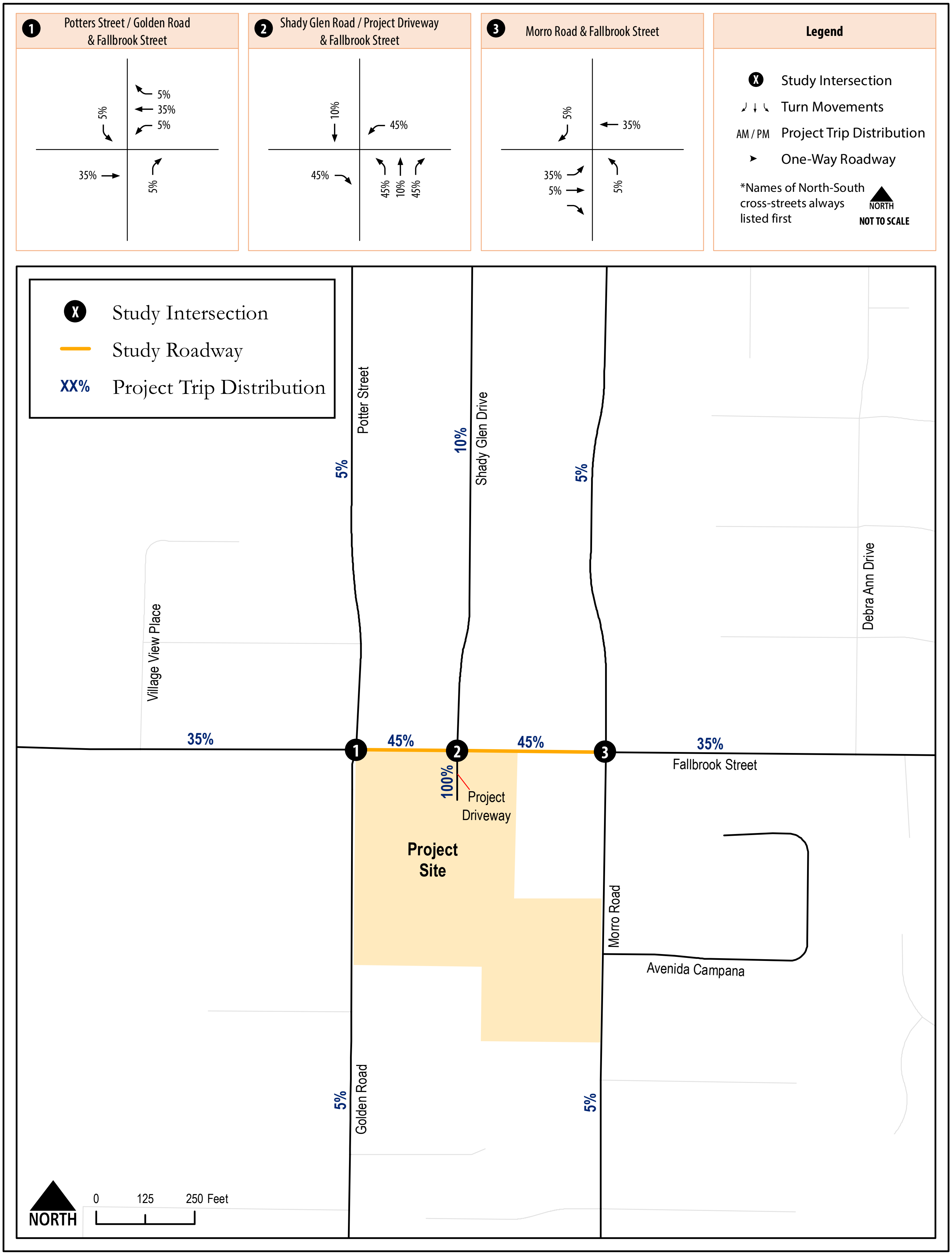
As shown in Table 3.1, the Proposed Project is anticipated to generate a total of 136 daily trips, including 6 trips (3-in / 3-out) during the AM peak hour and 11 trips (5-in / 6-out) during the PM peak hour.

3.2.2 Project Trip Distribution

In accordance with County of San Diego TSG, since the Proposed Project is estimated to generate 136 daily trips, the project trip distribution was manually developed based upon the Proposed Project's land use, geographical location, and corresponding land uses in the vicinity of the project site. Figure 3.1 displays the trip distribution patterns associated with the Proposed Project.

3.2.3 Project Trip Assignment

Based upon the project trip generation and distribution, AM/PM peak hour project trips were assigned to the adjacent roadway network, as displayed in Figure 3.2.



Fallbrook Community Park
Local Mobility Analysis

Figure 3.1
Project Trip Distribution

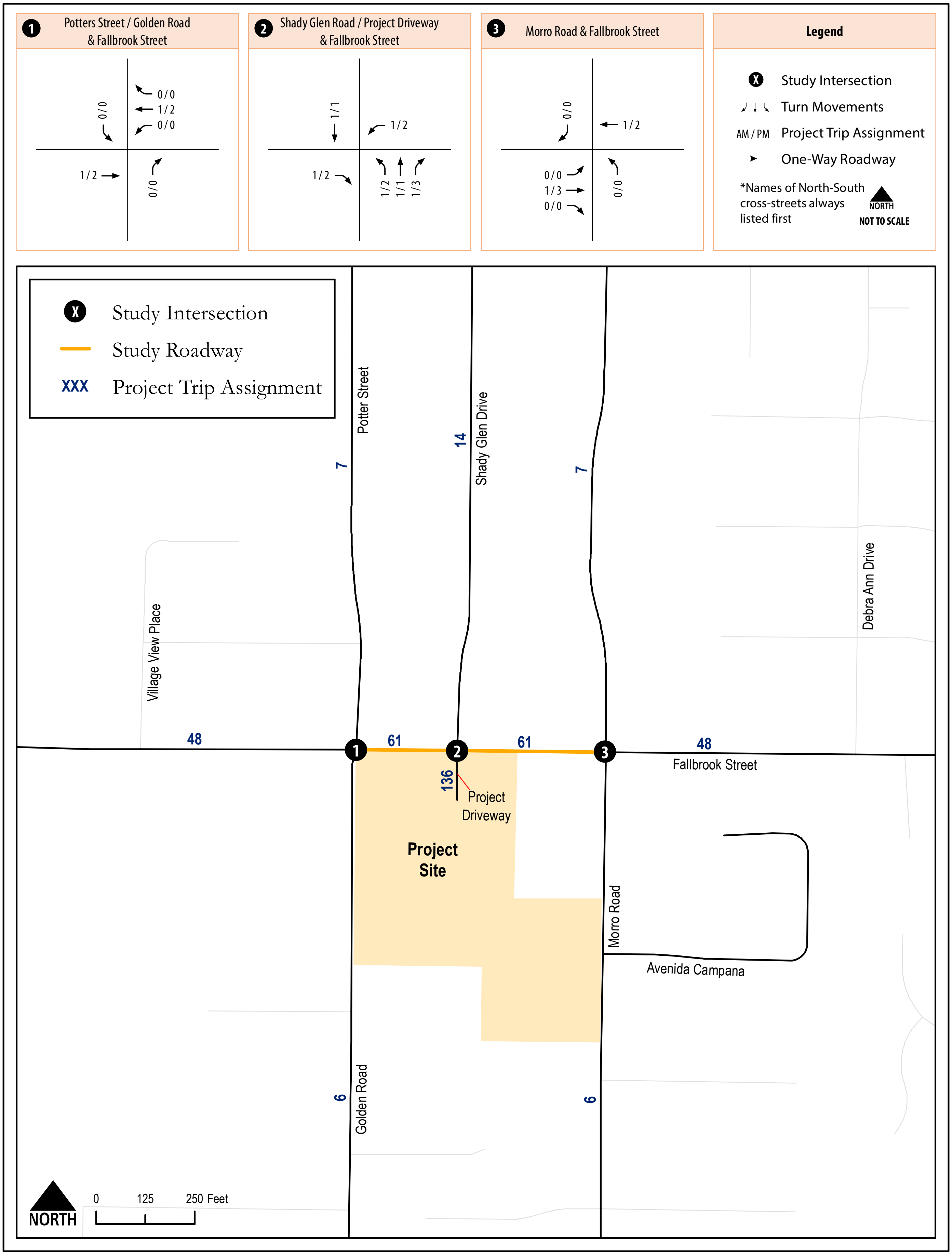


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Figure 3.2
Project Trip Assignment

3.3 Project Study Area

Based on the criteria previously outlined in Section 2.4, since the Proposed Project is not anticipated to generate more than 250 daily trips, the Proposed Project is not required to conduct an LMA. However, as mentioned previously, this LMA serves to address community concerns regarding traffic. As such, the following three (3) intersections were analyzed in this study:

1. Potters Street / Golden Road & Fallbrook Street (SSSC)
2. Shady Glen Road & Fallbrook Street (SSSC)
3. Morro Road & Fallbrook Street (SSSC)

Figure 3.3 illustrates the project study area.

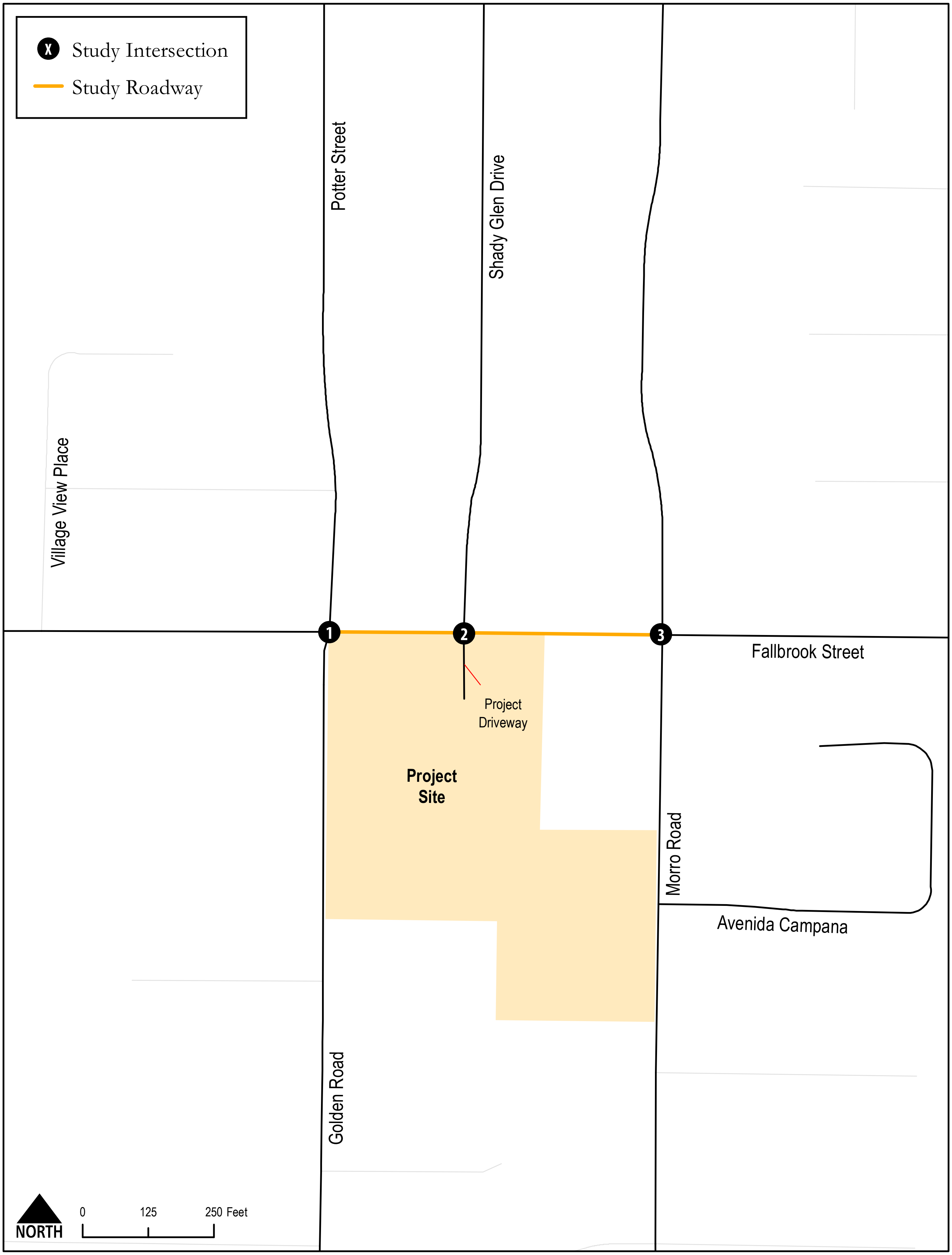

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Figure 3.3
Project Study Area

4.0 Existing Conditions

This section describes study roadway segments, study intersections, and daily roadway and peak hour intersection traffic volume information. Additionally, this section provides an analysis of Existing conditions without the addition of project traffic.

4.1 Existing Roadway Network

The Proposed Project frontage includes the following regional and locally significant roadway:

- *Fallbrook Street* – Within the project study area, Fallbrook Street is a two-lane roadway with a continuous left-turn lane between Golden Road /Potters Street and Morro Road and a posted speed limit of 40 miles per hour. Sidewalk facilities are present along the north side of Fallbrook Street, and missing on the south side. Additionally, there are no bicycle facilities and parking is prohibited along both sides of the roadway. According to the *County of San Diego General Plan*, Fallbrook Street is classified as a Two-Lane Light Collector with Continuous Turn Lane roadway. The County of San Diego Active Transportation Plan identifies a Class IV Bike Way along Fallbrook Street, including the segment fronting the northern portion of the Proposed Project.

Table 4.1 provides a summary of the roadway characteristics for roadway that traverse the study area.

Table 4.1 Existing Roadway Characteristics

Roadway	Segment	Number of Lanes	Median Type	Sidewalk?	Bike lanes?	Transit Route	Posted Speed Limit
Fallbrook Street	Between Potters Street/Golden Road and Morro Road	1 EB / 1 WB	TWLTL	Contiguous[1]	None	None	40

Note:
[1] Sidewalks are currently not present along the south side of Fallbrook Street between Potters Street/Golden Road and Morro Road.
TWLTL = Two-Way Left-Turn Lane

As documented in Section 3.3, three intersections are included as part of the study area. Figure 4.1 displays the existing intersection geometrics for the study intersections.

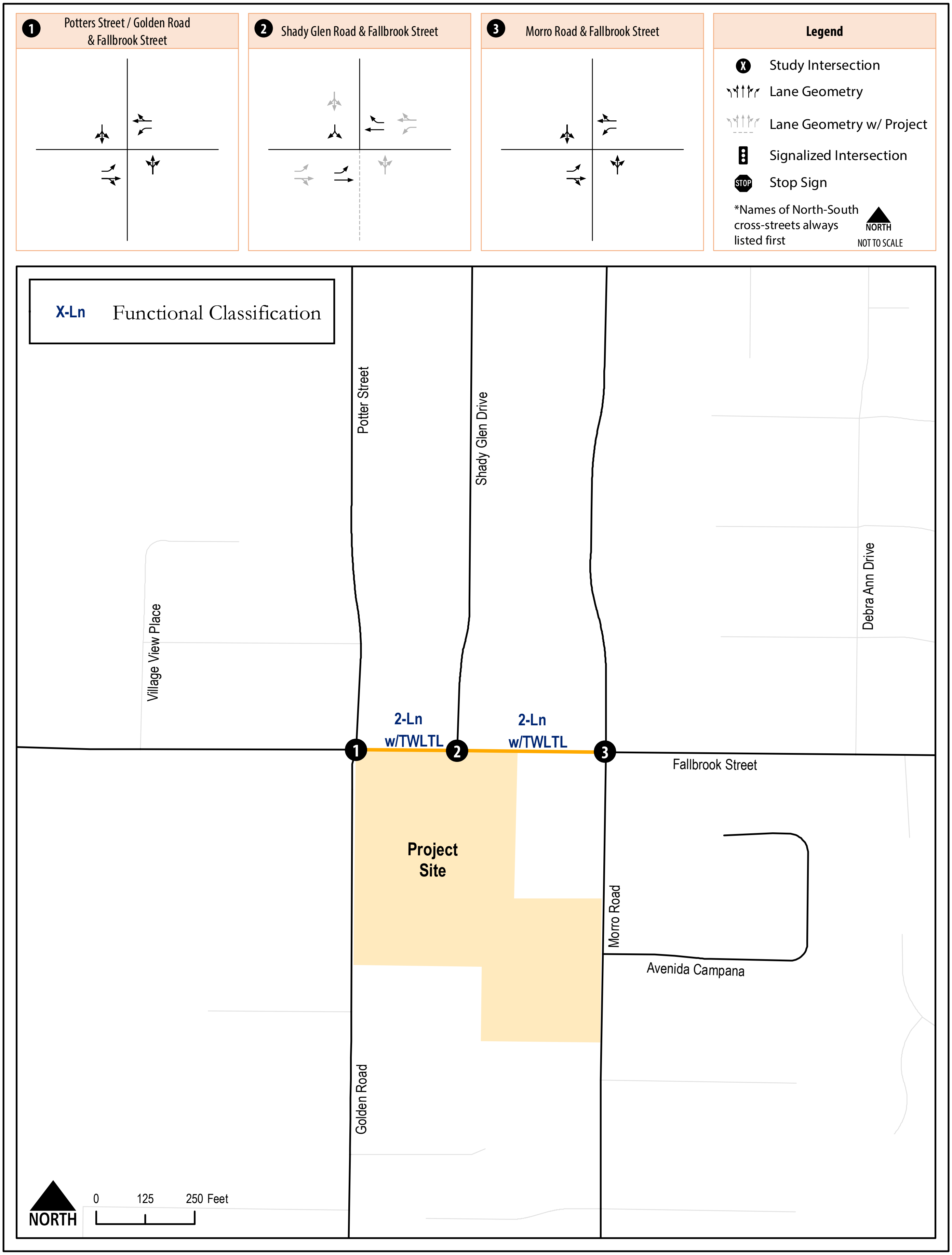
4.2 Existing Roadway and Intersection Volumes

Due to the COVID-19 pandemic, traffic counts collected by NDS in October 2020 (after the shelter-in-place orders associated with COVID-19) do not reflect normal traffic patterns. Therefore, roadway segment counts were collected along Fallbrook Street to calibrate October 2020 intersection turning movement counts. After comparing roadway segments counts from March 2015 and October 2020, it was determined that on average, the roadway segment counts collected in 2015 were 4.72% greater than 2020 roadway segment counts. Therefore, a 4.72% growth rate was applied per movement for all October 2020 intersection count data to better reflect normal conditions.

Figure 4.2 shows existing traffic volumes for AM/PM peak hour turning movements for the study intersections. Traffic counts, including the adjusted traffic counts, and growth calculations are provided in Appendix A.

4.3 Existing Traffic Conditions

LOS analyses under Existing conditions were conducted using the methodologies described in Chapter 2.0. Intersection LOS analysis results are discussed below.



Fallbrook Community Park
Local Mobility Analysis

Figure 4.1
Roadway and Intersection Geometrics
Exisitng Conditions

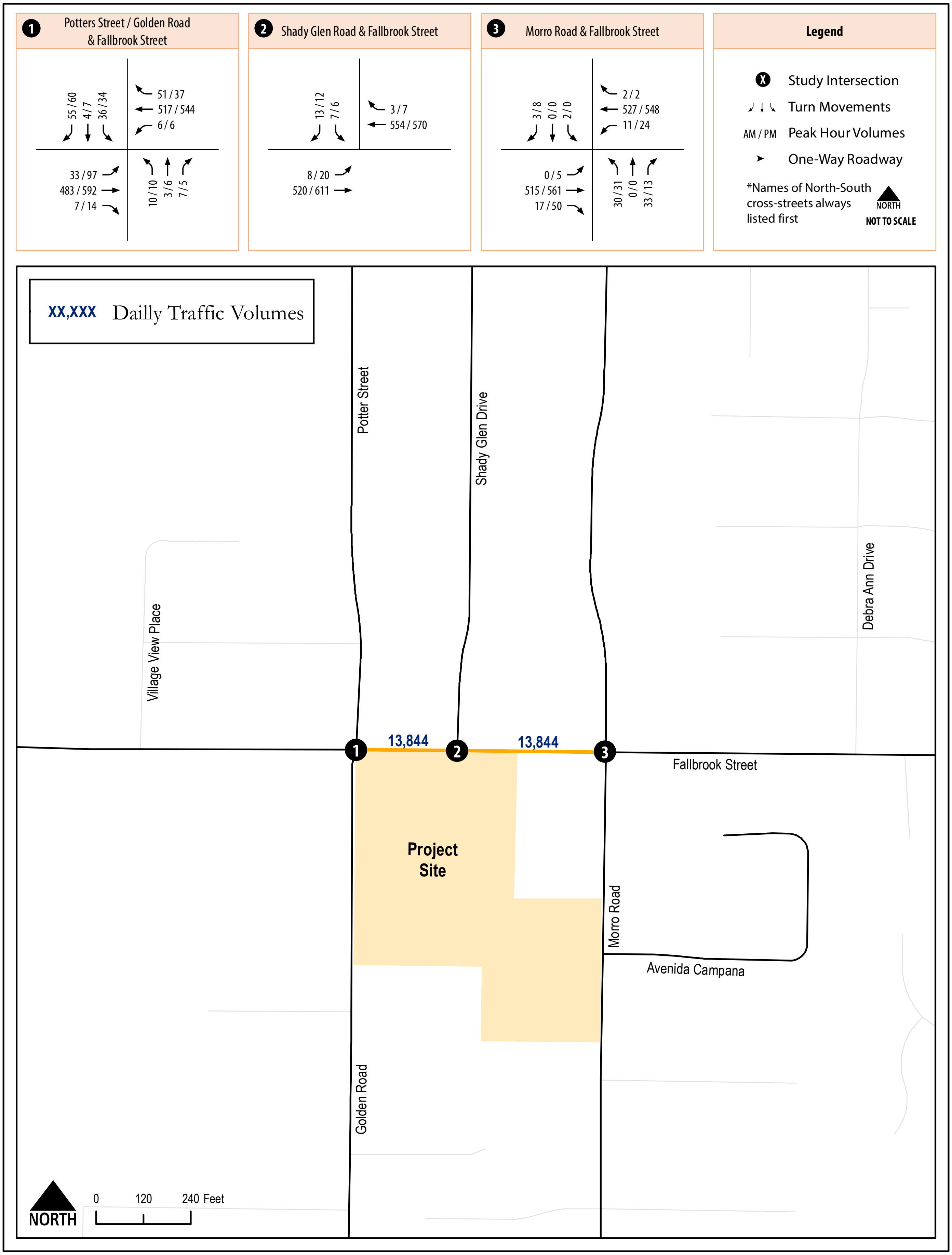


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Figure 4.2
Traffic Volumes
Existing Conditions

Intersection Analysis

Table 4.2 displays intersection LOS and average vehicle delay results for the study intersections under Existing conditions. LOS calculation worksheets for Existing conditions are provided in **Appendix C**.

Table 4.2 Peak Hour Intersection Level of Service Results – Existing Conditions

#	Intersection	Control Type	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS
1	Potters Street / Golden Road & Fallbrook Street	SSSC	27.0	D	51.5	**F**
2	Shady Glen Road & Fallbrook Street	SSSC	13.6	B	14.1	B
3	Morro Road & Fallbrook Street	SSSC	25.4	D	38.4	**E**

Notes:
Bold letter indicates substandard LOS E or F.
SSSC = Side-Street Stop-Controlled. For SSSC, the delay shown is the worst delay experienced by any of the approaches.

As shown in Table 4.2, the following two (2) intersections currently operate at substandard LOS E or F:

1. *Potters Street / Golden Road & Fallbrook Street* – LOS F during the PM peak hour. This is primarily due to the high volumes of traffic in the eastbound and westbound directions, causing delays for the minor movements along Potter Street and Golden Road. Northbound and southbound traffic is required to yield to Fallbrook Street through traffic and relies on gaps to maneuver through the intersection. It should be noted that for side-street stop-controlled intersections, the average vehicle delay for the worst approach is provided.

3. *Morro Road & Fallbrook Street* – LOS E during the PM peak hour. This is primarily due to the high volumes of traffic in the eastbound and westbound directions, causing delays for the minor movements along Morro Road. Northbound and southbound traffic is required to yield to Fallbrook Street through traffic and relies on gaps to maneuver through the intersection. It should be noted that for side-street stop-controlled intersections, the average vehicle delay for the worst approach is provided.

5.0 Near-Term Year Traffic Conditions

This section provides an analysis of Near-Term year 2022 Base conditions both with and without the Proposed Project. The scenarios analyzed in this section include:

- Near-Term Year 2022 Base
- Near-Term Year 2022 Base with Project

5.1 Near-Term Year 2022 Base Roadway Network and Traffic Volumes

Roadway and intersection geometrics under Near-Term Base conditions were assumed to be identical to the existing roadway and intersection geometrics, as shown in Figure 4.1.

Ambient Growth Traffic

There are currently no cumulative projects in the vicinity of the Proposed Project. However, as described in Section 4.2, historical traffic counts can be used to determine ambient growth. Historical traffic counts conducted in 2011 and 2015 were compared, over the four (4) year period a total growth of 5.76% was observed, resulting in an average annual growth rate of 1.44%. Since there are no cumulative projects in the vicinity of the Proposed Project, it was determined that an average growth rate of 1.44% per year was appropriate to apply to Existing conditions traffic volumes, displayed in Figure 4.2. As such, the total growth over a two (2) year period, between year 2020 and 2022, was estimated to be 2.88%.

Traffic Volumes

The Near-Term Base scenario traffic volumes were derived by adding the additional trips generated by a 2.88% ambient growth rate to the existing traffic volumes, displayed in Figure 4.2. **Figure 5.1** displays the intersection peak hour volumes under Near-Term Year 2022 Base conditions.

5.2 Near-Term Year 2022 Base Traffic Conditions

LOS analyses for Near-Term Base conditions were conducted using the methodologies described in Chapter 2.0. Intersection LOS analysis results are discussed below.

5.2.1 Intersection Analysis

Table 5.1 displays intersection LOS and average vehicle delay results for the study area intersections under Near-Term Year Base conditions. LOS calculation worksheets for Near-Term Year 2022 Base conditions are provided in **Appendix D**.

Table 5.1 Peak Hour Intersection Level of Service Results – Near-Term Year 2022 Base Conditions

#	Intersection	Control Type	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS
1	Potters Street / Golden Road & Fallbrook Street	SSSC	30.0	D	65.2	**F**
2	Shady Glen Road & Fallbrook Street	SSSC	13.9	B	14.5	B
3	Morro Road & Fallbrook Street	SSSC	27.2	D	41.8	**E**

Notes:
Bold letter indicates substandard LOS E or F.
SSSC = Side-Street Stop-Controlled. For SSSC, the delay shown is the worst delay experienced by any of the approaches.

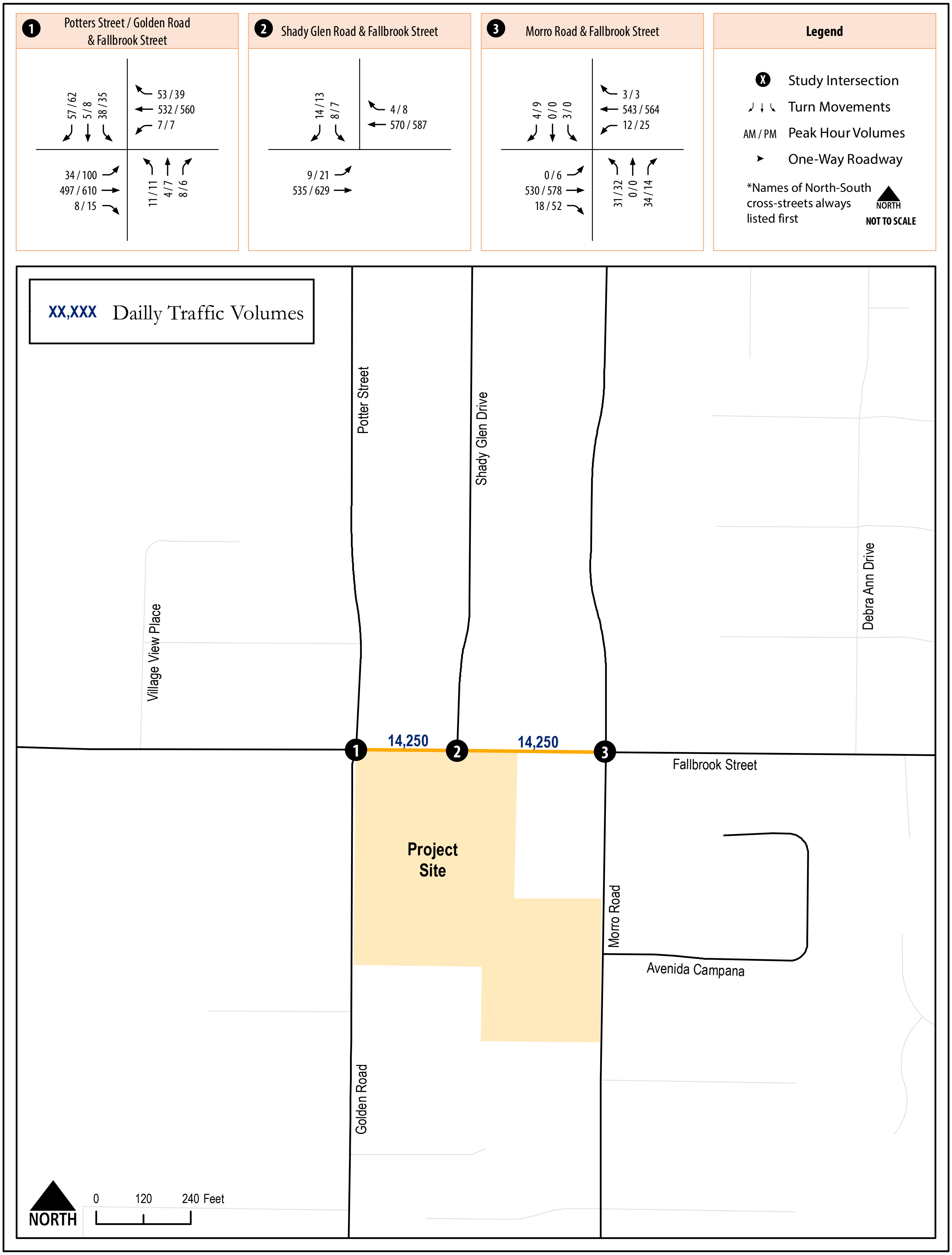

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Figure 5.1
Traffic Volumes
Near-Term Year 2022 Base Conditions

As shown in Table 5.2, the following two (2) study intersections are anticipated to operate at substandard LOS E or F under Near-Term Year 2022 Base conditions:

1. *Potters Street / Golden Road & Fallbrook Street* – LOS F during the PM peak hour. This is primarily due to the high volumes of traffic in the eastbound and westbound directions, causing delays for the minor movements along Potter Street and Golden Road. Northbound and southbound traffic is required to yield to Fallbrook Street through traffic and relies on gaps to maneuver through the intersection. It should be noted that for side-street stop-controlled intersections, the average vehicle delay for the worst approach is provided.

3. *Morro Road & Fallbrook Street* – LOS E during the PM peak hour. This is primarily due to the high volumes of traffic in the eastbound and westbound directions, causing delays for the minor movements along Morro Road. Northbound and southbound traffic is required to yield to Fallbrook Street through traffic and relies on gaps to maneuver through the intersection. It should be noted that for side-street stop-controlled intersections, the average vehicle delay for the worst approach is provided.

5.3 Near-Term Year 2022 Base with Project Roadway Network and Traffic Volumes

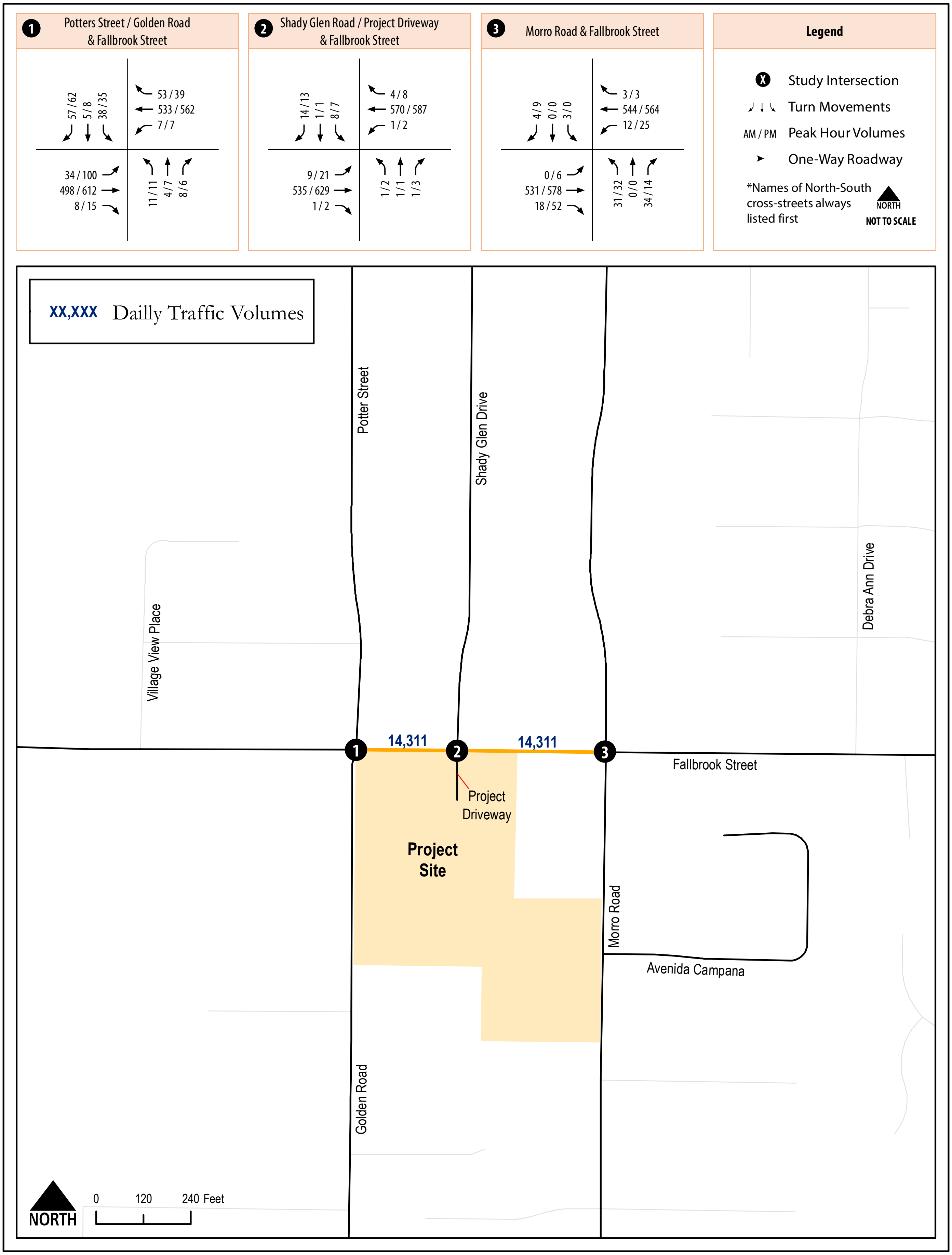
Intersection geometrics under Near-Term Year 2022 Base with Project conditions were assumed to be identical to existing geometrics (displayed in Figure 4.1) with the addition of the following one (1) project driveway:

- Shady Glen Road / Project Driveway & Fallbrook Street – This driveway would be constructed as the south leg of the existing intersection of Shady Glen Road and Fallbrook Street and would allow for full-access with one inbound lane and one outbound lane. This intersection would continue to operate as an unsignalized side-street stop-controlled intersection with Shady Glen Road and the project driveway being stop controlled and Fallbrook Street being uncontrolled.

Near-Term Year 2022 Base with Project traffic volumes were derived by combining the Near-Term Year 2022 Base traffic volumes (displayed in Figure 5.1) and the project trip assignment volumes (displayed in Figure 3.3). Peak hour intersection volumes for this scenario are displayed in **Figure 5.2**.

5.4 Near-Term Year Base with Project Traffic Conditions

LOS analyses were conducted using the methodologies described in Chapter 2.0. Intersection LOS analysis results are discussed below.



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Local Mobility Analysis

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Figure 5.2
Traffic Volumes
Near-Term Year 2022 Base with Project Conditions

5.4.1 Intersection Analysis

Table 5.2 displays intersection LOS and average vehicle delay results under Near-Term Year 2022 Base with Project conditions. LOS calculation worksheets for Near-Term Year 2022 Base with Project conditions are provided in **Appendix E**.

Table 5.2 Peak Hour Intersection Level of Service Results – Near-Term Year 2022 Base with Project Conditions

#	Intersection	Control Type	AM Peak Hour Avg. Delay (sec)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec)	PM Peak Hour LOS	Delay w/o Project (sec) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec) AM/PM
1	Potter Street / Golden Road & Fallbrook Street	SSSC	30.0	D	65.2	**F**	30.0 / 65.2	D / **F**	0.0 / 0.0
2	Shady Glen Road / Project Driveway & Fallbrook Street	SSSC	21.9	C	23.7	C	13.9 / 14.5	B / B	8.0 / 9.2
3	Morro Road & Fallbrook Street	SSSC	27.4	D	42.6	**E**	27.2 / 41.8	D / **E**	0.2 / 0.8

Notes:
Bold letter indicates substandard LOS E or F.
SSSC = Side-Street Stop-Controlled. For SSSC, the delay shown is the worst delay experienced by any of the approaches.

As shown in Table 5.2, the following two (2) study intersections are anticipated to operate at substandard LOS E or F under Near-Term Year 2022 Base with Project conditions:

1. *Potters Street / Golden Road & Fallbrook Street* – LOS F during the PM peak hour with no increase in delay. Similar to Near-Term Year 2022 Base conditions, substandard traffic operations are primarily due to excessive delays for minor movements along Potters Street/Golden Road. It should be noted that for side-street stop-controlled intersections the average vehicle delay for the worst approach is provided.

   The addition of Proposed Project traffic (4 trips during the PM peak hour) is not anticipated to increase average intersection delay. Therefore, based on the standards outlined in Section 2.4, since the addition of Proposed Project traffic is not anticipated to further degrade substandard level of service operations by 5 or more seconds, the Proposed Project would not cause substantial traffic effects and improvement recommendations are not required.

3. *Morro Road & Fallbrook Street* – LOS E during the PM peak hour with an increase of delay by 0.8 seconds. Similar to Near-Term Year 2022 Base conditions, substandard traffic operations are primarily due to excessive delays for minor movements along Morro Road. It should be noted that for side-street stop-controlled intersections the average vehicle delay for the worst approach is provided.

   The addition of Proposed Project traffic (4 trips during the PM peak hour) is anticipated to increase the average intersection delay by 0.8 seconds during the PM peak hour. Therefore, based on the standards outlined in Section 2.4, since the addition of Proposed Project traffic is not anticipated to further degrade substandard level of service operations by 5 or more seconds, the Proposed Project would not cause substantial traffic effects and improvement recommendations are not required.

5.5 Recommended Improvements

This section identifies potential improvement measures under Near-Term Year 2022 Base with Project Conditions based on the standards outlined in Section 2.4.

Intersections

The following two (2) study intersections are anticipated to operate at substandard LOS E or F under Near-Term Year 2022 Base with Project conditions:

1. *Potters Street / Golden Road & Fallbrook Street* – LOS F during the PM peak hour.

3. *Morro Road & Fallbrook Street* – LOS E during the PM peak hour.

Based on the standards outlined in Section 2.4, the Proposed Project would not cause substantial traffic effects. Therefore, improvement recommendations are not required. However, due to community concern, all-way stop-control guidelines and traffic signal warrant analyses were evaluated to determine if the daily or peak hour traffic volumes, including the trips generated by the Proposed Project, justified the installation of stop signs or traffic signals at these intersections. According to the *California Manual on Uniform Traffic Control Devices* (CA MUTCD)*, Revision 6*, the intersection of Potters Street/Golden Road & Fallbrook Street meets the requirement for a signalized intersection, while neither intersection qualifies for all-way stop-control.

It should be noted that satisfying the minimum requirements for a traffic signal does not necessarily require installation of a traffic signal. Additionally, since the Proposed Project will not cause a substantial traffic effect implementation of traffic control measures is not required but may be considered. Therefore, detailed discussion regarding traffic control options, including traffic signal, is provided in the chapter below.

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6.0 Site Access and Parking

This chapter addresses access to the project site. Topics discussed include site-access and parking, as well as the results of sight distance analysis conducted for the proposed project driveway.

6.1 Site Access

The Proposed Project will be located south of Fallbrook Street, east of Golden Road, and west of Morro Road, within the unincorporated community of Fallbrook, in San Diego County. Project access will be provided via the following one (1) driveway:

- Shady Glen Road / Project Driveway & Fallbrook Street – This driveway would be constructed as the south leg of the existing intersection of Shady Glen Road and Fallbrook Street and would allow for full-access with one inbound lane and one outbound lane.

As discussed in Section 5.4, the project driveway is projected to operate at LOS D or better during both the AM and PM peak hours with the addition of Proposed Project traffic under Near-Term Year 2022 Base with Project conditions. However, due to community concerns regarding existing traffic conditions along Fallbrook Street, intersection control modifications at this point of access were evaluated.

All-way stop-control guidelines and traffic signal warrant analyses were evaluated to determine if the daily or peak hour traffic volumes, including the trips generated by the Proposed Project, justified the installation of stop signs or traffic signals at the intersection of Shady Glen Road/Project Driveway & Fallbrook Street. All-way stop-controlled warrant and traffic signal warrant analyses results are provided in **Appendix F.** According to the CA MUTCD, the intersection does not meet the minimum daily or peak hour traffic volumes for an all-way stop-controlled or signalized intersection. However, in accordance with the CA MUTCD, given the use of engineering judgement an all-way stop-control or traffic signal may be considered at an intersection that does not meet minimum requirements. Therefore, an intersection control evaluation was conducted at this intersection and **Table 6.1** compares the intersection LOS and average vehicle delay results for three types of intersection control: (1) side-street stop-control, (2) all-way stop-control, (3) traffic signal.

Table 6.1 Intersection Control Evaluation – Peak Hour Intersection LOS Results

#	Intersection	Control Type	AM Peak Hour		PM Peak Hour	
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
2	Shady Glen Road / Project Driveway & Fallbrook Street	SSSC	21.9	C	23.7	C
		AWSC	27.4	C	40.2	**E**
		Signalized	14.4	B	16.4	B

Notes:
Bold letter indicates substandard LOS E or F.
SSSC = Side-Street Stop-Controlled. For SSSC, the delay shown is the worst delay experienced by any of the approaches.
AWSC = All-Way Stop-Controlled. For AWSC, the delay shown is the average delay for all approaches.

As shown in Table 6.1, only the all-way stop-control option would result in substandard LOS operations, which would occur during the PM peak hour. To better understand traffic operations for each type of intersection control, a queue analysis was conducted and the 95th percentile queues were compared. Given the proximity of the project driveway to the intersections of Potters Street/Golden Road & Fallbrook Street and Morro Road & Fallbrook Street, it was deemed appropriate to evaluate the eastbound and westbound approaches to identify queues at the project driveway that extend past these intersections. **Table 6.2** displays the 95th percentile queues for the three types of intersection control under evaluation.

Table 6.2 Intersection Control Evaluation – Queue Analysis Results

#	Intersection	Turning Movement	Available Storage Length	Peak Hour	SSSC 95th Queue	SSSC Excess	AWSC 95th Queue	AWSC Excess	Signalized 95th Queue	Signalized Excess
2	Shady Glen Road / Project Driveway & Fallbrook Street	EBL	175	AM	0	0	0	0	25	0
				PM	25	0	25	0	25	0
		EBT	175	AM	0	0	225	**50**	200	**25**
				PM	0	0	350	**175**	250	**75**
		WBL	300	AM	0	0	0	0	25	0
				PM	0	0	0	0	25	0
		WBT	300	AM	0	0	250	0	225	0
				PM	0	0	300	0	250	0

As shown in Table 6.2, the options of all-way stop-control and traffic signal would cause eastbound queues that extend past the intersection of Potters Street/Golden Road & Fallbrook Street. Due to these extensive queues, “Keep Clear” zones would have to be implemented to prevent traffic from blocking the intersection of Potters Street/Golden Road & Fallbrook Street.

Based on these preliminary results and taking into consideration community concerns regarding existing traffic conditions, it is concluded that all-way stop-control may not align with community expectations. However, a traffic signal would result in extensive queue for the eastbound approach. Thus, due to vertical sight distance concerns and the extensive queue, a signal is not recommended for this intersection. In order to increase pedestrian awareness, a Rectangular Rapid-Flashing Beacons (RRFB) and high visibility crosswalk is recommended at the intersection of Shady Glen Road / Project Driveway & Fallbrook Street. The RRFB and high visibility crosswalk should be designed to the County of San Diego standards.

6.2 Parking

Parking will be incorporated within the proposed development per the County of San Diego Ordinance No. 10251 Section 6764 and the California Building Code Table 11B-208.2, the Proposed Project is required to supply 68 vehicle spaces, including three ADA accessible vehicle spaces, and five bicycle parking spaces. **Table 6.2** displays the Proposed Project’s parking requirements.

Table 6.2 Parking Requirements

Type	Requirement	Units	Parking Spaces Required
County of San Diego Ordinance No. 10251			
Vehicle	10 spaces / acre	6.8 acres (park)	68 vehicle spaces
Bicycle	0.05 / vehicle space[1]	68 vehicle spaces	5 bicycle spaces
California Building Code Table 11B-208.2			
ADA Accessible	See Table 11B-208.2	68 vehicle spaces	3 ADA accessible vehicle spaces

Note:
[1] Park uses shall include bicycle racks to accommodate 0.05 bike spaces per car, but not less than 5 bicycle spaces

The Proposed Project will provide 68 vehicle spaces, three ADA accessible vehicle spaces, and five bicycle parking spaces. The Proposed Project would meet the parking requirements and no additional parking is required.

7.0 Active Transportation Assessment

This chapter discusses the Proposed Project's potential effect on active transportation facilities, including pedestrian, bicycle, and trail facilities.

7.1 Pedestrian Facilities

There are currently no sidewalks along the Proposed Project frontage. **Table 7.1** summarizes the existing physical characteristics of sidewalks along the Proposed Project frontage.

Table 7.1 Pedestrian Facilities Along Project Frontage

Roadway	From	North / East Side		South / West Side	
		Sidewalk Type	Conditions	Sidewalk Type	Conditions
Fallbrook Street	Between Golden Road and Morro Road	Contiguous	No obstructions and no significant sidewalk deterioration	None	Sidewalk missing along project frontage
Golden Road	Between Fallbrook Street and Project's southern limit	None	Sidewalk missing along project frontage	None	Sidewalk missing
Morro Road	Between Fallbrook Street and Project's southern limit	None	Sidewalk missing	None	Sidewalk missing along project frontage

As shown in Table 7.1, several segments were identified to have missing sidewalk facilities and there are no sidewalks present along the Proposed Project frontage. The Proposed Project will provide two (2) access points for pedestrians, including access from the north along Fallbrook Street and from the east along Morro Road. As such, the Proposed Project will construct sidewalks along the south side of Fallbrook Street between Golden Road and Morro Road, as well as the west side of Morro Road between Fallbrook Street and the project's southern limit. It is also recommended that the project installs an RRFB, as recommended above, to increase pedestrian awareness and safety for users of the park. RRFB and high visibility crosswalks should also be considered for the intersection of Morro Road and Avenue Campana.

7.2 Bicycle Facilities

There are no existing bicycle facilities adjacent to the project site along Fallbrook Street. *The County of San Diego Active Transportation Plan (October 2018)* identifies planned Class IV bicycle facilities along Fallbrook Street between South Mission Road and Stage Coach Lane, which includes the northern project frontage. This Class IV bicycle facility would provide connections to the east towards the Fallbrook Community Center and La Paloma Elementary school and to the west towards the center of town. Excerpts from the *County of San Diego Active Transportation Plan* is included in **Appendix G**. Along the project frontage, Fallbrook Street currently has an approximate width of 52 feet. The Proposed Project should coordinate with the County's Department of Public Works to ensure the Proposed Project provides enough right-of-way for the construction of the planned Class IV bicycle facility along the project frontage.

The Proposed Project would also include Class I bike paths within the project site for shared use between bicyclists and pedestrians. The Class I bike paths would connect the eastern access point along Morro Road to the planned Class IV bicycle facility along Fallbrook Street.

7.3 Transit

There are no existing transit facilities within ¼ mile walking distance from the Proposed Project.

Based on the preliminary review of the Proposed Project's site plan, the Proposed Project would not conflict with existing or planned transit facilities.

7.4 Trails

There are no existing trails/pathways adjacent to the project site. However, the *Fallbrook Community Trails and Pathway Plan* identifies a planned pathway along Fallbrook Street between South Mission Road and Stage Coach Lane. Excerpts from the *Fallbrook Community Trails and Pathway Plan* is included in Appendix H. The Proposed Project should coordinate with County staff to construct the portion of the planned pathway located along the project frontage.

Appendix A
Traffic Counts & Growth Calculations

Prepared by National Data & Surveying Services

SPEED

Fallbrook St Bet. Golden Rd & Morro Rd

Day: Sunday
Date: 11/1/2020

City: Fallbrook
Project #: CA20_040215_001e

East Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	0	3	3	5	1	0	0	0	0	0	13
00:15	0	0	0	2	2	2	5	1	0	0	0	0	0	12
00:30	0	0	0	2	2	6	3	1	0	1	1	0	0	16
00:45	0	0	1	0	1	2	3	0	0	0	0	0	0	7
01:00	0	0	0	0	1	2	0	0	1	0	0	0	0	4
01:15	0	0	0	2	1	4	2	1	0	0	0	0	0	10
01:30	0	0	0	0	0	0	2	0	0	0	0	0	0	2
01:45	0	0	0	0	0	0	1	2	0	0	0	0	0	3
02:00	0	0	0	0	1	1	1	0	0	0	0	0	0	3
02:15	0	0	0	0	0	1	2	0	1	0	0	0	0	4
02:30	0	0	0	0	0	2	0	0	0	0	0	0	0	2
02:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1
03:00	0	0	0	0	0	1	2	1	0	0	0	0	0	4
03:15	0	0	1	0	2	0	1	1	0	0	0	0	0	5
03:30	0	0	0	0	2	1	0	0	0	0	0	0	0	3
03:45	0	0	0	0	0	1	0	3	0	0	0	0	0	4
04:00	0	0	0	1	4	0	0	1	0	0	0	0	0	6
04:15	0	0	0	0	0	2	3	1	0	0	0	0	0	6
04:30	0	0	0	0	0	1	0	0	1	0	0	0	0	2
04:45	0	0	0	1	1	1	0	0	0	0	0	0	0	3
05:00	0	0	0	0	2	6	2	1	0	0	0	0	0	11
05:15	0	0	0	0	0	0	1	1	1	0	0	0	0	3
05:30	0	0	0	0	0	3	3	0	0	0	0	0	0	6
05:45	0	0	1	1	3	3	3	1	1	0	0	0	0	13
06:00	0	0	0	0	2	3	5	0	0	1	0	0	0	11
06:15	0	0	1	0	1	6	7	6	0	0	0	0	0	21
06:30	0	0	2	1	5	13	5	3	0	0	0	0	0	29
06:45	0	0	2	1	6	17	18	2	1	0	0	0	0	47
07:00	0	0	0	1	6	12	12	4	1	0	1	0	0	37
07:15	0	0	0	1	0	14	16	3	1	0	0	0	0	35
07:30	0	1	1	3	4	14	17	2	0	1	0	0	0	43
07:45	0	0	2	3	5	25	10	3	1	0	0	0	0	49
08:00	0	0	1	2	6	14	17	2	0	0	0	0	0	42
08:15	0	0	2	1	4	24	23	2	1	0	0	0	0	57
08:30	0	0	2	1	11	41	17	8	1	0	0	0	0	81
08:45	0	0	1	5	15	35	22	7	0	0	0	0	0	85
09:00	0	1	0	5	8	35	26	4	1	0	0	0	0	80
09:15	0	0	0	2	6	25	18	7	0	1	0	0	0	59
09:30	0	1	2	2	14	39	19	2	1	0	0	0	0	80
09:45	0	0	2	3	17	34	20	1	0	0	0	0	0	77
10:00	0	0	1	7	17	40	12	3	0	0	0	0	0	80
10:15	0	0	3	2	20	34	21	3	0	0	0	0	0	83
10:30	0	0	0	3	23	59	24	2	0	0	0	0	0	111
10:45	0	0	0	4	22	82	19	4	1	0	0	0	0	132
11:00	0	0	1	8	21	41	30	7	0	0	0	0	0	108
11:15	0	0	2	5	20	37	20	4	0	0	0	0	0	88
11:30	0	0	1	4	31	27	20	4	0	0	0	0	0	87
11:45	0	0	1	4	16	65	30	6	0	0	0	0	0	122
12:00 PM	0	1	0	3	11	60	28	5	0	0	0	0	0	108
12:15	0	1	1	8	19	47	19	1	0	0	0	0	0	96
12:30	0	0	1	4	21	48	34	3	1	0	0	0	0	112
12:45	0	0	0	8	23	42	16	1	3	0	1	0	0	94
13:00	0	0	0	7	34	51	18	2	0	0	0	0	0	112
13:15	0	0	1	1	16	44	29	2	3	0	0	0	0	96
13:30	0	0	0	6	23	31	28	4	0	0	0	0	0	92
13:45	0	0	1	7	20	29	24	2	1	0	0	0	0	84
14:00	0	0	0	4	12	37	25	3	1	0	0	0	0	82
14:15	0	0	0	5	13	25	28	7	0	0	0	1	0	79
14:30	0	0	0	3	18	37	22	6	2	0	0	0	0	88
14:45	0	0	0	2	19	42	27	3	0	0	0	0	0	93
15:00	0	0	0	1	7	49	31	6	0	0	0	0	0	94
15:15	0	0	1	3	20	43	20	7	0	0	0	0	0	94
15:30	0	0	0	2	14	56	15	5	1	0	0	0	0	93
15:45	0	0	0	6	30	38	26	7	0	0	0	0	0	107
16:00	0	0	0	2	20	40	18	6	1	0	0	0	0	87
16:15	0	0	1	7	26	46	22	1	1	0	0	0	0	104
16:30	0	0	2	2	19	36	17	4	1	0	0	0	0	81
16:45	0	1	1	1	21	30	16	7	2	0	0	0	0	79
17:00	0	0	2	3	21	47	12	1	0	0	0	0	0	86
17:15	0	0	0	3	20	44	9	1	0	0	0	0	0	77
17:30	0	0	0	3	24	48	13	2	0	0	0	0	0	90
17:45	0	0	1	4	24	43	17	3	1	0	0	0	0	93
18:00	0	0	0	4	19	30	18	5	0	1	0	0	0	77
18:15	0	0	2	4	7	21	17	5	0	1	0	0	0	57
18:30	0	0	0	8	9	31	10	3	0	0	0	0	0	61
18:45	0	0	0	3	8	28	12	2	0	0	0	0	0	53
19:00	0	0	0	3	6	29	9	3	1	1	0	0	0	52
19:15	0	0	0	0	14	19	13	2	0	0	0	0	0	48
19:30	0	0	1	1	5	22	16	0	0	0	0	0	0	45
19:45	0	0	1	0	4	15	17	4	0	0	0	0	0	41
20:00	0	0	0	5	9	15	10	2	1	1	0	0	0	43
20:15	0	0	1	0	5	4	9	3	1	0	0	0	0	23
20:30	0	0	0	2	4	15	7	3	1	1	0	0	0	33
20:45	0	0	0	3	3	3	8	1	1	0	0	0	0	19
21:00	0	0	0	1	0	6	7	4	2	0	0	0	0	20
21:15	0	0	0	3	2	2	7	1	0	0	1	1	0	17
21:30	0	0	0	2	2	7	2	2	2	0	0	0	0	17
21:45	0	0	0	1	0	11	3	5	0	0	0	0	0	20
22:00	0	0	0	2	3	7	2	3	1	0	0	0	0	18
22:15	0	0	0	0	0	2	6	3	0	0	0	0	0	11
22:30	0	0	1	2	1	3	4	2	0	0	0	0	0	13
22:45	0	0	1	0	2	8	0	1	0	0	1	1	0	14
23:00	0	0	0	2	3	2	2	2	0	0	0	0	0	11
23:15	0	0	0	0	0	4	0	1	0	0	0	0	0	5
23:30	0	0	1	0	0	2	3	0	0	0	0	0	0	6
23:45	0	0	0	0	0	1	2	3	0	0	0	0	0	6
Totals		6	51	218	886	2078	1165	254	43	9	5	3		4718
% of Totals		0%	1%	5%	19%	44%	25%	5%	1%	0%	0%	0%		100%

AM Volumes	0	3	31	77	305	778	467	105	15	4	2	0	0	1787
% AM		0%	1%	2%	6%	16%	10%	2%	0%	0%	0%			38%
AM Peak Hour		08:45	09:30	10:45	10:45	11:45	11:45	08:30	06:30					10:30
Volume		2	8	21	94	220	111	26	3	1	1			439
PM Volumes	0	3	20	141	581	1300	698	149	28	5	3	3	0	2931
% PM		0%	0%	3%	12%	28%	15%	3%	1%	0%	0%	0%		62%
PM Peak Hour		12:00	16:15	12:15	12:15	12:00	14:15	15:00	12:30	17:30	12:00	13:30		12:15
Volume		2	6	27	97	197	108	25	7	2	1	1		414

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	429 ⟷	9%	794 ⟷	17%	697 ⟷	15%	2798 ⟷	59%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Fallbrook St	East Bound	32	38	38	43	47	4718
Fallbrook St	West Bound	31	37	37	43	46	4847

Prepared by National Data & Surveying Services

VOLUME

Fallbrook St W/O McDonald Rd

Day: Tuesday
Date: 10/27/2020

City: Fallbrook
Project #: CA20_040215_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,689	6,531	13,220

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		7		16		12:00			99		99		198	
00:15			5		6		11		12:15			86		132		218	
00:30			4		5		9		12:30			116		135		251	
00:45			5	23	5	23	10	46	12:45			128	429	109	475	237	904
01:00			6		3		9		13:00			121		122		243	
01:15			2		3		5		13:15			137		114		251	
01:30			2		1		3		13:30			160		127		287	
01:45			1	11	3	10	4	21	13:45			192	610	170	533	362	1143
02:00			4		1		5		14:00			166		189		355	
02:15			5		7		12		14:15			122		171		293	
02:30			0		5		5		14:30			140		127		267	
02:45			3	12	2	15	5	27	14:45			108	536	112	599	220	1135
03:00			3		3		6		15:00			100		102		202	
03:15			2		2		4		15:15			134		97		231	
03:30			2		0		2		15:30			138		124		262	
03:45			1	8	2	7	3	15	15:45			123	495	118	441	241	936
04:00			2		4		6		16:00			129		121		250	
04:15			2		2		4		16:15			128		138		266	
04:30			2		3		5		16:30			111		132		243	
04:45			1	7	3	12	4	19	16:45			129	497	162	553	291	1050
05:00			7		8		15		17:00			155		139		294	
05:15			7		4		11		17:15			129		107		236	
05:30			17		5		22		17:30			122		134		256	
05:45			18	49	15	32	33	81	17:45			161	567	111	491	272	1058
06:00			23		11		34		18:00			157		139		296	
06:15			24		29		53		18:15			140		129		269	
06:30			26		29		55		18:30			117		117		234	
06:45			48	121	31	100	79	221	18:45			115	529	92	477	207	1006
07:00			71		51		122		19:00			95		83		178	
07:15			92		60		152		19:15			98		90		188	
07:30			145		66		211		19:30			91		55		146	
07:45			156	464	125	302	281	766	19:45			65	349	65	293	130	642
08:00			125		131		256		20:00			71		43		114	
08:15			121		171		292		20:15			61		40		101	
08:30			72		116		188		20:30			54		43		97	
08:45			82	400	99	517	181	917	20:45			39	225	47	173	86	398
09:00			123		177		300		21:00			41		36		77	
09:15			128		177		305		21:15			27		20		47	
09:30			100		118		218		21:30			28		22		50	
09:45			77	428	103	575	180	1003	21:45			35	131	20	98	55	229
10:00			71		96		167		22:00			28		20		48	
10:15			79		84		163		22:15			13		19		32	
10:30			94		84		178		22:30			20		12		32	
10:45			70	314	115	379	185	693	22:45			18	79	0	51	18	130
11:00			95		97		192		23:00			1		0		1	
11:15			92		72		164		23:15			0		0		0	
11:30			101		92		193		23:30			0		0		0	
11:45			116	404	114	375	230	779	23:45			0	1	0		0	1
TOTALS				2241		2347		**4588**	**TOTALS**				4448		4184		**8632**
SPLIT %				48.8%		51.2%		**34.7%**	**SPLIT %**				51.5%		48.5%		**65.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,689	6,531	13,220

	NB	SB	EB	WB	Total		NB	SB	EB	WB	Total
AM Peak Hour			07:30	09:00	**07:30**	**PM Peak Hour**			13:15	13:30	**13:30**
AM Pk Volume			547	575	**1040**	**PM Pk Volume**			655	657	**1297**
Pk Hr Factor			0.877	0.812	**0.890**	**Pk Hr Factor**			0.853	0.869	**0.896**
7 - 9 Volume	0	0	864	819	**1683**	**4 - 6 Volume**	0	0	1064	1044	**2108**
7 - 9 Peak Hour			07:30	07:45	**07:30**	**4 - 6 Peak Hour**			17:00	16:15	**16:15**
7 - 9 Pk Volume	0	0	547	543	**1040**	**4 - 6 Pk Volume**	0	0	567	571	**1094**
Pk Hr Factor	0.000	0.000	0.877	0.794	**0.890**	**Pk Hr Factor**	0.000	0.000	0.880	0.881	**0.930**

National Data & Surveying Services

Intersection Turning Movement Count

Location: Potter St/Golden Rd & E Fallbrook St
City: Fallbrook
Control: 2-Way Stop (NB/SB)

Project ID: 20-040216-001
Date: 10/27/2020

Total

NS/EW Streets:	Potter St/Golden Rd				Potter St/Golden Rd				E Fallbrook St				E Fallbrook St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	1	2	0	6	1	13	0	7	51	1	0	0	62	3	0	150
7:15 AM	4	1	1	0	7	1	13	0	8	77	2	0	0	65	3	0	182
7:30 AM	1	1	3	0	9	0	17	0	9	121	3	0	0	72	4	0	240
7:45 AM	3	0	2	0	5	1	16	0	7	132	0	0	3	130	14	0	313
8:00 AM	2	1	0	0	11	2	9	0	7	110	0	0	0	134	10	0	286
8:15 AM	3	0	1	0	9	0	10	0	8	98	3	0	2	157	20	0	311
8:30 AM	0	2	0	0	4	2	10	0	4	80	4	0	1	112	11	0	230
8:45 AM	2	0	2	0	5	0	9	0	6	75	1	0	1	104	12	0	217
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	6	11	0	56	7	97	0	56	744	14	0	7	836	77	0	1929
APPROACH %'s :	51.43%	17.14%	31.43%	0.00%	35.00%	4.38%	60.63%	0.00%	6.88%	91.40%	1.72%	0.00%	0.76%	90.87%	8.37%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	9	2	6	0	34	3	52	0	31	461	6	0	5	493	48	0	1150
PEAK HR FACTOR :	0.750	0.500	0.500	0.000	0.773	0.375	0.765	0.000	0.861	0.873	0.500	0.000	0.417	0.785	0.600	0.000	0.919
		0.850				0.856				0.896				0.763			

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	1	0	0	0	1	0	0	0	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	3	1	1	0	8	1	10	0	22	139	3	0	0	112	15	0	315
4:15 PM	3	0	1	0	5	1	17	0	24	124	5	0	1	124	9	0	314
4:30 PM	3	3	2	0	8	1	12	0	21	131	2	0	1	121	10	0	315
4:45 PM	1	1	0	0	8	1	16	0	27	143	3	0	3	151	9	0	363
5:00 PM	2	1	1	0	11	3	12	0	20	167	3	0	0	123	7	0	350
5:15 PM	1	0	3	0	7	1	12	0	22	133	2	0	4	95	9	0	289
5:30 PM	2	0	2	0	12	1	11	0	15	137	4	0	3	111	15	0	313
5:45 PM	3	0	2	0	8	1	14	0	15	150	2	0	0	104	9	0	308
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	6	12	0	67	10	104	0	166	1124	24	0	12	941	83	0	2567
APPROACH %'s :	50.00%	16.67%	33.33%	0.00%	37.02%	5.52%	57.46%	0.00%	12.63%	85.54%	1.83%	0.00%	1.16%	90.83%	8.01%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	9	5	4	0	32	6	57	0	92	565	13	0	5	519	35	0	1342
PEAK HR FACTOR :	0.750	0.417	0.500	0.000	0.727	0.500	0.838	0.000	0.852	0.846	0.650	0.000	0.417	0.859	0.875	0.000	0.924
		0.563				0.913				0.882				0.857			

Prepared by National Data & Surveying Services

Potter St/Golden Rd & E Fallbrook St

Peak Hour Turning Movement Count

ID: 20-040216-001
City: Fallbrook

Day: Tuesday
Date: 10/27/2020

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Potter St/Golden Rd — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departing
AM	52	3	34	0	81
NOON	0	0	0	0	0
PM	57	6	32	0	132
Lanes	0	1	0	0	

E Fallbrook St — WESTBOUND

	Lanes	PM	NOON	AM
Right	1	35	0	48
Thru	1	519	0	493
Left	0	5	0	5
U-Turn	0	0	0	0
Departing		601	0	501

E Fallbrook St — EASTBOUND

	AM	NOON	PM	Lanes
Departing	554	0	585	
U-Turn	0	0	0	0
Left	31	0	92	0
Thru	461	0	565	1
Right	6	0	13	0

Potter St/Golden Rd — NORTHBOUND

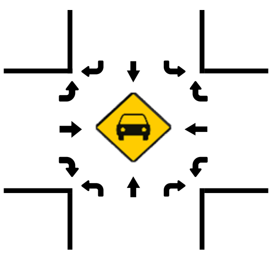
	Departing	U-Turn	Left	Thru	Right
Lanes		0	0	1	0
PM	24	0	9	5	4
NOON	0	0	0	0	0
AM	14	0	9	2	6

CONTROL

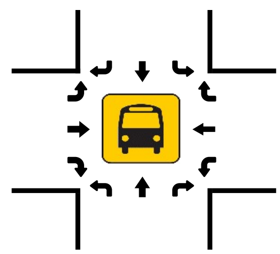
2-Way Stop (NB/SB)

	AM	NOON	PM
TEV	1150	0	1342
PHF	0.92		0.92

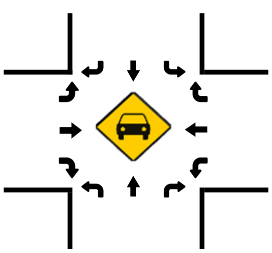
Total Vehicles (AM)



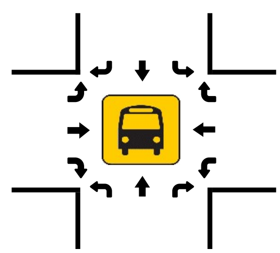
Total Vehicles (AM)



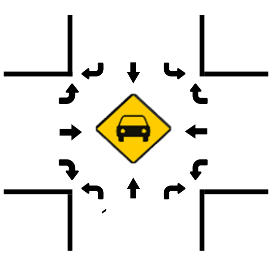
Total Vehicles (NOON)



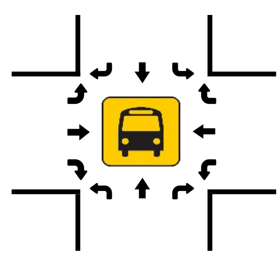
Total Vehicles (NOON)



Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg	0	0	0
North leg	0	0	0
West leg	0	0	0
West leg	0	0	0
East leg	0	0	0
East leg	0	0	0
South leg	0	0	0
South leg	0	0	0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Shady Glen Dr & E Fallbrook St
City: Fallbrook
Control: 1-Way Stop (SB)

Project ID: 20-040216-002
Date: 10/27/2020

Total

NS/EW Streets:	Shady Glen Dr				Shady Glen Dr				E Fallbrook St				E Fallbrook St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	2	0	3	0	1	61	0	0	0	59	0	0	126
7:15 AM	0	0	0	0	2	0	2	0	0	80	0	0	0	69	0	0	153
7:30 AM	0	0	0	0	0	0	3	0	1	136	0	0	0	73	2	0	215
7:45 AM	0	0	0	0	5	0	4	0	2	132	0	0	0	136	0	0	279
8:00 AM	0	0	0	0	0	0	4	0	1	127	0	0	0	148	0	0	280
8:15 AM	0	0	0	0	1	0	1	0	3	101	0	0	0	172	0	0	278
8:30 AM	0	0	0	0	1	0	4	0	0	85	0	0	0	121	1	0	212
8:45 AM	0	0	0	0	0	0	3	0	0	80	0	0	0	116	0	0	199
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	11	0	24	0	8	802	0	0	0	894	3	0	1742
APPROACH %'s :					31.43%	0.00%	68.57%	0.00%	0.99%	99.01%	0.00%	0.00%	0.00%	99.67%	0.33%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	6	0	12	0	7	496	0	0	0	529	2	0	1052
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.300	0.000	0.750	0.000	0.583	0.912	0.000	0.000	0.000	0.769	0.250	0.000	0.939
					0.500				0.918				0.772				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	2	0	2	151	0	0	0	128	1	0	284
4:15 PM	0	0	0	0	1	0	2	0	3	128	0	0	0	129	1	0	264
4:30 PM	0	0	0	0	2	0	6	0	5	132	0	0	0	133	1	0	279
4:45 PM	0	0	0	0	1	0	3	0	6	142	0	0	0	154	1	0	307
5:00 PM	0	0	0	0	1	0	0	0	5	181	0	0	0	128	3	0	318
5:15 PM	0	0	0	0	2	0	1	0	4	137	0	0	0	109	3	0	256
5:30 PM	0	0	0	0	0	0	2	0	5	148	0	0	0	126	1	0	282
5:45 PM	0	0	0	0	2	0	4	0	7	151	0	0	0	110	0	0	274
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	9	0	20	0	37	1170	0	0	0	1017	11	0	2264
APPROACH %'s :					31.03%	0.00%	68.97%	0.00%	3.07%	96.93%	0.00%	0.00%	0.00%	98.93%	1.07%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	5	0	11	0	19	583	0	0	0	544	6	0	1168
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.625	0.000	0.458	0.000	0.792	0.805	0.000	0.000	0.000	0.883	0.500	0.000	0.918
					0.500				0.809				0.887				

Prepared by National Data & Surveying Services

Shady Glen Dr & E Fallbrook St

Peak Hour Turning Movement Count

ID: 20-040216-002
City: Fallbrook

Day: Tuesday
Date: 10/27/2020

PEAK HOURS		COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Shady Glen Dr — SOUTHBOUND

	Right	Through	Left	U-Turn	Out
AM	12	0	6	0	9
NOON	0	0	0	0	0
PM	11	0	5	0	25
Lanes	0	1	0	0	

E Fallbrook St — EASTBOUND

	AM	NOON	PM	Lanes
Out	541	0	555	
U-Turn	0	0	0	0
Left	7	0	19	0
Through	496	0	583	1
Right	0	0	0	0

E Fallbrook St — WESTBOUND

	PM	NOON	AM	Lanes
Right	6	0	2	0
Through	544	0	529	1
Left	0	0	0	0
U-Turn	0	0	0	0
Out	588	0	502	

Shady Glen Dr — NORTHBOUND

	Out	U-Turn	Left	Through	Right
Lanes		0	0	0	0
PM	0	0	0	0	0
NOON	0	0	0	0	0
AM	0	0	0	0	0

CONTROL

1-Way Stop (SB)

	AM	NOON	PM
TEV	1052	0	1168
PHF	0.94		0.92

Total Vehicles (AM)

Total Vehicles (NOON)

Total Vehicles (PM)

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (west side)	0	0	0
North leg (east side)	0	0	0
South leg (west side)	0	0	0
South leg (east side)	0	0	0
West leg (north side)	0	0	0
West leg (south side)	0	0	0
East leg (north side)	0	0	0
East leg (south side)	0	0	0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Morro Rd & E Fallbrook St
City: Fallbrook
Control: 2-Way Stop (NB/SB)

Project ID: 20-040216-003
Date: 10/27/2020

Total

NS/EW Streets:	Morro Rd				Morro Rd				E Fallbrook St				E Fallbrook St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	0	4	0	0	0	2	0	0	59	0	0	1	56	0	0	125
7:15 AM	6	0	9	0	1	0	0	0	0	83	0	0	0	61	0	0	160
7:30 AM	2	0	10	0	1	0	0	0	0	128	3	0	3	73	0	0	220
7:45 AM	9	0	8	0	0	0	2	0	0	138	4	0	0	126	1	0	288
8:00 AM	8	0	6	0	0	0	0	0	0	121	3	0	1	133	0	0	272
8:15 AM	9	0	7	0	0	0	0	0	0	104	6	0	6	171	0	0	303
8:30 AM	5	0	2	0	0	0	0	0	0	72	10	0	1	118	2	0	210
8:45 AM	8	0	2	0	1	0	0	0	0	71	8	0	1	104	1	0	196
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	50	0	48	0	3	0	4	0	0	776	34	0	13	842	4	0	1774
APPROACH %'s :	51.02%	0.00%	48.98%	0.00%	42.86%	0.00%	57.14%	0.00%	0.00%	95.80%	4.20%	0.00%	1.51%	98.02%	0.47%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	28	0	31	0	1	0	2	0	0	491	16	0	10	503	1	0	1083
PEAK HR FACTOR :	0.778	0.000	0.775	0.000	0.250	0.000	0.250	0.000	0.000	0.889	0.667	0.000	0.417	0.735	0.250	0.000	0.894
	0.868				0.375				0.893				0.726				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	0	1	0	0	0	2	0	1	134	12	0	2	109	0	0	270
4:15 PM	10	0	1	0	0	0	1	0	1	126	8	0	5	125	0	0	277
4:30 PM	4	0	3	0	0	0	1	0	0	114	11	0	7	125	1	0	266
4:45 PM	8	0	4	0	0	0	2	0	1	134	16	0	4	149	0	0	318
5:00 PM	7	0	4	0	0	0	3	0	2	161	12	0	6	124	0	0	319
5:15 PM	6	1	3	0	0	0	0	0	3	124	12	0	4	101	0	0	254
5:30 PM	10	0	3	0	1	0	2	0	2	133	7	0	5	120	1	0	284
5:45 PM	3	0	4	0	0	0	0	0	1	150	10	0	1	103	0	0	272
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	57	1	23	0	1	0	11	0	11	1076	88	0	34	956	2	0	2260
APPROACH %'s :	70.37%	1.23%	28.40%	0.00%	8.33%	0.00%	91.67%	0.00%	0.94%	91.57%	7.49%	0.00%	3.43%	96.37%	0.20%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	29	0	12	0	0	0	7	0	4	535	47	0	22	523	1	0	1180
PEAK HR FACTOR :	0.725	0.000	0.750	0.000	0.000	0.000	0.583	0.000	0.500	0.831	0.734	0.000	0.786	0.878	0.250	0.000	0.925
	0.854				0.583				0.837				0.892				

Prepared by National Data & Surveying Services

Morro Rd & E Fallbrook St

Peak Hour Turning Movement Count

ID: 20-040216-003
City: Fallbrook

Day: Tuesday
Date: 10/27/2020

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Morro Rd — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departing
AM	2	0	1	0	1
NOON	0	0	0	0	0
PM	7	0	0	0	5
	0	1	0	0	

E Fallbrook St — EASTBOUND

	AM	NOON	PM	
Departing	533	0	559	
U-Turn	0	0	0	0
Left	0	0	4	0
Thru	491	0	535	1
Right	16	0	47	0

E Fallbrook St — WESTBOUND

		PM	NOON	AM
Right	0	1	0	1
Thru	1	523	0	503
Left	0	22	0	10
U-Turn	0	0	0	0
Departing		547	0	523

Morro Rd — NORTHBOUND

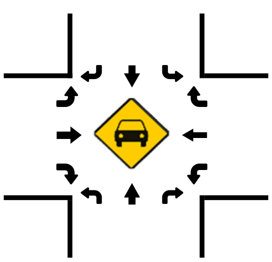
	Departing	U-Turn	Left	Thru	Right
		0	0	1	0
PM	69	0	29	0	12
NOON	0	0	0	0	0
AM	26	0	28	0	31

CONTROL

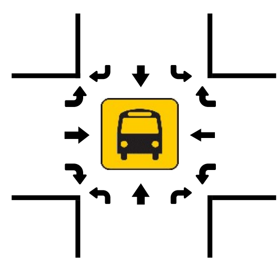
2-Way Stop (NB/SB)

	AM	NOON	PM
TEV	1083	0	1180
PHF	0.89		0.92

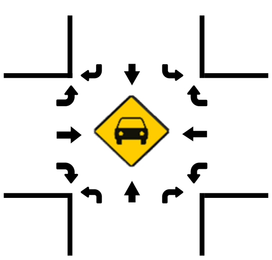
Total Vehicles (AM)



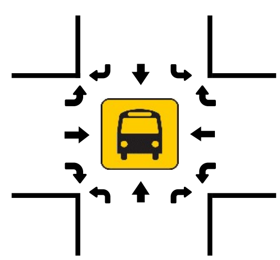
Total Vehicles (AM)



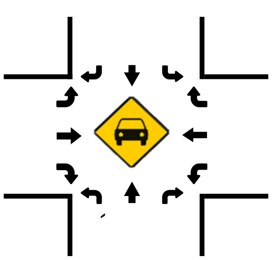
Total Vehicles (NOON)



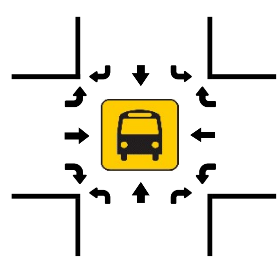
Total Vehicles (NOON)



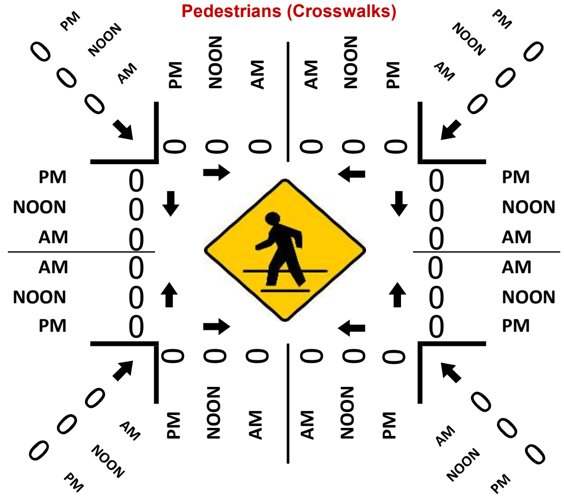
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



Crosswalk	AM	NOON	PM
North (west half)	0	0	0
North (east half)	0	0	0
West (north half)	0	0	0
West (south half)	0	0	0
East (north half)	0	0	0
East (south half)	0	0	0
South (west half)	0	0	0
South (east half)	0	0	0
Diagonal NW	0	0	0
Diagonal NE	0	0	0
Diagonal SW	0	0	0
Diagonal SE	0	0	0

Prepared by NDS/ATD

VOLUME

Fallbrook St W/O McDonald Rd

Day: Thursday
Date: 4/9/2015

City: Fallbrook
Project #: CA15_4086_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,020	0	7,020

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					7		0		7		12:00					107		0		107	
00:15					4		0		4		12:15					95		0		95	
00:30					8		0		8		12:30					91		0		91	
00:45					6	25	0		6	25	12:45					101	394	0		101	394
01:00					0		0		0		13:00					110		0		110	
01:15					4		0		4		13:15					114		0		114	
01:30					1		0		1		13:30					135		0		135	
01:45					0	5	0		0	5	13:45					139	498	0		139	498
02:00					1		0		1		14:00					145		0		145	
02:15					1		0		1		14:15					135		0		135	
02:30					1		0		1		14:30					133		0		133	
02:45					0	3	0		0	3	14:45					153	566	0		153	566
03:00					0		0		0		15:00					137		0		137	
03:15					3		0		3		15:15					141		0		141	
03:30					2		0		2		15:30					139		0		139	
03:45					1	6	0		1	6	15:45					145	562	0		145	562
04:00					4		0		4		16:00					143		0		143	
04:15					9		0		9		16:15					143		0		143	
04:30					18		0		18		16:30					149		0		149	
04:45					16	47	0		16	47	16:45					151	586	0		151	586
05:00					24		0		24		17:00					166		0		166	
05:15					24		0		24		17:15					181		0		181	
05:30					28		0		28		17:30					160		0		160	
05:45					53	129	0		53	129	17:45					149	656	0		149	656
06:00					52		0		52		18:00					129		0		129	
06:15					79		0		79		18:15					112		0		112	
06:30					99		0		99		18:30					107		0		107	
06:45					95	325	0		95	325	18:45					87	435	0		87	435
07:00					85		0		85		19:00					82		0		82	
07:15					161		0		161		19:15					89		0		89	
07:30					157		0		157		19:30					79		0		79	
07:45					154	557	0		154	557	19:45					66	316	0		66	316
08:00					97		0		97		20:00					59		0		59	
08:15					84		0		84		20:15					63		0		63	
08:30					75		0		75		20:30					52		0		52	
08:45					94	350	0		94	350	20:45					55	229	0		55	229
09:00					77		0		77		21:00					35		0		35	
09:15					72		0		72		21:15					46		0		46	
09:30					82		0		82		21:30					36		0		36	
09:45					95	326	0		95	326	21:45					40	157	0		40	157
10:00					78		0		78		22:00					28		0		28	
10:15					88		0		88		22:15					19		0		19	
10:30					101		0		101		22:30					20		0		20	
10:45					98	365	0		98	365	22:45					10	77	0		10	77
11:00					80		0		80		23:00					18		0		18	
11:15					89		0		89		23:15					8		0		8	
11:30					90		0		90		23:30					11		0		11	
11:45					102	361	0		102	361	23:45					8	45	0		8	45
TOTALS						2499				**2499**	**TOTALS**						4521				**4521**
SPLIT %						100.0%				**35.6%**	**SPLIT %**						100.0%				**64.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,020	0	7,020

	NB	SB	EB	WB	TOTAL		NB	SB	EB	WB	TOTAL
AM Peak Hour			07:15		**07:15**	**PM Peak Hour**			16:45		**16:45**
AM Pk Volume			569		**569**	**PM Pk Volume**			658		**658**
Pk Hr Factor			0.884		**0.884**	**Pk Hr Factor**			0.909		**0.909**
7 - 9 Volume	0	0	907	0	**907**	**4 - 6 Volume**	0	0	1242	0	**1242**
7 - 9 Peak Hour			07:15		**07:15**	**4 - 6 Peak Hour**			16:45		**16:45**
7 - 9 Pk Volume	0	0	569	0	**569**	**4 - 6 Pk Volume**	0	0	658	0	**658**
Pk Hr Factor	0.000	0.000	0.884	0.000	**0.884**	**Pk Hr Factor**	0.000	0.000	0.909	0.000	**0.909**

COMPARISON: HISTORICAL COUNTS TO EXISTING COUNTS					
Roadway Segment	Direction of Travel	2015 ADT	2020 ADT	Total Growth	Average Annual Growth Rate
Falbrook Street w/o McDonald Road	EB	7,020	6,689	4.72%	0.94%
	WB	6,855[1]	6,531	4.73%	0.95%
	TOTAL	13,875	13,220	4.72%	0.94%

Note:

[1] Historical count only included data for the Eastbound approach. 2020 EB/WB split was used to estimate 2015 WB data.

Roadway	Segment	October 2020	Total Growth	Estimated ADT (Existing Conditions)
Fallbrook Street	Potter Street / Golden Road to Shady Glen Road	13,220	4.72%	13,844
Fallbrook Street	Shady Glen Road to Morro Drive	13,220		13,844

Appendix B
Excerpt of County of San Diego Transportation Study Guidelines

4.5. LMA Methodology

4.5.1. Signalized Intersections Methodology

Traffic operational impacts at signalized intersections should be analyzed using standard or state-of-the-practice procedures such as Highway Capacity Manual (HCM) analysis. At isolated intersections that are not heavily congested, deterministic methods that apply HCM equations for each intersection in isolation can be used. HCM 6th Edition is the latest version which reflects current state-of-the-practice methodology. There are several software packages that use deterministic methods such as Synchro, Vistro (previously Traffix), and Highway Capacity Software. The HCM methodology assigns a LOS grade to an intersection based on estimated delay.

For intersections that are closely spaced, have a unique geometry, or are part of a congested corridor, micro-simulation analysis should be performed. Micro-simulation can more accurately evaluate intersections with unique characteristics or in congested systems because the method accounts for how intersections within a system interact with one another. For example, if a vehicle queue extends from an intersection and blocks a different intersection, micro-simulation will account for that condition, whereas deterministic methods will not. Micro-simulation should also be considered when determining required turn lane storage if the analyst believes deterministic methods are not producing reasonable maximum or 95th percentile queue lengths. There are several micro-simulation software packages such as SimTraffic (which is a module of Synchro) and Vissim.

It is recommended that the methodology and software proposed for use is coordinated with County staff as part of the Scoping Agreement process. County staff may also request the consultant provide micro-simulation electronic files for review.

The following provides general guidelines for the parameters necessary to perform the analysis. For evaluating existing and project buildout conditions within five years of commencement of the LMA, the parameters should generally be based on field measurements taken during traffic data collection or field observation. For new study intersections or to analyze a buildout year that is beyond five years of commencement of the LMA, the guidelines in **Table 6** can be used to determine input parameters.

TABLE 6 - SIGNALIZED INTERSECTIONS PARAMETERS

Parameter	Guidance
Intersection Delay	Average intersection delay (and associated HCM level of service) should be reported for signalized intersections.
Peak Hour Factor (PHF)	Use the measured PHF by intersection approach that is obtained during traffic data collection. For new intersections or to analyze conditions beyond five years of commencing the LMA, refer to the HCM and maintain consistency across analysis periods, scenarios, and intersections.
Saturation Flow Rate	Use typical saturation flow rate presented in the HCM. The current typical saturation flow rate is 1,800 vehicles per hour per lane.

Signal Timing	Obtain signal timing plans from the appropriate agency and use the timing (by time of day if provided) for the analysis. For new traffic signals use a maximum cycle length of 120 seconds for intersections near freeway interchanges or at the intersection of two arterial roadways. For all other conditions use a maximum of 90 seconds. For all conditions, ensure that the minimum pedestrian crossing times are utilized.
Conflicting Pedestrians and Pedestrian Calls	Use pedestrian count data if available. If not available refer to the HCM for appropriate minimum values.
Heavy Truck Percentage	If available, use observed values from field observations or traffic counts. If unavailable, the minimum recommended value is 3%. Heavy truck percentages should be higher on truck routes.
Lane Utilization Factor	If applicable, adjust the lane utilization factor based on field observations. Otherwise, refer to the HCM.
Queue & Storage Analysis	HCM should be utilized to compare turn volumes with the length of available storage.

An improvement is required at a signalized intersection if any of the following are triggered:

- Consistent with County General Plan Policy, any intersection that is operating at an acceptable LOS or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS E or F should identify improvements to improve operations to LOS D or better.
- Any signalized study intersection that is operating at LOS E or F without project traffic where the project increased delay by 5.0 or more seconds should identify improvements to offset the increase in delay.
- If the left turn volume exceeds 100 vehicles per hour, an exclusive left turn lane is recommended.
- If the left turn volume exceeds 150 vehicles per hour and posted speed 45 mph or greater, a protected left turn signal phase is recommended.
- If the left turn volume exceeds 300 vehicles per hour, a second left turn lane is recommended.
- If the right turn volume exceeds 150 vehicles per hour, a dedicated right turn lane is recommended.
- The project causes the 95th percentile queue at a turn lane to exceed the existing turn lane length/storage.

The following types of typical improvements for signalized intersections:

- Addition of left or right turn lanes.
- Lengthening a turn lane.
- Signal timing/phasing/coordination/equipment improvements or transportation system management (TSM).
- ADA signal accessible improvements.
- The County may also require upgrades to meet current design standards or better accommodate pedestrian and bicycle mobility consistent with the County Active Transportation Plan.

4.5.2. Unsignalized Intersections Methodology

Traffic operational impacts at unsignalized intersections (all-way stop, side-street stop, and roundabout intersections) should be analyzed using standard or state-of-the-practice procedures consistent with acceptable LOS as outlined in the County General Plan. The software packages and methods described for signalized intersections also apply to stop controlled intersections.

All-way stop intersections and roundabouts should be reported for the entire intersection average value.

Minor side-street stop intersections should be reported for the worst-case movement.

An improvement is required at side street stop unsignalized intersection if:

- The project causes the average intersection delay to be LOS E or F during the peak hour.
- If the worst-case movement is currently operating at LOS E or F:
  - The project adds 5 or more seconds of *overall intersection.*

    AND

  - The project adds ten (10) or more trips to the worst-case movement OR 50 or more trips to the overall intersection.
- The intersection meets the peak hour traffic signal warrants after the addition of project traffic per the *California Manual on Uniform Traffic Control Devices* (CA MUTCD–latest edition). An investigation of the need for a traffic control signal may also include an analysis of factors related to the existing operations and safety at a study intersection and the potential to improve these conditions. A warrant analysis is not required for right turn in/right turn out only intersections or driveways that are physically restricted by raised center median.

An improvement is required at all-way stop and roundabout unsignalized intersection if:

- The project causes the average intersection delay to be LOS E or F during the peak hour.
- The project adds 5 or more seconds of delay to an intersection that is currently operating at LOS E or F during the peak hour.

- The intersection meets the peak hour traffic signal warrants after the addition of project traffic per the *California Manual on Uniform Traffic Control Devices* (CA MUTCD–latest edition). An investigation of the need for a traffic control signal may also include an analysis of factors related to the existing operations and safety at a study intersection and the potential to improve these conditions. A warrant analysis is not required for right turn in/right turn out only intersections or driveways that are physically restricted by raised center median.

The following types of typical improvements improve operations for unsignalized intersections:

- Install All-Way Stop Control.
- Install Two-Way Stop Control.
- Provide Left Turn Lane.
- Provide Right Turn Lane.
- Install Bypass Lane.
- Install Center Acceleration Lane.
- Install new traffic control device (Perform intersection control evaluation (ICE), see below).
- The County may also require upgrades to meet current design standards or better accommodate pedestrian and bicycle mobility consistent with the County ATP.

4.5.3. Intersection Control Evaluation (ICE)

The selection of the appropriate intersection control evaluation (ICE) should be guided by performance-based evaluations that objectively consider the range of project solutions and control strategies for a given project context. Traffic operations and safety performance are key inputs into the ICE framework. Consistent with the California MUTCD, the County of San Diego recognizes the roundabout as a standard form of intersection control. Roundabouts can provide increased efficiency of operations and enhanced safety. Should a project recommend the construction of a new signalized intersection or control measure, the County recommends the intersection be further analyzed using Caltrans ICE methodology. If the analysis screening indicates that a roundabout should be evaluated, the analysis should be conducted using one of the following methodologies: SIDRA or RODEL. These models are consistent with HCM 2010 and HCM Edition 6 models.

There are various reference and informational guides that discuss applications, designs, and performance characteristics of different intersection types and control strategies are available to support screening, analyzing and designing roundabouts.

https://safety.fhwa.dot.gov/intersection/ice/fhwasa18076/fhwasa18076.pdf

https://safety.fhwa.dot.gov/intersection/innovative/roundabouts/

https://dot.ca.gov/programs/traffic-operations/intersection-evaluation-control

It is recommended that early consultation occur with County staff when the Transportation Study determines the need for a new intersection control measure. A roundabout option should be screened early in the draft Transportation Study. During this process, the applicant's consultant may request a meeting with County staff to clarify study requirements or comments received on the draft study related to the need to conduct an ICE study.

4.5.4. Roadway Segments Methodology

Intersections are typically the constraint when analyzing traffic operations. However, in some cases for larger projects, a roadway segment assessment may be appropriate and requested by County staff.

Roadway segment analysis should be performed using thresholds from the latest HCM methodology that reflects the current state-of-the-practice. The HCM methodology assigns a LOS grade to the roadway segment and is evaluated based on acceptable LOS as identified in the County General Plan and Public Road Standards based on facility classification type.

https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/references/rtcref/ch3.1.8/2014-12-19_CountyofSanDiego2012_PublicRoadStandards.pdf

4.5.5. Site Access, Safety, and Other Analyses

The proper application of access management and basic site planning principles is essential to all transportation analysis. The design of site circulation, parking, and access should also easily accommodate bus and pedestrian movements. The following factors should be considered when evaluating existing and/or post-project traffic conditions to address identified traffic operations and safety concerns:

1. Intersection phasing and queuing
2. Inadequate weaving distance with increasing traffic volumes
3. Inadequate deceleration length with increasing traffic volumes
4. Speed differentials from vehicles slowing or stopping
5. Inadequate decision sight distance
6. Access management
7. Driveway location and design
8. Bicycle, pedestrian and transit accessibility

Appendix C
Peak Hour Intersection Capacity Worksheets Existing Conditions

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	483	7	6	517	51	10	3	7	36	4	55
Future Vol, veh/h	33	483	7	6	517	51	10	3	7	36	4	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	106	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	525	8	7	562	55	11	3	8	39	4	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	617	0	0	533	0	0	1237	1232	529	1183	1181	562
Stage 1	-	-	-	-	-	-	601	601	-	576	576	-
Stage 2	-	-	-	-	-	-	636	631	-	607	605	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	963	-	-	1035	-	-	153	177	550	166	190	526
Stage 1	-	-	-	-	-	-	487	489	-	503	502	-
Stage 2	-	-	-	-	-	-	466	474	-	483	487	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	963	-	-	1035	-	-	129	169	550	156	182	526
Mov Cap-2 Maneuver	-	-	-	-	-	-	129	169	-	156	182	-
Stage 1	-	-	-	-	-	-	469	471	-	484	498	-
Stage 2	-	-	-	-	-	-	407	471	-	455	469	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	27	26.9
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	185	963	-	-	1035	-	-	266
HCM Lane V/C Ratio	0.118	0.037	-	-	0.006	-	-	0.388
HCM Control Delay (s)	27	8.9	-	-	8.5	-	-	26.9
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	1.8

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	520	554	3	7	13
Future Vol, veh/h	8	520	554	3	7	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	553	589	3	7	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	592	0	-	0	1162	591
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	571	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	984	-	-	-	216	507
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	565	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	984	-	-	-	214	507
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	565	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	984	-	-	-	439
HCM Lane V/C Ratio	0.009	-	-	-	0.048
HCM Control Delay (s)	8.7	-	-	-	13.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	515	17	11	527	2	30	0	33	2	0	3
Future Vol, veh/h	0	515	17	11	527	2	30	0	33	2	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	579	19	12	592	2	34	0	37	2	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	594	0	0	598	0	0	1208	1207	589	1224	1215	593
Stage 1	-	-	-	-	-	-	589	589	-	617	617	-
Stage 2	-	-	-	-	-	-	619	618	-	607	598	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	982	-	-	979	-	-	160	183	508	156	181	506
Stage 1	-	-	-	-	-	-	494	495	-	477	481	-
Stage 2	-	-	-	-	-	-	476	481	-	483	491	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	982	-	-	979	-	-	157	181	508	143	179	506
Mov Cap-2 Maneuver	-	-	-	-	-	-	157	181	-	143	179	-
Stage 1	-	-	-	-	-	-	494	495	-	477	475	-
Stage 2	-	-	-	-	-	-	467	475	-	448	491	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	25.4	19.7
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	246	982	-	-	979	-	-	251
HCM Lane V/C Ratio	0.288	-	-	-	0.013	-	-	0.022
HCM Control Delay (s)	25.4	0	-	-	8.7	-	-	19.7
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	97	592	14	6	544	37	10	6	5	34	7	60
Future Vol, veh/h	97	592	14	6	544	37	10	6	5	34	7	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	106	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	643	15	7	591	40	11	7	5	37	8	65

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	631	0	0	658	0	0	1523	1506	651	1472	1473	591
Stage 1	-	-	-	-	-	-	861	861	-	605	605	-
Stage 2	-	-	-	-	-	-	662	645	-	867	868	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	951	-	-	930	-	-	97	121	469	105	127	507
Stage 1	-	-	-	-	-	-	350	372	-	485	487	-
Stage 2	-	-	-	-	-	-	451	467	-	348	370	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	951	-	-	930	-	-	73	107	469	90	112	507
Mov Cap-2 Maneuver	-	-	-	-	-	-	73	107	-	90	112	-
Stage 1	-	-	-	-	-	-	312	331	-	432	483	-
Stage 2	-	-	-	-	-	-	384	463	-	300	329	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.1	49.6	51.5
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	103	951	-	-	930	-	-	181
HCM Lane V/C Ratio	0.222	0.111	-	-	0.007	-	-	0.607
HCM Control Delay (s)	49.6	9.3	-	-	8.9	-	-	51.5
HCM Lane LOS	E	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.8	0.4	-	-	0	-	-	3.4

Intersection						
Int Delay, s/veh	0.4					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	611	570	7	6	12
Future Vol, veh/h	20	611	570	7	6	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	650	606	7	6	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	613	0	-	0	1302	610
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	692	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	966	-	-	-	177	494
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	497	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	966	-	-	-	173	494
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	497	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	966	-	-	-	414
HCM Lane V/C Ratio	0.022	-	-	-	0.046
HCM Control Delay (s)	8.8	-	-	-	14.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	561	50	24	548	2	31	0	13	0	0	8
Future Vol, veh/h	5	561	50	24	548	2	31	0	13	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	630	56	27	616	2	35	0	15	0	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	618	0	0	686	0	0	1346	1342	658	1349	1369	617
Stage 1	-	-	-	-	-	-	670	670	-	671	671	-
Stage 2	-	-	-	-	-	-	676	672	-	678	698	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	962	-	-	908	-	-	128	152	464	128	146	490
Stage 1	-	-	-	-	-	-	446	455	-	446	455	-
Stage 2	-	-	-	-	-	-	443	454	-	442	442	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	962	-	-	908	-	-	122	147	464	121	141	490
Mov Cap-2 Maneuver	-	-	-	-	-	-	122	147	-	121	141	-
Stage 1	-	-	-	-	-	-	443	452	-	443	441	-
Stage 2	-	-	-	-	-	-	422	440	-	425	439	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	38.4	12.5
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	156	962	-	-	908	-	-	490
HCM Lane V/C Ratio	0.317	0.006	-	-	0.03	-	-	0.018
HCM Control Delay (s)	38.4	8.8	-	-	9.1	-	-	12.5
HCM Lane LOS	E	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.3	0	-	-	0.1	-	-	0.1

Appendix D
Peak Hour Intersection Capacity Worksheets Near-Term Year 2022 Base Conditions

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	497	8	7	532	53	11	4	8	38	5	57
Future Vol, veh/h	34	497	8	7	532	53	11	4	8	38	5	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	106	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	540	9	8	578	58	12	4	9	41	5	62

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	636	0	0	549	0	0	1276	1271	545	1219	1217	578
Stage 1	-	-	-	-	-	-	619	619	-	594	594	-
Stage 2	-	-	-	-	-	-	657	652	-	625	623	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	947	-	-	1021	-	-	144	168	538	157	181	516
Stage 1	-	-	-	-	-	-	476	480	-	491	493	-
Stage 2	-	-	-	-	-	-	454	464	-	473	478	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	947	-	-	1021	-	-	119	160	538	146	172	516
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	160	-	146	172	-
Stage 1	-	-	-	-	-	-	457	461	-	472	489	-
Stage 2	-	-	-	-	-	-	392	460	-	443	459	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	29.1	30
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	174	947	-	-	1021	-	-	250
HCM Lane V/C Ratio	0.144	0.039	-	-	0.007	-	-	0.435
HCM Control Delay (s)	29.1	9	-	-	8.6	-	-	30
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	2.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	535	570	4	8	14
Future Vol, veh/h	9	535	570	4	8	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	569	606	4	9	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	610	0	-	0	1197	608
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	589	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	969	-	-	-	205	496
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	554	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	969	-	-	-	203	496
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	554	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	969	-	-	-	426
HCM Lane V/C Ratio	0.01	-	-	-	0.055
HCM Control Delay (s)	8.8	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	530	18	12	543	3	31	0	34	3	0	4
Future Vol, veh/h	0	530	18	12	543	3	31	0	34	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	596	20	13	610	3	35	0	38	3	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	613	0	0	616	0	0	1246	1245	606	1263	1254	612
Stage 1	-	-	-	-	-	-	606	606	-	638	638	-
Stage 2	-	-	-	-	-	-	640	639	-	625	616	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	966	-	-	964	-	-	151	174	497	147	172	493
Stage 1	-	-	-	-	-	-	484	487	-	465	471	-
Stage 2	-	-	-	-	-	-	464	470	-	473	482	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	966	-	-	964	-	-	148	172	497	134	170	493
Mov Cap-2 Maneuver	-	-	-	-	-	-	148	172	-	134	170	-
Stage 1	-	-	-	-	-	-	484	487	-	465	465	-
Stage 2	-	-	-	-	-	-	454	464	-	437	482	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	27.2	21.3
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	234	966	-	-	964	-	-	229
HCM Lane V/C Ratio	0.312	-	-	-	0.014	-	-	0.034
HCM Control Delay (s)	27.2	0	-	-	8.8	-	-	21.3
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	610	15	7	560	39	11	7	6	35	8	62
Future Vol, veh/h	100	610	15	7	560	39	11	7	6	35	8	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	106	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	109	663	16	8	609	42	12	8	7	38	9	67

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	651	0	0	679	0	0	1573	1556	671	1522	1522	609
Stage 1	-	-	-	-	-	-	889	889	-	625	625	-
Stage 2	-	-	-	-	-	-	684	667	-	897	897	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	935	-	-	913	-	-	89	113	456	97	118	495
Stage 1	-	-	-	-	-	-	338	361	-	473	477	-
Stage 2	-	-	-	-	-	-	439	457	-	334	358	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	935	-	-	913	-	-	65	99	456	81	103	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	65	99	-	81	103	-
Stage 1	-	-	-	-	-	-	298	319	-	418	473	-
Stage 2	-	-	-	-	-	-	369	453	-	284	316	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.1	56.7	65.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	95	935	-	-	913	-	-	165
HCM Lane V/C Ratio	0.275	0.116	-	-	0.008	-	-	0.692
HCM Control Delay (s)	56.7	9.4	-	-	9	-	-	65.2
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1	0.4	-	-	0	-	-	4.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	629	587	8	7	13
Future Vol, veh/h	21	629	587	8	7	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	669	624	9	7	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	633	0	-	0	1342	629
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	713	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	950	-	-	-	168	482
Stage 1	-	-	-	-	531	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	950	-	-	-	164	482
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	486	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	950	-	-	-	400
HCM Lane V/C Ratio	0.024	-	-	-	0.053
HCM Control Delay (s)	8.9	-	-	-	14.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	578	52	25	564	3	32	0	14	0	0	9
Future Vol, veh/h	6	578	52	25	564	3	32	0	14	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	649	58	28	634	3	36	0	16	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	637	0	0	707	0	0	1389	1385	678	1392	1413	636
Stage 1	-	-	-	-	-	-	692	692	-	692	692	-
Stage 2	-	-	-	-	-	-	697	693	-	700	721	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	947	-	-	891	-	-	120	143	452	119	138	478
Stage 1	-	-	-	-	-	-	434	445	-	434	445	-
Stage 2	-	-	-	-	-	-	431	445	-	430	432	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	947	-	-	891	-	-	114	138	452	112	133	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	114	138	-	112	133	-
Stage 1	-	-	-	-	-	-	431	442	-	431	431	-
Stage 2	-	-	-	-	-	-	409	431	-	412	429	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	41.8	12.7
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	148	947	-	-	891	-	-	478
HCM Lane V/C Ratio	0.349	0.007	-	-	0.032	-	-	0.021
HCM Control Delay (s)	41.8	8.8	-	-	9.2	-	-	12.7
HCM Lane LOS	E	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.4	0	-	-	0.1	-	-	0.1

Appendix E
Peak Hour Intersection Capacity Worksheets Near-Term Year 2022 Base with Project Conditions

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	498	8	7	533	53	11	4	8	38	5	57
Future Vol, veh/h	34	498	8	7	533	53	11	4	8	38	5	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	106	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	541	9	8	579	58	12	4	9	41	5	62

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	637	0	0	550	0	0	1278	1273	546	1221	1219	579
Stage 1	-	-	-	-	-	-	620	620	-	595	595	-
Stage 2	-	-	-	-	-	-	658	653	-	626	624	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	947	-	-	1020	-	-	143	167	538	157	180	515
Stage 1	-	-	-	-	-	-	476	480	-	491	492	-
Stage 2	-	-	-	-	-	-	453	464	-	472	478	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	947	-	-	1020	-	-	118	159	538	146	172	515
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	159	-	146	172	-
Stage 1	-	-	-	-	-	-	457	461	-	472	488	-
Stage 2	-	-	-	-	-	-	391	460	-	442	459	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	29.3	30
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	173	947	-	-	1020	-	-	250
HCM Lane V/C Ratio	0.145	0.039	-	-	0.007	-	-	0.435
HCM Control Delay (s)	29.3	9	-	-	8.6	-	-	30
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	2.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	535	1	1	570	4	1	1	1	8	1	14
Future Vol, veh/h	9	535	1	1	570	4	1	1	1	8	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	92	92	94	94	92	92	92	94	92	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	569	1	1	606	4	1	1	1	9	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	610	0	0	570	0	0	1208	1202	570	1201	1200	608
Stage 1	-	-	-	-	-	-	590	590	-	610	610	-
Stage 2	-	-	-	-	-	-	618	612	-	591	590	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	969	-	-	1002	-	-	160	185	521	162	185	496
Stage 1	-	-	-	-	-	-	494	495	-	482	485	-
Stage 2	-	-	-	-	-	-	477	484	-	493	495	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	969	-	-	1002	-	-	153	183	521	159	183	496
Mov Cap-2 Maneuver	-	-	-	-	-	-	153	183	-	159	183	-
Stage 1	-	-	-	-	-	-	489	490	-	477	484	-
Stage 2	-	-	-	-	-	-	461	483	-	486	490	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	21.9	19.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	216	969	-	-	1002	-	-	274
HCM Lane V/C Ratio	0.015	0.01	-	-	0.001	-	-	0.089
HCM Control Delay (s)	21.9	8.8	-	-	8.6	-	-	19.4
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	531	18	12	544	3	31	0	34	3	0	4
Future Vol, veh/h	0	531	18	12	544	3	31	0	34	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	597	20	13	611	3	35	0	38	3	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	614	0	0	617	0	0	1248	1247	607	1265	1256	613
Stage 1	-	-	-	-	-	-	607	607	-	639	639	-
Stage 2	-	-	-	-	-	-	641	640	-	626	617	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	965	-	-	963	-	-	150	173	496	146	171	492
Stage 1	-	-	-	-	-	-	483	486	-	464	470	-
Stage 2	-	-	-	-	-	-	463	470	-	472	481	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	965	-	-	963	-	-	147	171	496	133	169	492
Mov Cap-2 Maneuver	-	-	-	-	-	-	147	171	-	133	169	-
Stage 1	-	-	-	-	-	-	483	486	-	464	464	-
Stage 2	-	-	-	-	-	-	453	464	-	436	481	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	27.4	21.4
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	233	965	-	-	963	-	-	228
HCM Lane V/C Ratio	0.313	-	-	-	0.014	-	-	0.034
HCM Control Delay (s)	27.4	0	-	-	8.8	-	-	21.4
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	612	15	7	562	39	11	7	6	35	8	62
Future Vol, veh/h	100	612	15	7	562	39	11	7	6	35	8	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	106	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	109	665	16	8	611	42	12	8	7	38	9	67

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	653	0	0	681	0	0	1577	1560	673	1526	1526	611
Stage 1	-	-	-	-	-	-	891	891	-	627	627	-
Stage 2	-	-	-	-	-	-	686	669	-	899	899	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	934	-	-	912	-	-	89	112	455	96	118	494
Stage 1	-	-	-	-	-	-	337	361	-	471	476	-
Stage 2	-	-	-	-	-	-	438	456	-	334	358	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	934	-	-	912	-	-	65	98	455	81	103	494
Mov Cap-2 Maneuver	-	-	-	-	-	-	65	98	-	81	103	-
Stage 1	-	-	-	-	-	-	298	319	-	416	472	-
Stage 2	-	-	-	-	-	-	368	452	-	284	316	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.1	56.7	65.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	95	934	-	-	912	-	-	165
HCM Lane V/C Ratio	0.275	0.116	-	-	0.008	-	-	0.692
HCM Control Delay (s)	56.7	9.4	-	-	9	-	-	65.2
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1	0.4	-	-	0	-	-	4.1

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	629	2	2	587	8	2	1	3	7	1	13
Future Vol, veh/h	21	629	2	2	587	8	2	1	3	7	1	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	92	92	94	94	92	92	92	94	92	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	669	2	2	624	9	2	1	3	7	1	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	633	0	0	671	0	0	1354	1351	670	1349	1348	629
Stage 1	-	-	-	-	-	-	714	714	-	633	633	-
Stage 2	-	-	-	-	-	-	640	637	-	716	715	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	950	-	-	919	-	-	127	150	457	128	151	482
Stage 1	-	-	-	-	-	-	422	435	-	468	473	-
Stage 2	-	-	-	-	-	-	464	471	-	421	434	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	950	-	-	919	-	-	120	146	457	124	147	482
Mov Cap-2 Maneuver	-	-	-	-	-	-	120	146	-	124	147	-
Stage 1	-	-	-	-	-	-	412	425	-	457	472	-
Stage 2	-	-	-	-	-	-	448	470	-	407	424	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	23.7	22.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	199	950	-	-	919	-	-	233
HCM Lane V/C Ratio	0.033	0.024	-	-	0.002	-	-	0.096
HCM Control Delay (s)	23.7	8.9	-	-	8.9	-	-	22.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	581	52	25	566	3	32	0	14	0	0	9
Future Vol, veh/h	6	581	52	25	566	3	32	0	14	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	653	58	28	636	3	36	0	16	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	639	0	0	711	0	0	1395	1391	682	1398	1419	638
Stage 1	-	-	-	-	-	-	696	696	-	694	694	-
Stage 2	-	-	-	-	-	-	699	695	-	704	725	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	945	-	-	888	-	-	119	142	450	118	137	477
Stage 1	-	-	-	-	-	-	432	443	-	433	444	-
Stage 2	-	-	-	-	-	-	430	444	-	428	430	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	945	-	-	888	-	-	113	136	450	111	132	477
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	136	-	111	132	-
Stage 1	-	-	-	-	-	-	429	440	-	430	430	-
Stage 2	-	-	-	-	-	-	408	430	-	410	427	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	42.6	12.7
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	146	945	-	-	888	-	-	477
HCM Lane V/C Ratio	0.354	0.007	-	-	0.032	-	-	0.021
HCM Control Delay (s)	42.6	8.8	-	-	9.2	-	-	12.7
HCM Lane LOS	E	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.5	0	-	-	0.1	-	-	0.1

Appendix F
All-Way Stop-Control Warrant and Traffic Signal Warrant Analyses

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE October 27, 2020
CALC ______ DATE ______
CHK ______ DATE ______

DIST ____ CO ____ RTE ____ PM ____

Major St: Fallbrook Street
Minor St: Potters Street / Golden Road

Critical Approach Speed 40MPH mph
Critical Approach Speed N/A mph

Speed limit or critical speed on major street traffic > 40 mph........ ☒ or
In built up area of isolated community of < 10,000 population........ ☐ } RURAL (R)
☐ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☒
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume
100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)											
	U	R	U	R								
APPROACH LANES	1		2 or More		9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM Hour
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	610	840	803	905	742	697	772	695
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	No ADT counts along minor roads							

Condition B - Interruption of Continuous Traffic
100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)											
	U	R	U	R								
APPROACH LANES	1		2 or More		9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM Hour
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	610	840	803	905	742	697	772	695
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	No ADT counts along minor roads							

Combination of Conditions A & B SATISFIED YES ☐ NO ☒

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☒
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

[a] Basic minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume — **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied) — **SATISFIED YES ☐ NO ☐**

PART A — **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

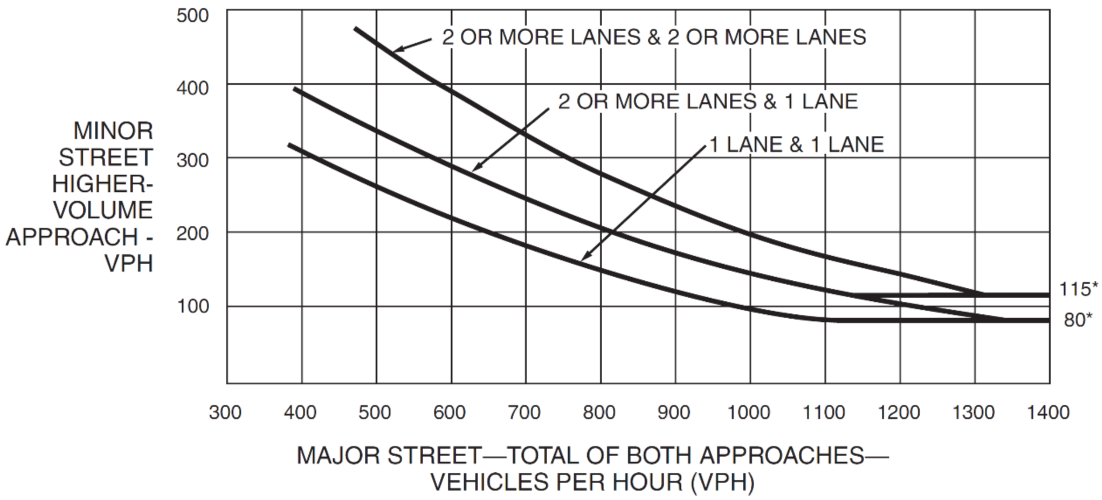
PART B — **SATISFIED YES ☐ NO ☐**

APPROACH LANES	One	2 or More	4:15 PM	Hour
Both Approaches - Major Street	1,229			
Higher Approach - Minor Street	95			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

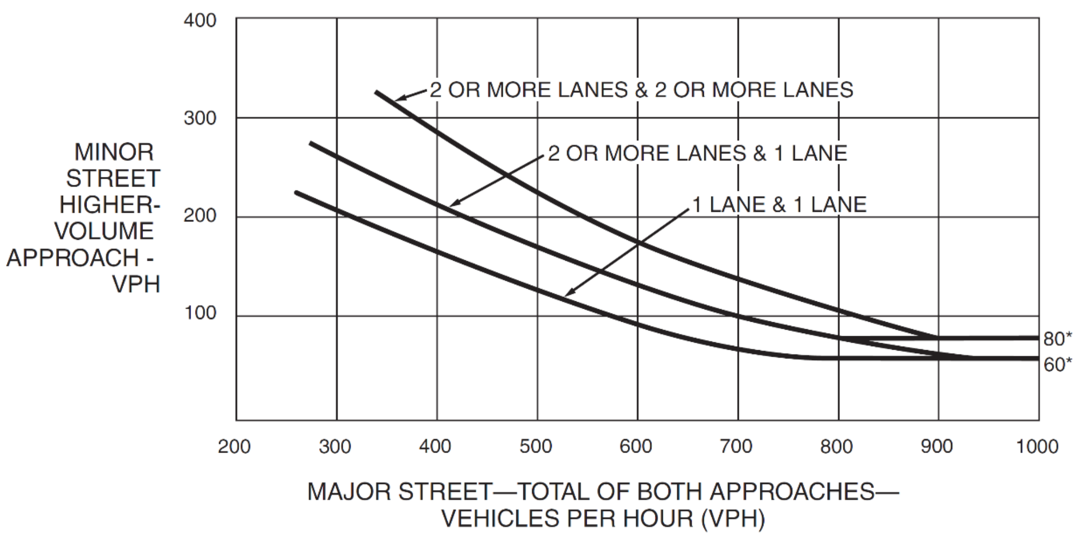
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

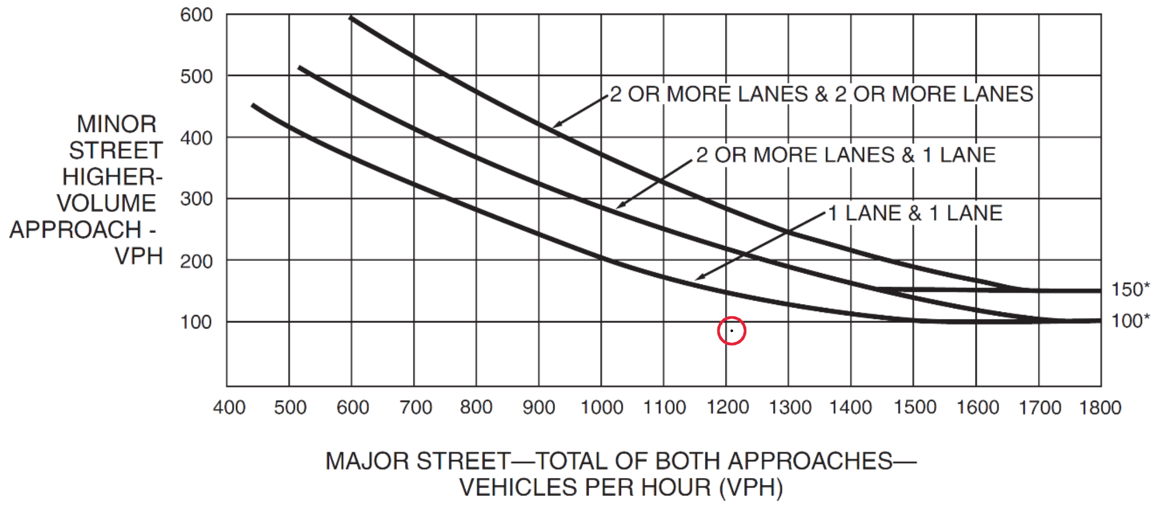
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

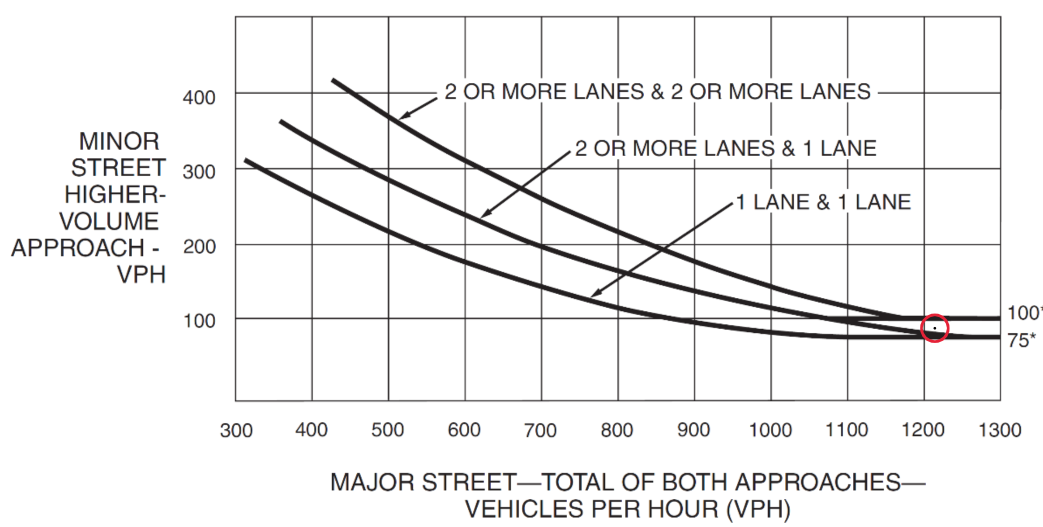
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 3 of 5)

WARRANT 4 - Pedestrian Volume
(Parts 1 and 2 Must Be Satisfied)

SATISFIED YES ☐ NO ☐

Part 1 **(Parts A or B must be satisfied)**

A.

Hours - - ->					
Vehicles per hour for any 4 hours					
Pedestrians per hour for any 4 hours					

Figure 4C-5 or Figure 4C-6
SATISFIED YES ☐ NO ☐

B.

Hours - - ->					
Vehicles per hour for any 1 hour					
Pedestrians per hour for any 1 hour					

Figure 4C-7 or Figure 4C-8
SATISFIED YES ☐ NO ☐

Part 2 **SATISFIED YES ☐ NO ☐**

AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street.	Yes ☐ No ☐

WARRANT 5 - School Crossing
(Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☐

Part A **SATISFIED YES ☐ NO ☐**
Gap/Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

Gaps < Minutes YES ☐ NO ☐
AND Children > 20/hr YES ☐ NO ☐

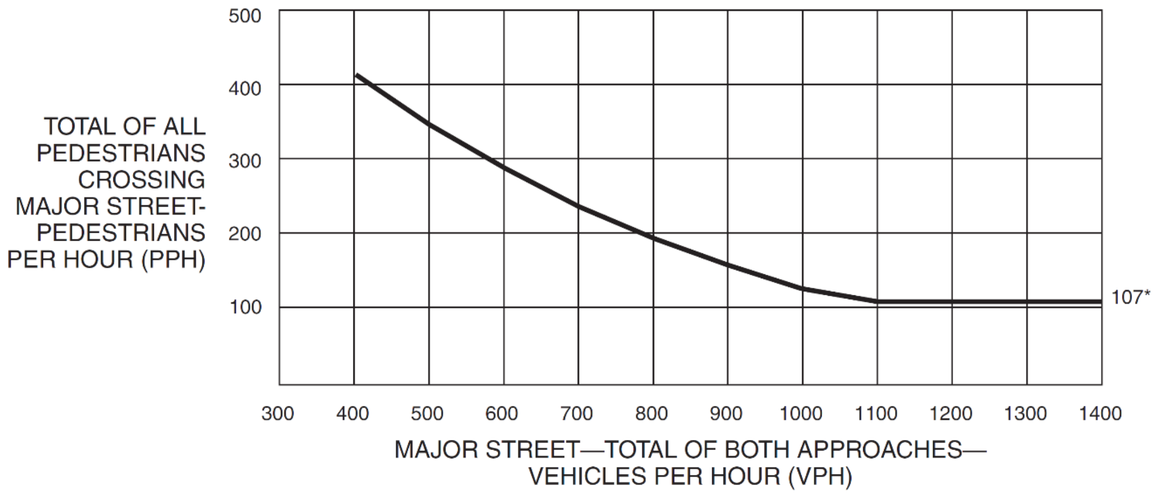
AND, Consideration has been given to less restrictive remedial measures.	Yes ☐ No ☐

Part B **SATISFIED YES ☐ NO ☐**

The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed signal will not restrict the progressive movement of traffic.	Yes ☐ No ☐

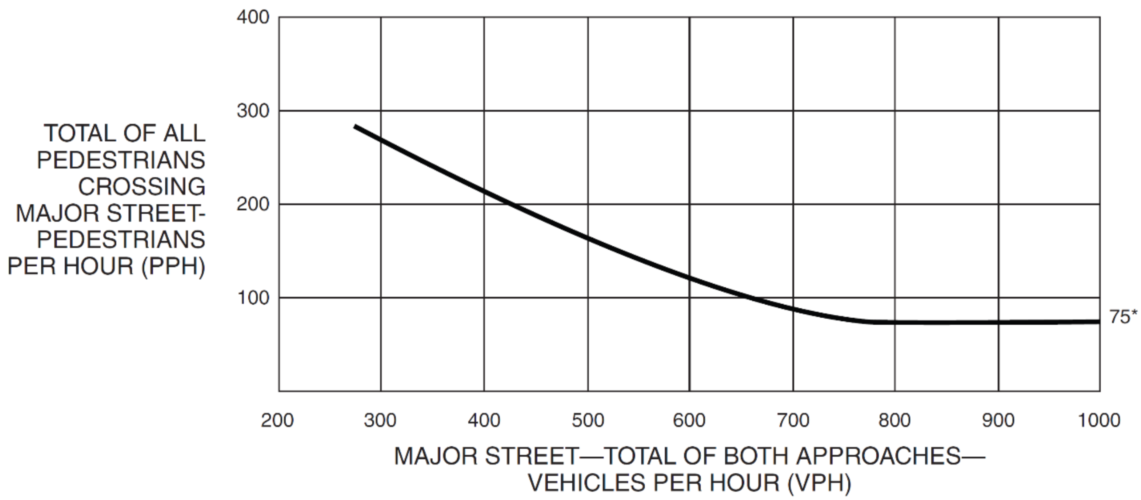
The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



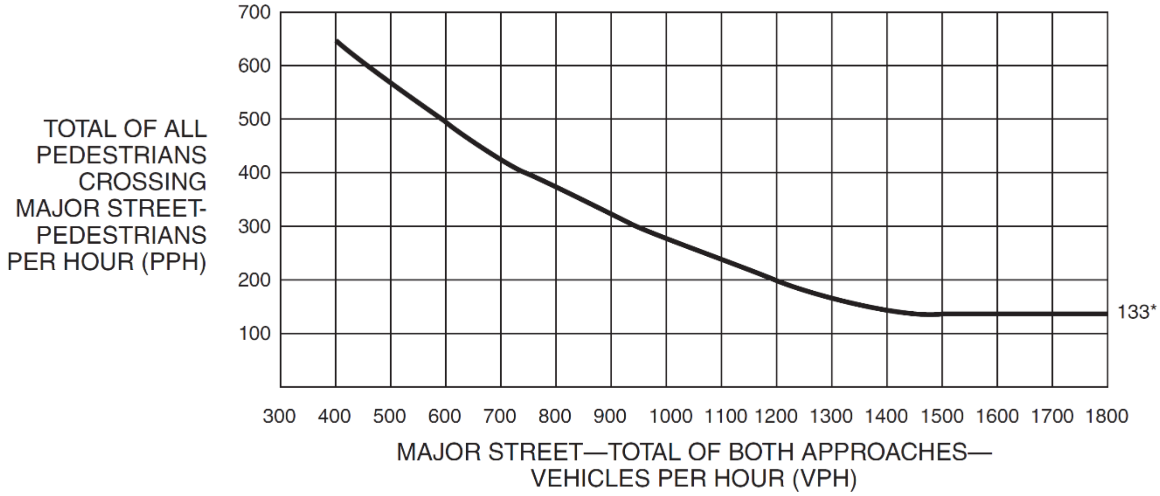
*Note: 107 pph applies as the lower threshold volume.

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



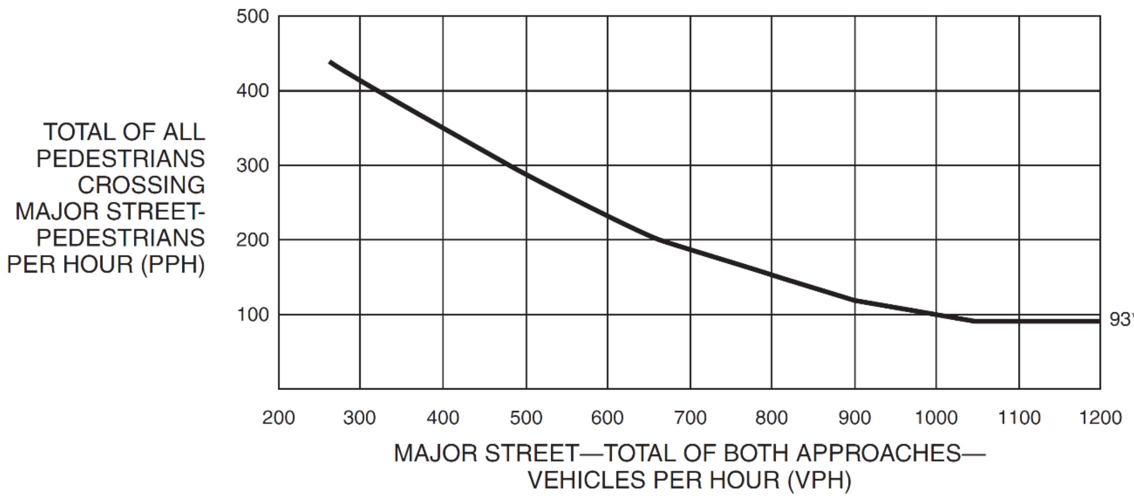
*Note: 75 pph applies as the lower threshold volume.

Figure 4C-7. Warrant 4, Pedestrian Peak Hour



*Note: 133 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



*Note: 93 pph applies as the lower threshold volume.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System
(All Parts Must Be Satisfied)

SATISFIED YES ☐ NO ☐

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N ______ ft, S ______ ft, E ______ ft, W ______ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant
(All Parts Must Be Satisfied)

SATISFIED YES ☐ NO ☐

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☐
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☐
5 OR MORE			
REQUIREMENTS	CONDITIONS	✓	Yes ☐ No ☐
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network
(All Parts Must Be Satisfied)

SATISFIED YES ☐ NO ☐

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour ____________ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun ______ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)

WARRANT 9 - Intersection Near a Grade Crossing **SATISFIED YES ☐ NO ☐**
(Both Parts A and B Must Be Satisfied)

PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ______ ft	Yes ☐ No ☐
PART B **There is one minor street approach lane at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ______ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ______ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ______ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches : ______ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ______ VPH X AF (Use Tables 4C-2, 3, & 4 below to calcualte AF) = ______ VPH	Yes ☐ No ☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C.10.

1- Number of Rail Traffic per Day________________________________ Adjustment factor from table 4C-2____

2- Percentage of High-Occupancy Buses on Minor Street Approach_____ Adjustment factor from table 4C-3____

3- Percentage of Tractor-Trailer Trucks on Minor Street Approach_______ Adjustment factor from table 4C-4____

NOTE: If no data is availale or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

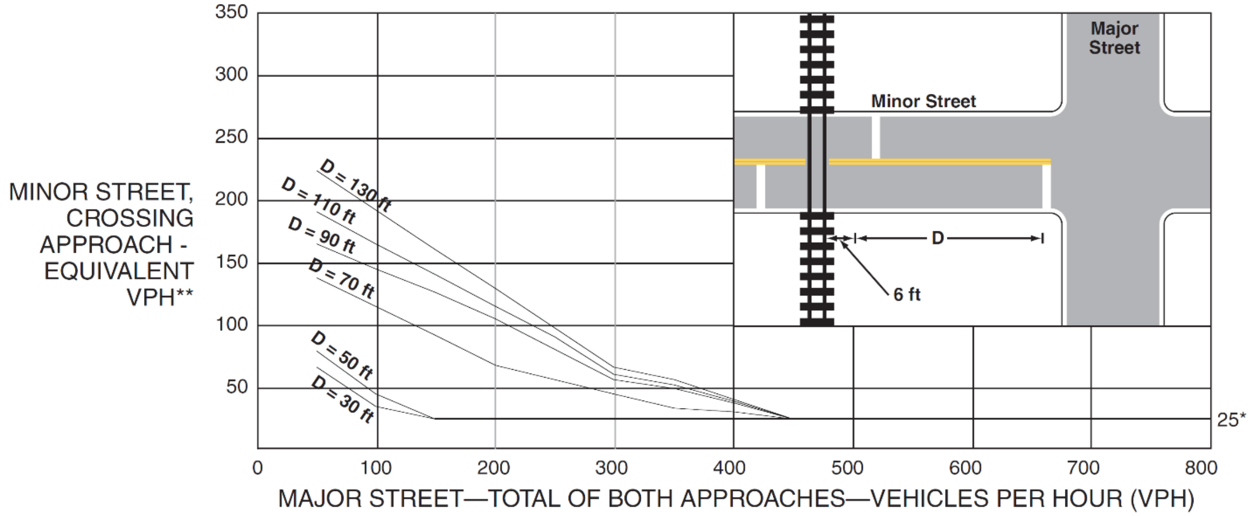
% of High-Occupancy Buses* on Minor-Street Approach	Adjustment Factor
0%	1.00
2%	1.09
4%	1.19
6% or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people.

Table 4C-4. Warrant 9, Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

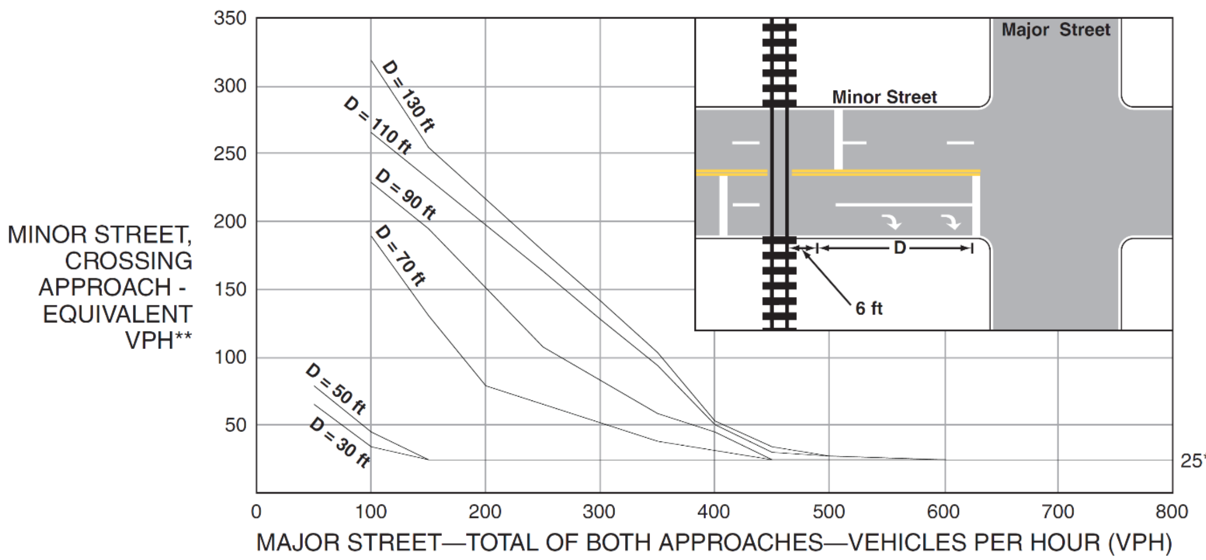
Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (Two or More Approach Lanes at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE October 27, 2020
CALC ______ DATE ______
CHK ______ DATE ______

DIST ______ CO ______ RTE ______ PM ______

Major St: Fallbrook Street — Critical Approach Speed 40MPH mph
Minor St: Shady Glen Road — Critical Approach Speed N/A mph

Speed limit or critical speed on major street traffic > 40 mph........................ ☐ or
In built up area of isolated community of < 10,000 population........................ ☐ } RURAL (R)
☐ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☐
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume
100% SATISFIED YES ☐ NO ☐
80% SATISFIED YES ☐ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)											
	U	R	U	R	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM (Hour)
APPROACH LANES	1		2 or More									
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	610	840	803	905	742	697	772	695
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	No ADT counts along minor roads							

Condition B - Interruption of Continuous Traffic
100% SATISFIED YES ☐ NO ☐
80% SATISFIED YES ☐ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)											
	U	R	U	R	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM (Hour)
APPROACH LANES	1		2 or More									
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	610	840	803	905	742	697	772	695
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	No ADT counts along minor roads							

Combination of Conditions A & B SATISFIED YES ☐ NO ☐

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☐
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

[a] Basic minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour	Hour	Hour	Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied) **SATISFIED YES ☐ NO ☐**

PART A **SATISFIED YES ☐ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

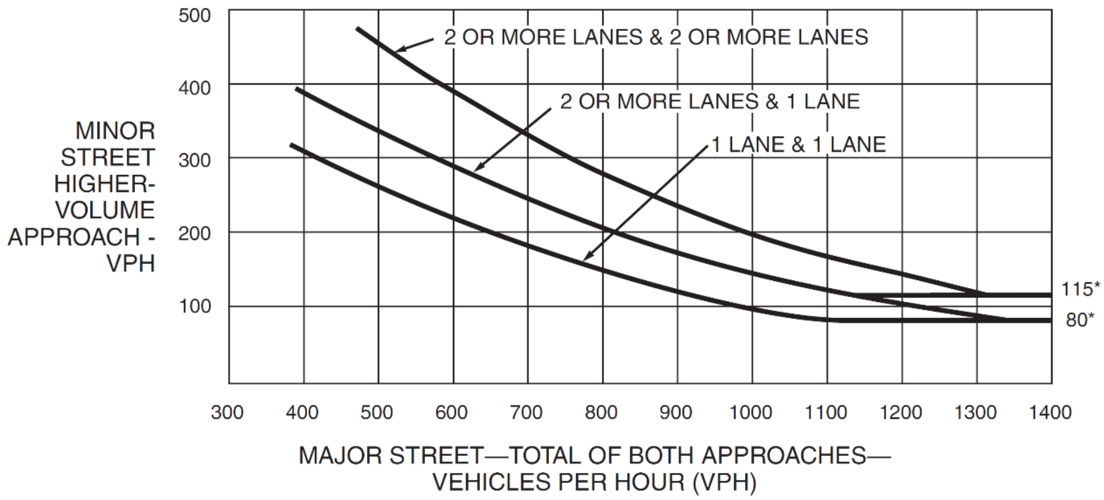
PART B **SATISFIED YES ☐ NO ☐**

APPROACH LANES	One	2 or More	4:15 PM Hour
Both Approaches - Major Street	1,152		
Higher Approach - Minor Street	16		

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

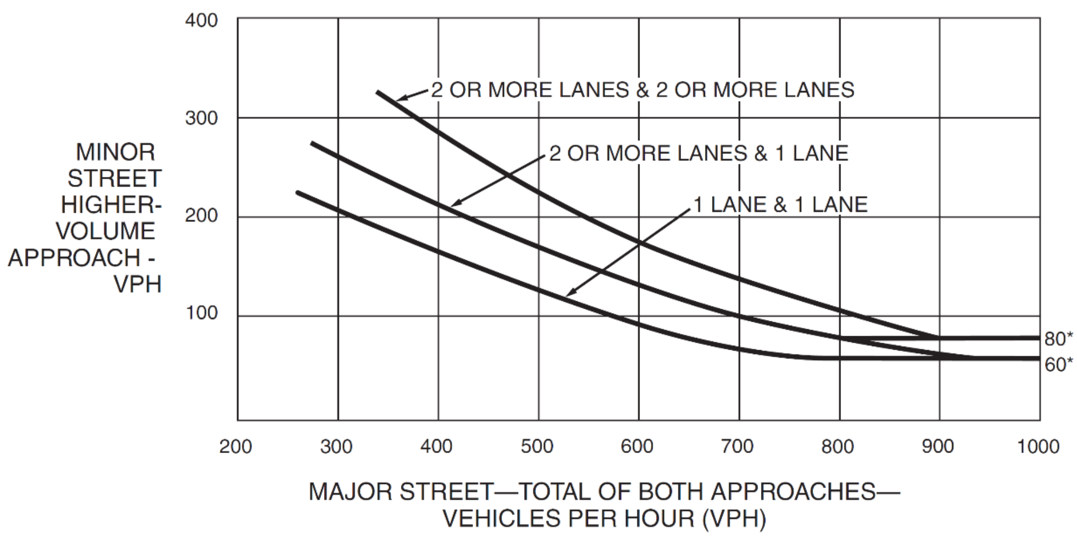
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

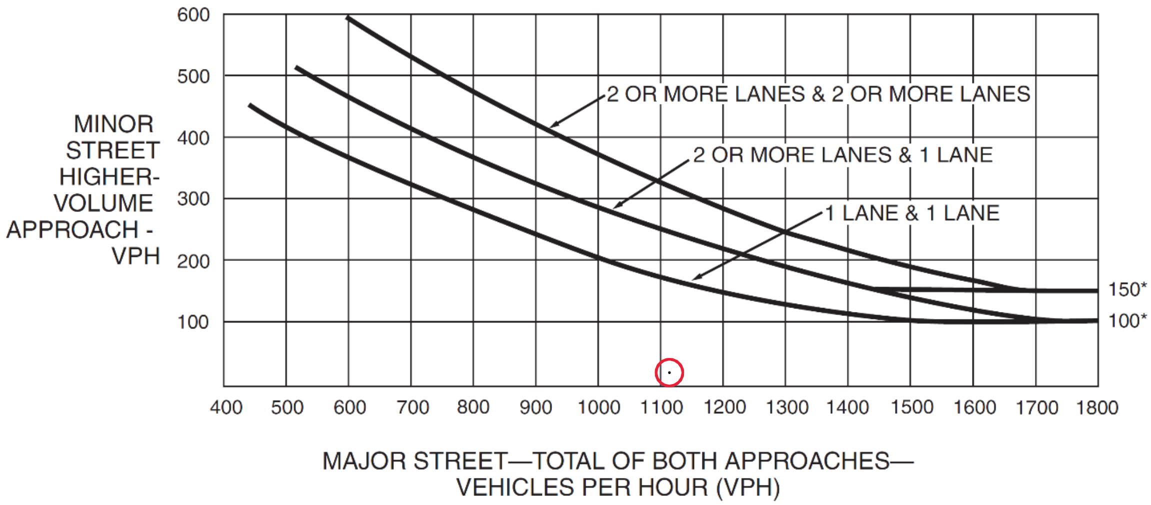
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

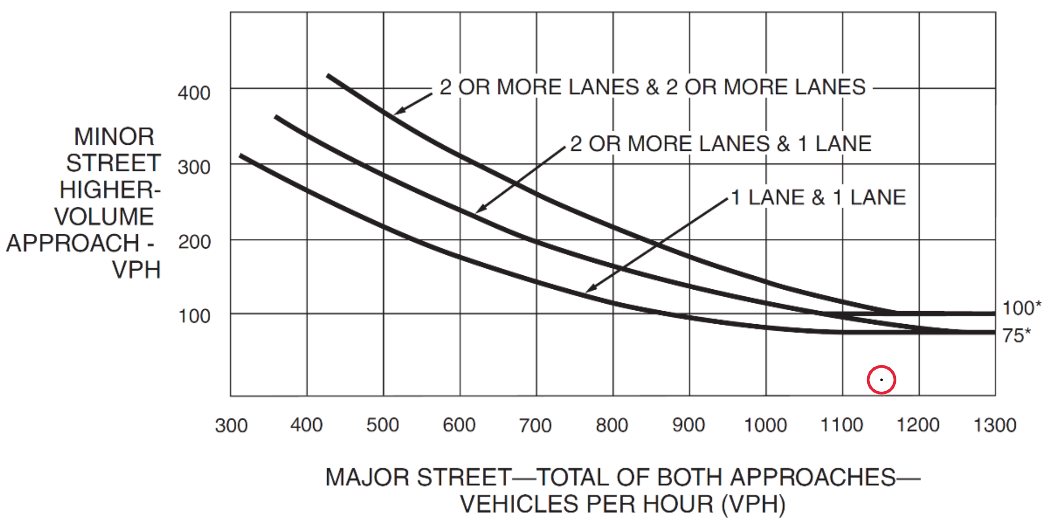
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 3 of 5)

WARRANT 4 - Pedestrian Volume
(Parts 1 and 2 Must Be Satisfied)

SATISFIED YES ☐ NO ☐

Part 1 **(Parts A or B must be satisfied)**

A.

Hours - - ->				
Vehicles per hour for any 4 hours				
Pedestrians per hour for any 4 hours				

Figure 4C-5 or Figure 4C-6
SATISFIED YES ☐ NO ☐

B.

Hours - - ->				
Vehicles per hour for any 1 hour				
Pedestrians per hour for any 1 hour				

Figure 4C-7 or Figure 4C-8
SATISFIED YES ☐ NO ☐

Part 2 **SATISFIED YES ☐ NO ☐**

AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street.	Yes ☐ No ☐

WARRANT 5 - School Crossing
(Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☐

Part A **SATISFIED YES ☐ NO ☐**
Gap/Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

Gaps < Minutes YES ☐ NO ☐
AND Children > 20/hr YES ☐ NO ☐

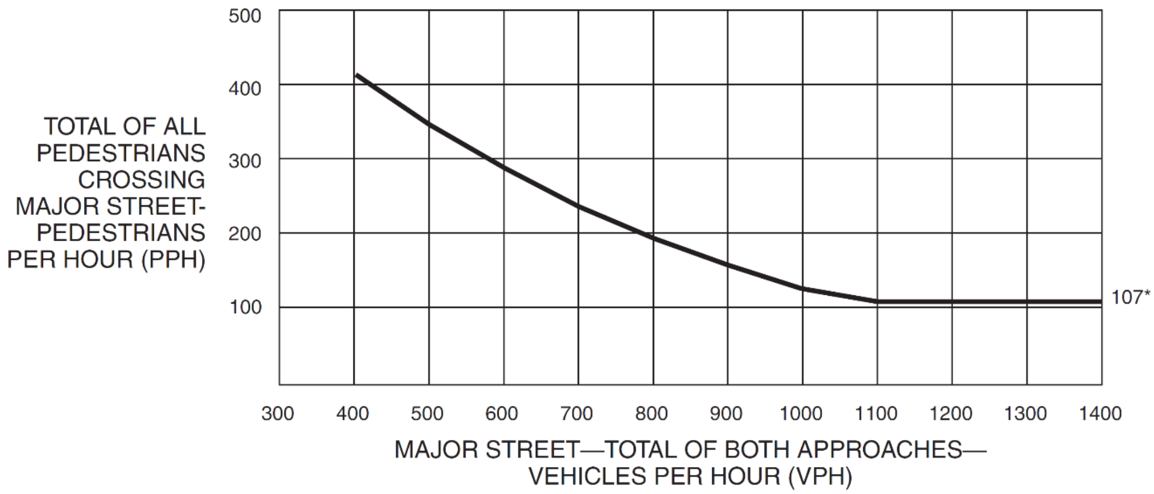
AND, Consideration has been given to less restrictive remedial measures.	Yes ☐ No ☐

Part B **SATISFIED YES ☐ NO ☐**

The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed signal will not restrict the progressive movement of traffic.	Yes ☐ No ☐

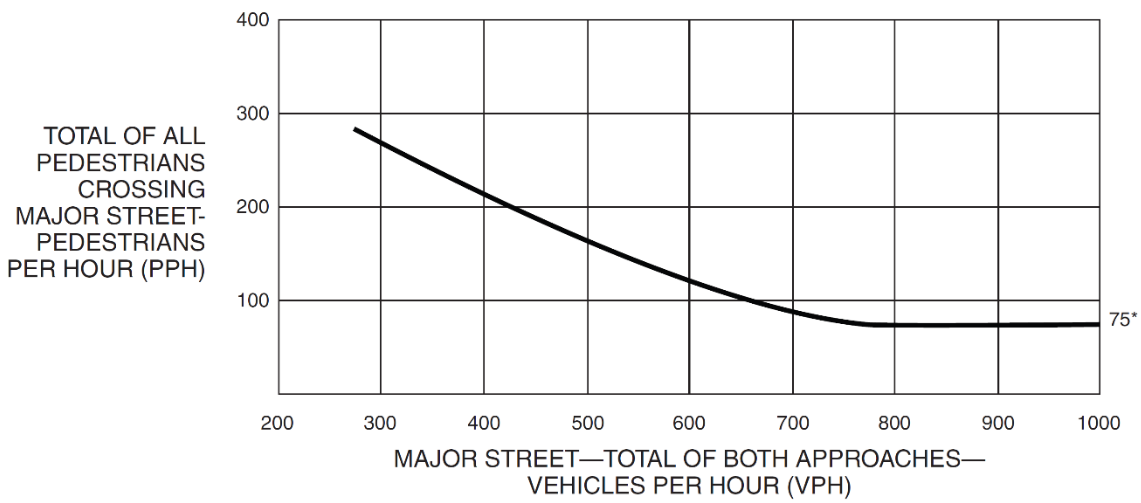
The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



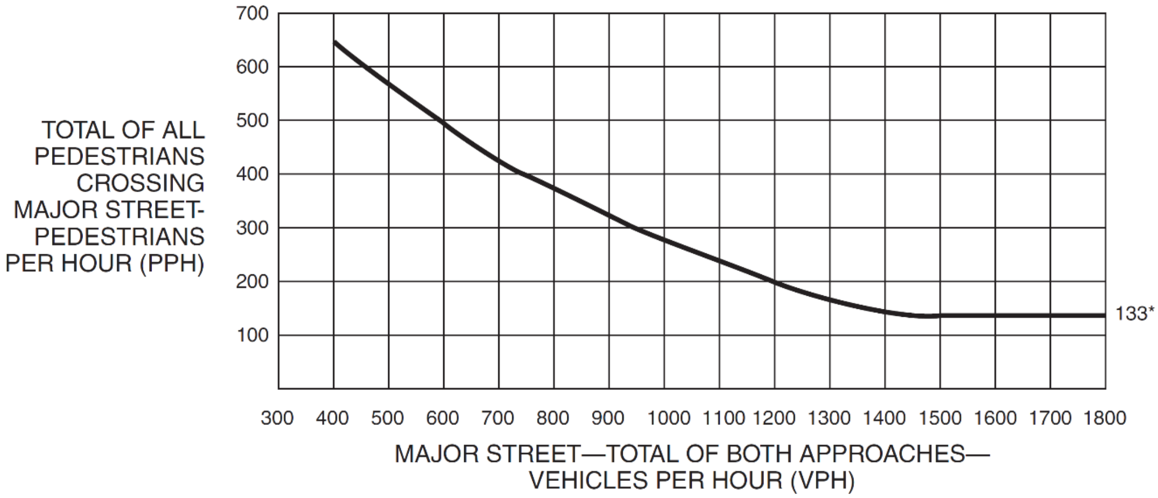
*Note: 107 pph applies as the lower threshold volume.

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



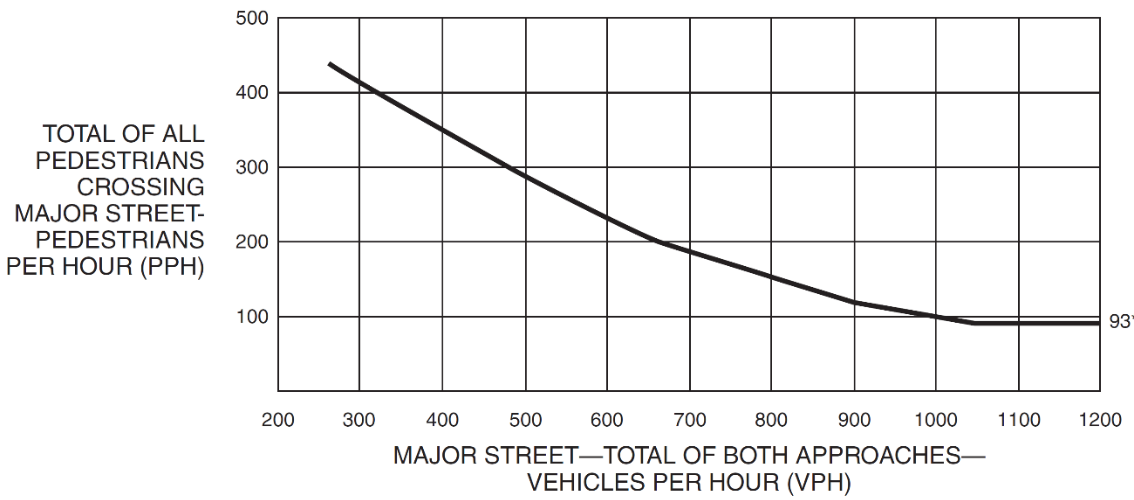
*Note: 75 pph applies as the lower threshold volume.

Figure 4C-7. Warrant 4, Pedestrian Peak Hour



*Note: 133 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



*Note: 93 pph applies as the lower threshold volume.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N ______ ft, S ______ ft, E ______ ft, W ______ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		Yes ☐ No ☐

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☐
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☐
5 OR MORE			
REQUIREMENTS	CONDITIONS	✓	Yes ☐ No ☐
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour ____________ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun ______ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)

WARRANT 9 - Intersection Near a Grade Crossing
(Both Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☐

PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ______ ft	Yes ☐ No ☐
PART B **There is one minor street approach lane at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ______ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ______ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ______ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches : ______ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ______ VPH X AF (Use Tables 4C-2, 3, & 4 below to calcualte AF) = ______ VPH	Yes ☐ No ☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C.10.

1- Number of Rail Traffic per Day________________________________ Adjustment factor from table 4C-2____

2- Percentage of High-Occupancy Buses on Minor Street Approach_____ Adjustment factor from table 4C-3____

3- Percentage of Tractor-Trailer Trucks on Minor Street Approach_______ Adjustment factor from table 4C-4____

NOTE: If no data is availale or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

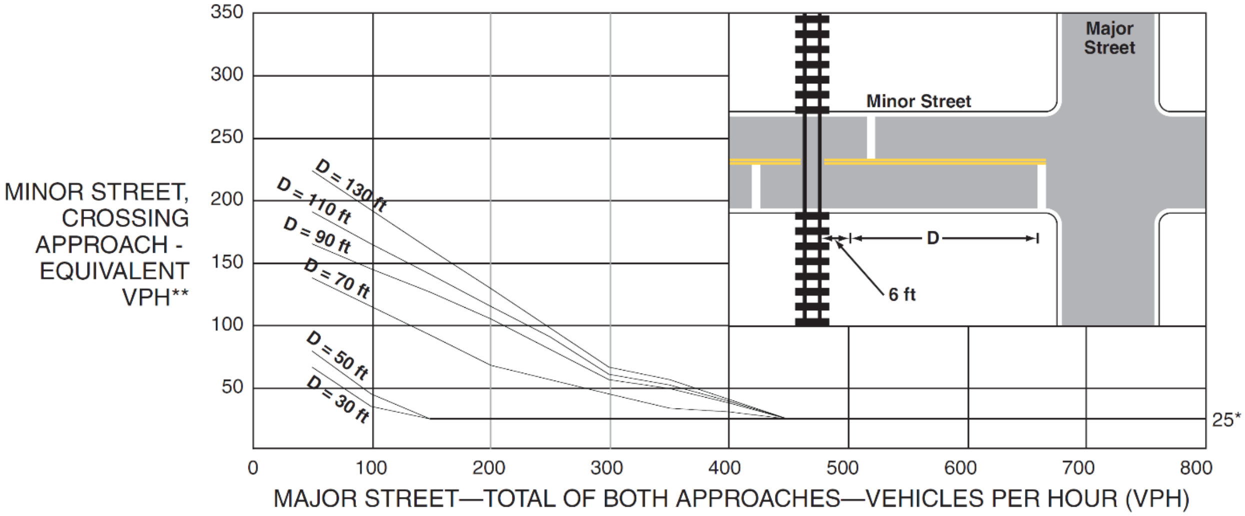
% of High-Occupancy Buses* on Minor-Street Approach	Adjustment Factor
0%	1.00
2%	1.09
4%	1.19
6% or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people.

Table 4C-4. Warrant 9, Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

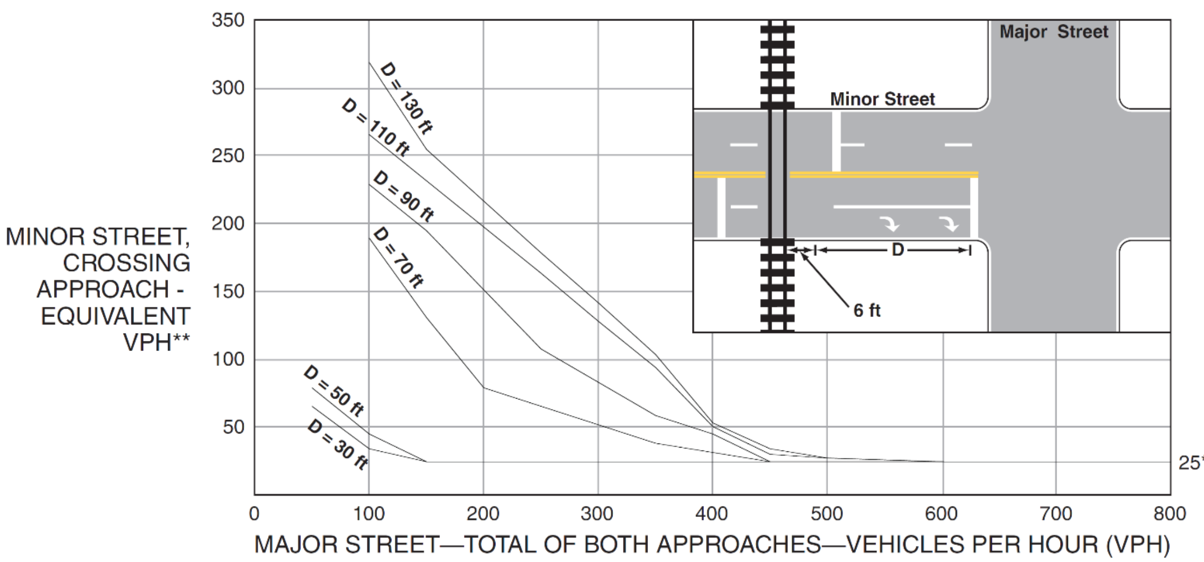
Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (Two or More Approach Lanes at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE October 27, 2020

CALC ________ DATE ________

CHK ________ DATE ________

DIST ____ CO ____ RTE ____ PM ____

Major St: Fallbrook Street — Critical Approach Speed 40MPH mph

Minor St: Morro Road — Critical Approach Speed N/A mph

Speed limit or critical speed on major street traffic > 40 mph............ ☒ or
In built up area of isolated community of < 10,000 population............ ☐ } RURAL (R)
☐ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume — SATISFIED YES ☐ NO ☒
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume
100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)	U	R	U	R	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM
APPROACH LANES	1		2 or More									Hour
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	610	840	803	905	742	697	772	695
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	No ADT counts along minor roads							

Condition B - Interruption of Continuous Traffic
100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)	U	R	U	R	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM
APPROACH LANES	1		2 or More									Hour
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	610	840	803	905	742	697	772	695
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	No ADT counts along minor roads							

Combination of Conditions A & B — SATISFIED YES ☐ NO ☒

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☒
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

[a] Basic minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume — **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour	Hour	Hour	Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied) — **SATISFIED YES ☐ NO ☐**

PART A — **SATISFIED YES ☐ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐	No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐	No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐	No ☐

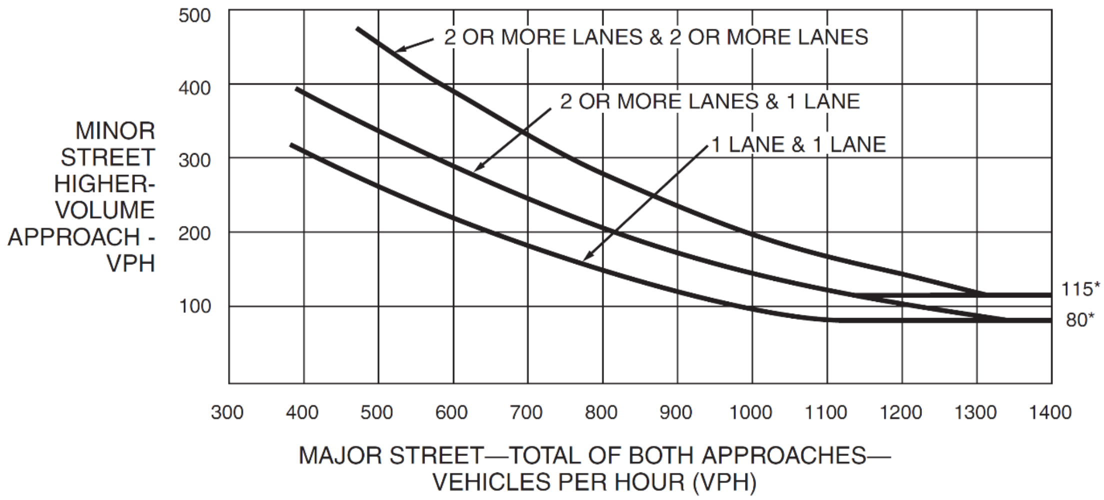
PART B — **SATISFIED YES ☐ NO ☐**

APPROACH LANES	One	2 or More	4:15 PM Hour
Both Approaches - Major Street	1,132		
Higher Approach - Minor Street	41		

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

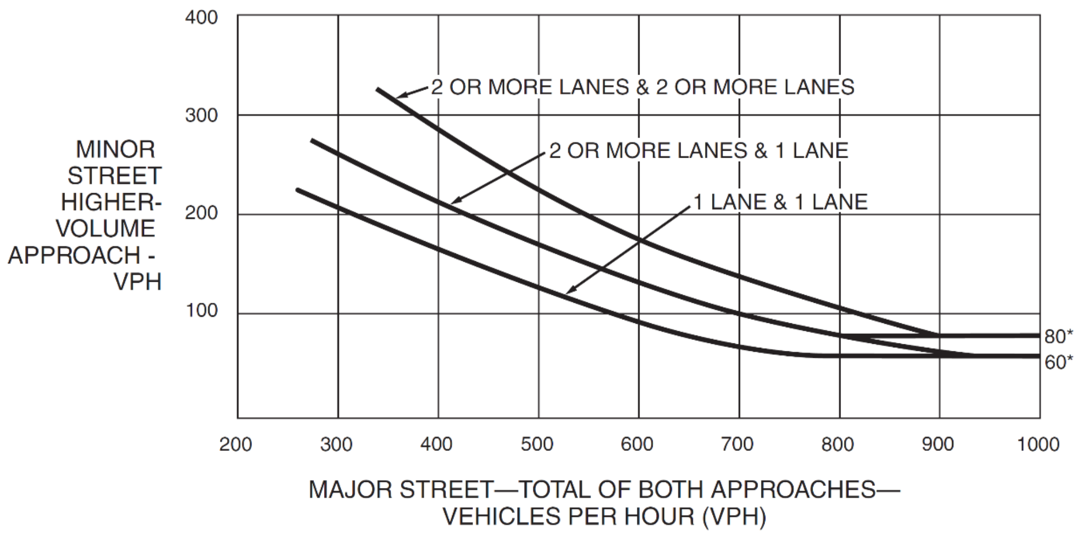
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

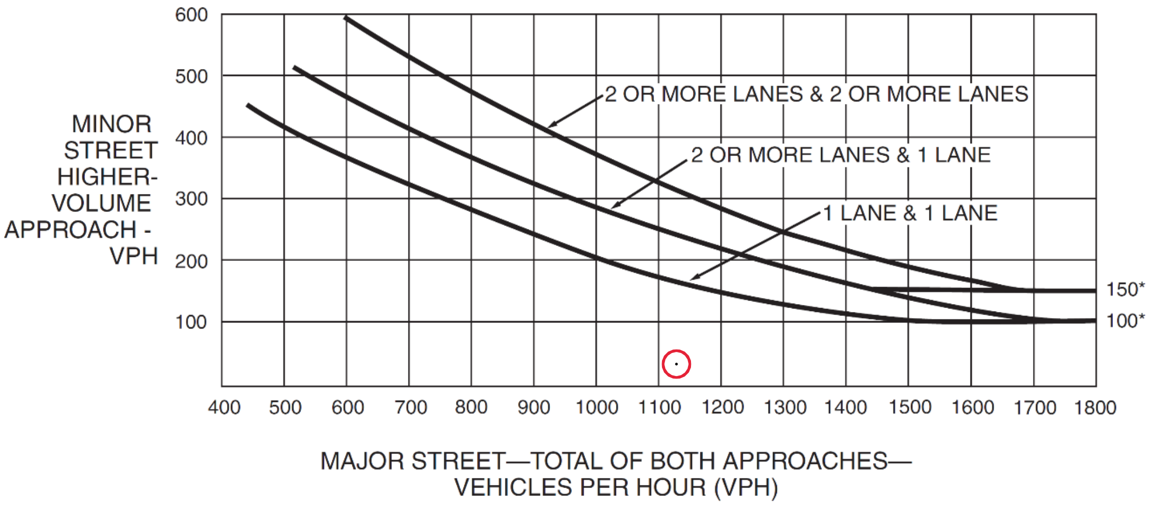
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

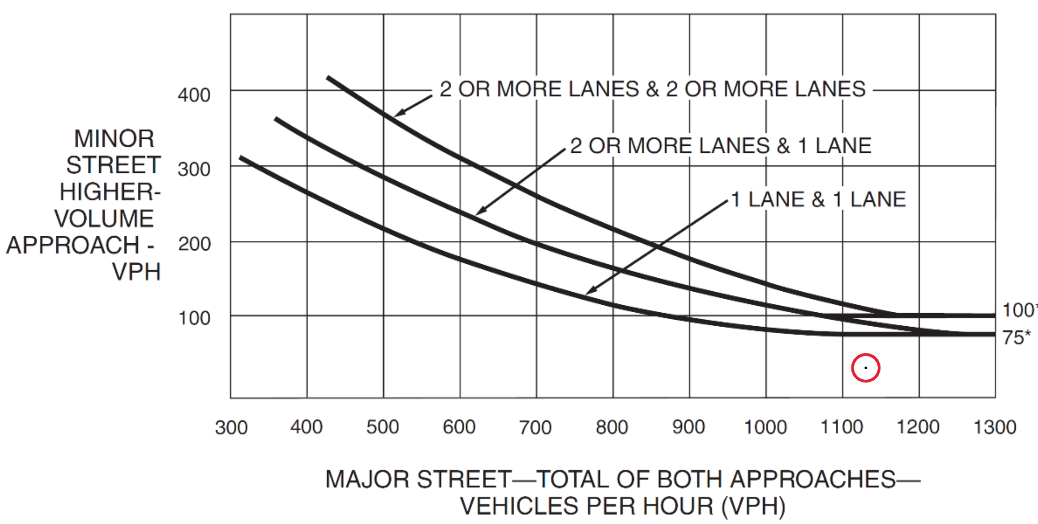
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 3 of 5)

WARRANT 4 - Pedestrian Volume
(Parts 1 and 2 Must Be Satisfied)

SATISFIED YES ☐ NO ☐

Part 1 **(Parts A or B must be satisfied)**

A.

Hours - - ->					
Vehicles per hour for any 4 hours					
Pedestrians per hour for any 4 hours					

Figure 4C-5 or Figure 4C-6
SATISFIED YES ☐ NO ☐

B.

Hours - - ->					
Vehicles per hour for any 1 hour					
Pedestrians per hour for any 1 hour					

Figure 4C-7 or Figure 4C-8
SATISFIED YES ☐ NO ☐

Part 2 **SATISFIED YES ☐ NO ☐**

AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street.	Yes ☐ No ☐

WARRANT 5 - School Crossing
(Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☐

Part A **SATISFIED YES ☐ NO ☐**
Gap/Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

Gaps < Minutes YES ☐ NO ☐
AND Children > 20/hr YES ☐ NO ☐

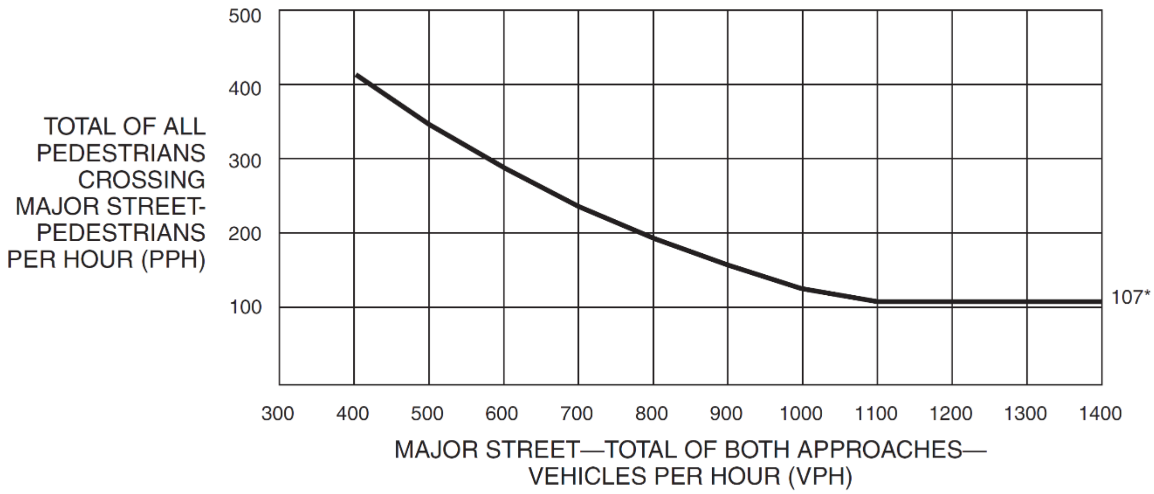
AND, Consideration has been given to less restrictive remedial measures.	Yes ☐ No ☐

Part B **SATISFIED YES ☐ NO ☐**

The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed signal will not restrict the progressive movement of traffic.	Yes ☐ No ☐

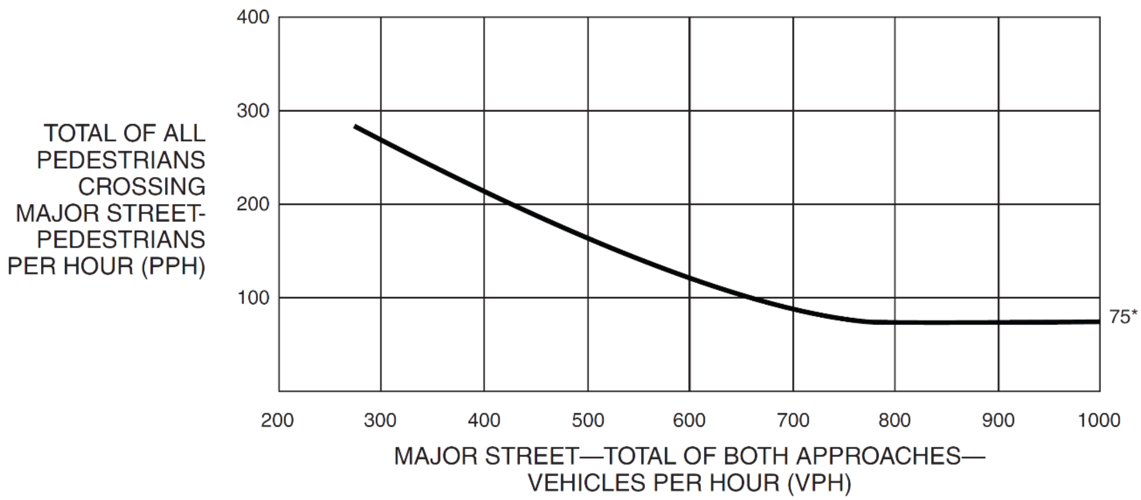
The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



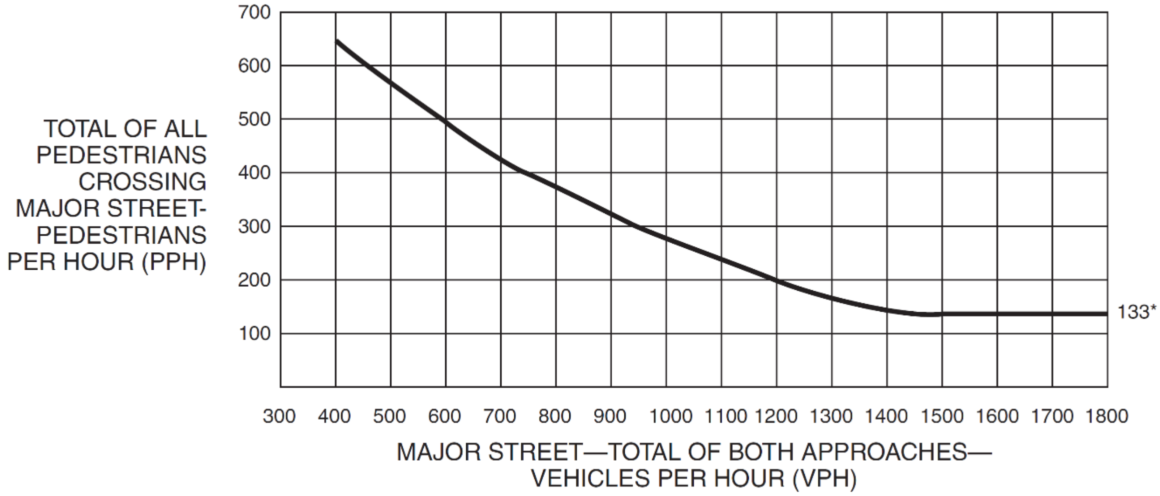
*Note: 107 pph applies as the lower threshold volume.

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



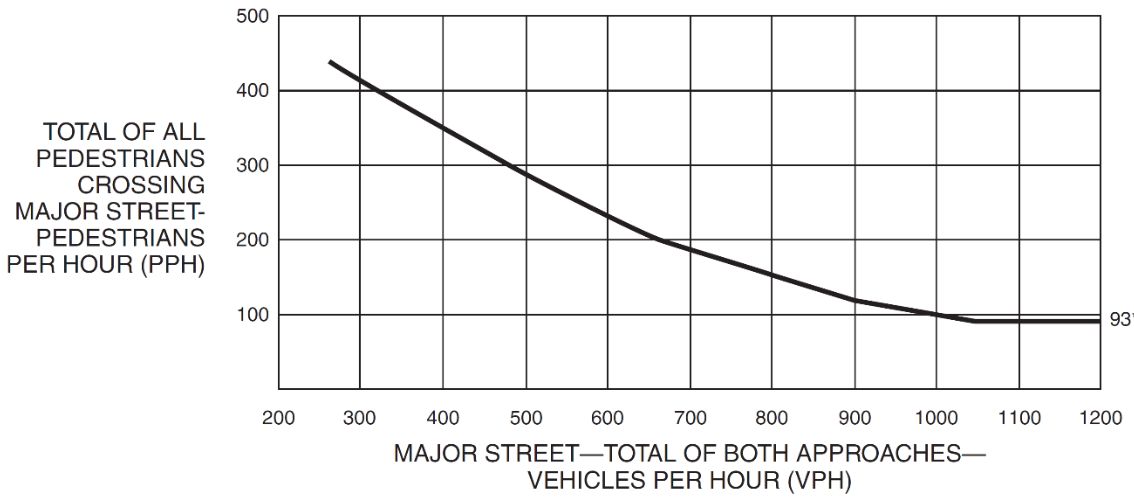
*Note: 75 pph applies as the lower threshold volume.

Figure 4C-7. Warrant 4, Pedestrian Peak Hour



*Note: 133 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



*Note: 93 pph applies as the lower threshold volume.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N ______ ft, S ______ ft, E ______ ft, W ______ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☐
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☐
5 OR MORE			
REQUIREMENTS	CONDITIONS	✓	Yes ☐ No ☐
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour __________ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun ______ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)

WARRANT 9 - Intersection Near a Grade Crossing
(Both Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☐

PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ______ ft	Yes ☐ No ☐
PART B **There is one minor street approach lane at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ______ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ______ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ______ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches : ______ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ______ VPH X AF (Use Tables 4C-2, 3, & 4 below to calcualte AF) = ______ VPH	Yes ☐ No ☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C.10.

1- Number of Rail Traffic per Day________________________________ Adjustment factor from table 4C-2____

2- Percentage of High-Occupancy Buses on Minor Street Approach_____ Adjustment factor from table 4C-3____

3- Percentage of Tractor-Trailer Trucks on Minor Street Approach_______ Adjustment factor from table 4C-4____

NOTE: If no data is availale or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

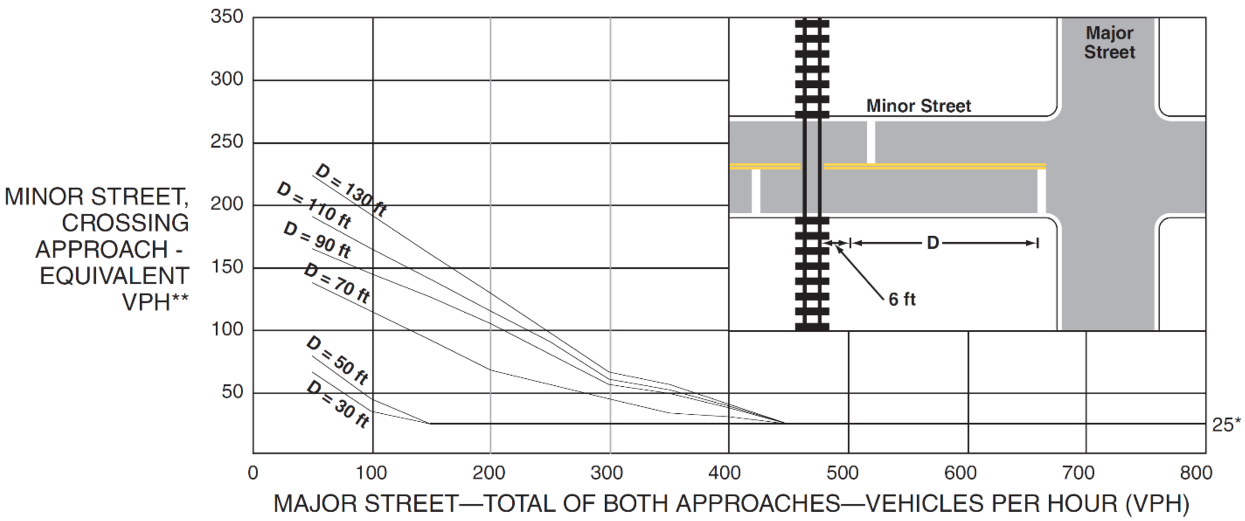
% of High-Occupancy Buses* on Minor-Street Approach	Adjustment Factor
0%	1.00
2%	1.09
4%	1.19
6% or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people.

Table 4C-4. Warrant 9, Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

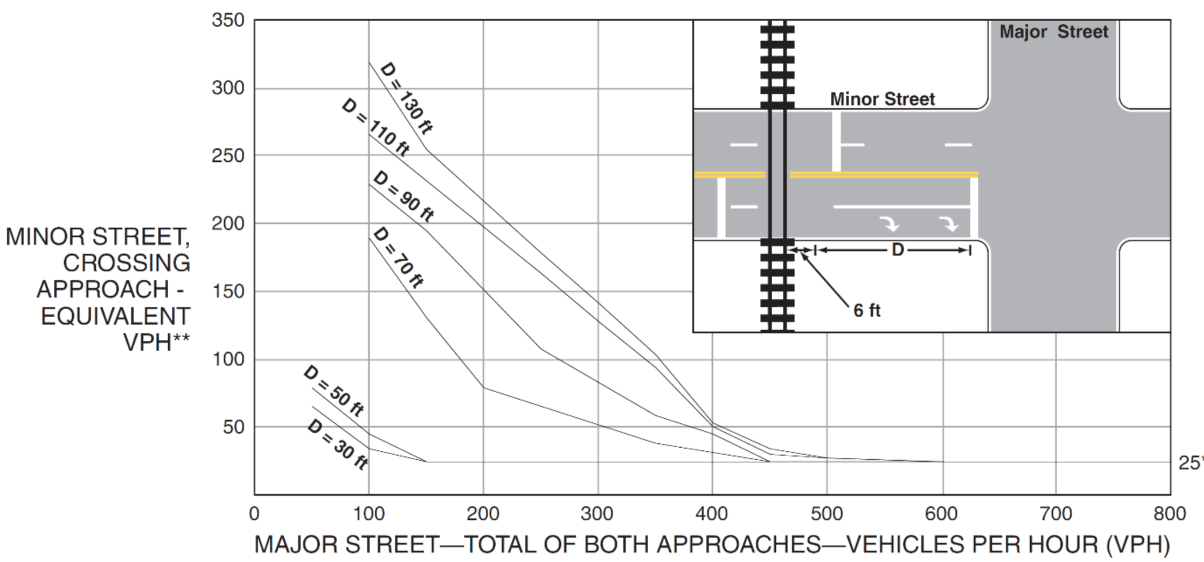
Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (Two or More Approach Lanes at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

SECTION 2B.07 MULTI-WAY STOP APPLICATIONS

Intersection: Potter Street/Golden Road & Fallbrook Street

Support:

01 Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

02 The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.

Guidance:

03 The decision to install multi-way stop control should be based on an engineering study.

04 The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

~~A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.~~

~~B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.~~

C. Minimum volumes:

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and There are more than 8 hours where the total of both major street approaches exceeds 300 vehicles per hour.

2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but we do not have ADT counts along minor streets, but based on the peak hour intersection counts it is not anticipated that the 8 hours identified in step 1 would exceed 200 units per hour. In other words, there is not sufficient minor street traffic to satisfy this requirement.

3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2. Major street approach speed is 43 MPH. However, similar to previous response, even with a reduced value of 140, it is not clear that minor traffic would exceed the minimum requirement during 8 hours of a typical day.

~~D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.~~

Option:

05 Other criteria that may be considered in an engineering study include:

A. The need to control left-turn conflicts;

B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;

C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and

D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

SECTION 2B.07 MULTI-WAY STOP APPLICATIONS

Intersection: Morro Road & Fallbrook Street

Support:

01 Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

02 The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.

Guidance:

03 The decision to install multi-way stop control should be based on an engineering study.

04 The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

~~A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.~~

~~B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.~~

C. Minimum volumes:

   1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and There are more than 8 hours where the total of both major street approaches exceeds 300 vehicles per hour.

   2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but we do not have ADT counts along minor streets, but based on the peak hour intersection counts it is not anticipated that the 8 hours identified in step 1 would exceed 200 units per hour. In other words, there is not sufficient minor street traffic to satisfy this requirement.

   3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2. Major street approach speed is 43 MPH. However, similar to previous response, even with a reduced value of 140, it is not clear that minor traffic would exceed the minimum requirement during 8 hours of a typical day.

~~D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.~~

Option:

05 Other criteria that may be considered in an engineering study include:

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C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and

D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Appendix G
County of San Diego Active Transportation Plan

Bike Network

Bike Network

- Bike Way - Class IV
- Bike Lane - Class II
- Bike Path - Class I

Reference

- Village Boundary
- Village Center - 1 and 2 Mile Radius
- County and State Parks
- Cleveland National Forest
- Incorporated Area
- Military Installation
- Community Planning Area

N

0 2.5 5 10 Miles

Document Path: P:\20170207_ME_bike\mxd\community\bike_pro_cnty_D_PRO\bike_pro_cnty_D_PRO.aprx Date: 4/10/2019

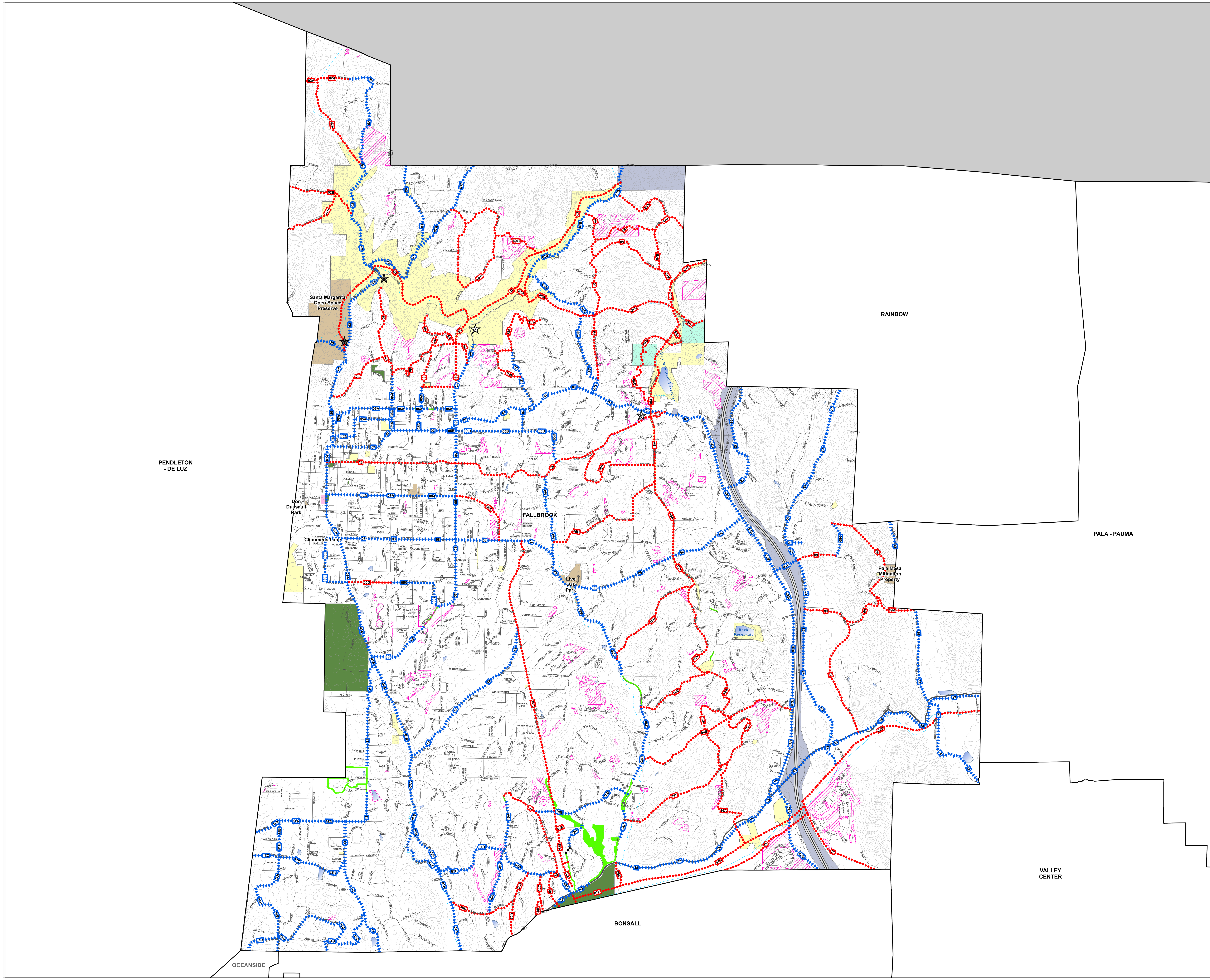
COUNTY OF SAN DIEGO ACTIVE TRANSPORTATION PLAN

Appendix H
Fallbrook Community Trails and Pathway Plan

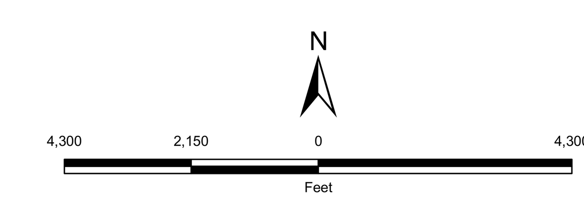
Fallbrook

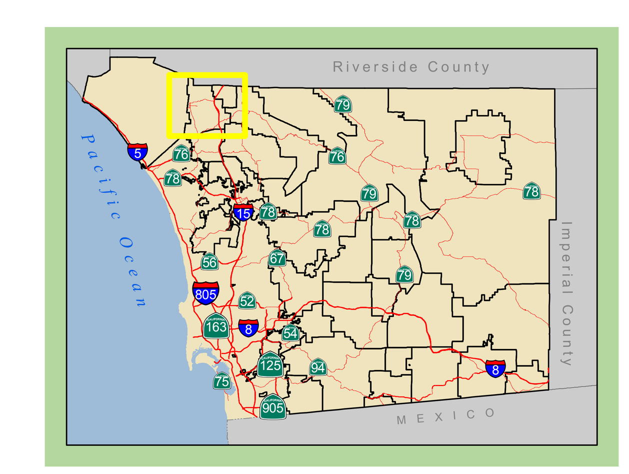
Community Trails and Pathways Plan

FOR PLANNING PURPOSES ONLY



Regional Trail Proposed
Regional Trail Existing
Existing Community Trails
Proposed Community Pathways
Proposed Community Trails
Existing Staging Area
Proposed Staging Area
Community Planning Areas
Municipal Boundaries
Trail and Pathway Easements
Biological or Open Space Easement
County Park Owned, Managed, or Other Property
Other County Lands
City Lands
State Parks
California Department of Fish and Game
Bureau of Land Management
U.S. Fish and Wildlife Service
U.S. Forest Service
Military Reservations
Indian Reservations
Special District Lands
Other Federal Lands
Other State Lands
Water Body
Freeway
Highway
Roads
River
Intermittent Stream
40' Topographic Contours





COMMUNITY TRAILS MAP
APPROVED JANUARY 12, 2005
UPDATE APPROVED JUNE 24, 2009
BY COUNTY OF SAN DIEGO
BOARD OF SUPERVISORS

County of San Diego
Department of Parks and Recreation
Geographic Information Services

For more information regarding this map please contact:
Department of Parks and Recreation
Maryanne Vancio, Trails Program Coordinator at (858) 966-1372

Appendix G
VMT Memorandum

C+R

MEMORANDUM

TO: Janelle Firoozi, Environmental Science Associates (ESA)

FROM: Phuong Nguyen, PE; CR Associates

DATE: June 9, 2021

RE: **Fallbrook Community Park Transportation Impact Study**

REGISTERED PROFESSIONAL ENGINEER
PHUONG H. NGUYEN
TR 2660
EXP. 03/31/2022
TRAFFIC
STATE OF CALIFORNIA

Background

The Fallbrook Community Park Project ("Proposed Project") proposes to construct a new 6.8-acre local park within the Fallbrook Community Planning Area of the Unincorporated portions of the County of San Diego. The Proposed Project is located on Fallbrook Street, between Golden Road and Morro Road and approximately ¼ mile from the Fallbrook Community Center. The project site previously served as a nursery and is adjacent to rural residential and agricultural uses. Potential amenities proposed by the Proposed Project include picnic areas, skate park elements, multi-use path, playground equipment, nature play, dog park, fitness stations, basketball court, and multi-use field. Figure 1 displays the project's site plan.

Analysis Methodology

The San Diego County Board of Supervisors adopted the County of San Diego Transportation Study Guidelines (County TSG) on June 24, 2020. The recently adopted County TSG, is consistent with the California Environmental Quality Act (CEQA) guidelines and utilizes VMT as a metric for evaluating transportation-related impacts. Per the County TSG, all projects within the Unincorporated portions of San Diego County are required to go through a screening process to determine the level of transportation analysis that is required. An excerpt of the screening process is provided in Attachment A.

Based on Section 3.3 of the County TSG, when conducting a screening analysis, projects that can be classified within any of the following screening criteria would have a less than significant VMT impact due to project's characteristic and/or location and are therefore exempt from additional VMT CEQA analysis:

- *Project located in VMT efficient area:* A VMT efficient area is any area with an average VMT per Resident, VMT per Employee, or VMT per Service Population below the baseline average for the unincorporated county average. Land use projects may qualify for the use of VMT efficient area screening if the project can be reasonably expected to generate VMT per Resident, per Employee, or per Service Population, respectively, that is similar to the existing land uses in the VMT efficient area.

- *Small residential and employment projects:* Projects generating less than 110 daily vehicle trips (trips are based on the number of vehicle trips calculated using national ITE trip generation rates with any alternative modes/location-based adjustments are applied) may be presumed to have a less than significant impact absent substantial evidence to the contrary.

Fallbrook Community Park
Transportation Impact Study

C+R

Figure 1
Proposed Project Site Plan

- *Project located in Transit Accessible Area:* Projects located within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor may be presumed to have a less than significant impact absent substantial evidence to the contrary. Note that Sprinter stations are considered major transit stops. This presumption may not apply if the project:
  - Has a Floor Area Ratio of less than 0.75.
  - Includes more parking for use by residents, customers, or employees of the project than required by the County.
  - Is inconsistent with SANDAG's most recent Sustainable Communities Strategy (SCS).
  - Replaces affordable residential units with a smaller number of moderate- or high-income residential units.
- *Locally serving retail:* Local serving retail/service projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail/service generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.
- *Locally serving public facilities and other uses:* Public facilities that serve the surrounding community or public facilities that are passive use may be presumed to have a less than significant impact absent substantial evidence to the contrary. These do not include facilities or uses that would attract users from outside the vicinity of the use. The following are examples of locally serving facilities and uses:
  - Transit centers
  - Schools
  - Libraries
  - Post offices
  - Park-and-ride lots
  - Local health/medical clinics
  - Law enforcement and fire facilities
  - Local parks and trailheads
  - Government offices
  - Communication and utility buildings
  - Water sanitation buildings
  - Waste management buildings
- *Redevelopment projects:* Redevelopment projects with greater VMT efficiency in which a project replaces existing VMT-generating land uses, the project may be presumed to have a less than significant impact if the total project VMT is less than the existing land use's total VMT, absent substantial evidence to the contrary.
- *Affordable housing:* An affordable housing project may be presumed to have a less than significant impact absent substantial evidence to the contrary if 100% of units are affordable.

Projects that do not meet the screening criteria are required to conduct a VMT analysis using either the County's screening map or the SANDAG Regional Transportation Model to determine whether the project is below the threshold established in the County TSG.

Transportation Impact Analysis

A screening analysis was conducted for the Proposed Project using the County TSG screening criteria. Based upon the criterion provided at the beginning of this memo as well as Attachment A, the Proposed Project is under the local serving public facilities and other uses (local parks and trailheads) category. The County TSG stated that local serving public facilities and other uses are presumed to have less than significant VMT impact.

Conclusion

Based on the analysis results documented above, the Proposed Project is presumed to have a <u>less than significant VMT impact</u>, and no additional analysis would be required.

Attachment A

Excerpt of the County of San Diego TSG

COUNTY OF SAN DIEGO

TRANSPORTATION STUDY GUIDELINES

JUNE 2020 - FINAL

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APPROVAL

I hereby certify that the **County of San Diego Transportation Study Guidelines** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and were considered by the Director of Planning & Development Services, in coordination with the Director of Public Works on the 24th day of June, 2020.

MARK WARDLAW
Director of Planning & Development Services

JEFF MONEDA
Director of Public Works

I hereby certify that these **County of San Diego Transportation Study Guidelines** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and have hereby been approved by the Deputy Chief Administrative Officer of the Land Use and Environment Group on the 24th day of June, 2020. The Director of Planning & Development Services is authorized to approve revisions to these County of San Diego Transportation Study Guidelines, except any revisions to the CEQA VMT thresholds of significance contained in Section 3 *CEQA Requirements for Transportation VMT* must be approved by the Deputy Chief Administrative Officer.

Approved: June 24, 2020

SARAH AGHASSI
Deputy Chief Administrative Officer

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APPROVED – June 24, 2020

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Table of Contents

Tables

Figures

Appendices

List of Abbreviated Terms

ATP	Active Transportation Plan
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
County	County of San Diego
CSTDM	California Statewide Travel Demand Model
CTMP	Community Trails Master Plan
DER	Design Exception Request
DOT	Department of Transportation
DPW	Department of Public Works
EIR	Environmental Impact Report
FHWA	Federal Highway Administration
FLMA	Focused Local Mobility Analysis
GHG	greenhouse gas
GPA	General Plan Amendment
HCM	Highway Capacity Manual
ICE	intersection control evaluation
ITE	Institute of Transportation Engineers
IX	internal-to-external
LMA	Local Mobility Analysis
LOS	Level of Service
MTS	Metropolitan Transit System
MUTCD	Manual on Uniform Traffic Control Devices
MXD	mixed-use development
NCTD	North County Transit District
O-D	origin-destination
OPR	Governor's Office of Planning and Research
PCE	passenger car equivalent
PDS	County Planning & Development Services
PHF	peak hour factor
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SB	senate bill
SCS	Sustainable Communities Strategy
TAZ	transportation analysis zone
TDM	transportation demand management
TSG	Transportation Study Guidelines
TSM	transportation system management
XI	external-to-internal
XX	external-to-external

Definitions

Average Daily Traffic - The average 24-hour traffic volume at a given location.

Active Transportation Plan - The County's Active Transportation Plan (2018) supports efforts to promote active transportation through pedestrian and bicycle improvements in the unincorporated county.

Capacity - The maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions.

Climate Action Plan - The County's Climate Action Plan sets forth strategies and measures to reduce greenhouse gas emissions in the county's unincorporated areas and from County operations.

California Environmental Quality Act - The California Environmental Quality Act requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental impacts to the extent feasible.

Community Trails Master Plan - The County Trails Program facilitates the development of a system of interconnected regional and community trails and pathways.

Greenhouse Gas - Greenhouse gases are those gases in the atmosphere that have an influence on the earth's energy balance by trapping heat.

General Plan Amendment - General Plan Amendments are required for development projects with a land use or density that is not permitted by the General Plan.

Induced Travel - Induced travel or the VMT attributable to a transportation capacity increase is the increased amount of vehicle travel that is caused by the highway capacity increase.

Local Mobility Analysis – An evaluation that takes place *outside of CEQA* to assess the effects of a proposed development project on traffic operations and safety for the roadway network in the proximate area of the project.

Level of Service – Level of Service is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on delay or density.

Regional Transportation Plan – The RTP is produces by SANDAG and serves as the blueprint for a regional transportation system that further enhances our quality of life, promotes sustainability, and offers more mobility options for people and goods.

Transportation Analysis Zone – TAZs are units of geography used in the Travel Demand Model and contain critical information; such as, the number of automobiles per household, household income, and employment that is utilized to further understand of trips that are produced and attracted within the zone.

Transportation Demand Management – Various strategies that result in more efficient use of transportation resources with the goal of reducing VMT.

Travel Demand Model - A travel demand model is any relatively complex computerized set of procedures for predicting future trip making as a function of land use, demographics, travel costs, the road system, and the transit system.

Vehicle Miles Traveled - The number of miles traveled by motor vehicles on roadways in a given area over a given time period.

1. Introduction

1.1. Background

The County of San Diego previously adopted *"Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic"* in 2006, with revisions and modifications approved in 2007, 2009, 2010 and 2011. Revisions and modifications focused primarily on metrics related to vehicle delay through Level of Service (LOS). These Guidelines presented an evaluation of quantitative and qualitative analyses and objective and predictable evaluation criteria and performance measures for determining whether a land development project or a public project like a community plan has a significant traffic impact on the environment pursuant to the State California Environmental Quality Act (CEQA), as well as a determination of the required level of CEQA analysis.

CEQA Changes

Senate Bill 743 (SB 743) was signed into law on September 27, 2013 and changed the way that public agencies evaluate transportation impact under CEQA. A key element of this law is the elimination of using auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant transportation impacts under CEQA. The legislative intent of SB 743 was to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas (GHG) emissions." According to the law, "traffic congestion shall not be considered a significant impact on the environment" within CEQA transportation analysis.

In response, the Governor's Office of Planning and Research (OPR) updated CEQA Guidelines to establish new criteria for determining the significance of transportation impacts. Based on input from the public, public agencies, and various organizations, OPR recommended that Vehicle Miles Traveled (VMT) be the primary metric for evaluating transportation impacts under CEQA. VMT measures the number of vehicle trips generated and the length or distance of those trips. For instance, if one vehicle drives ten miles from home to the grocery store, that trip generated ten VMT. If three vehicles each drive ten miles to the grocery store, then they collectively generate 30 VMT. VMT is generally expressed as VMT per capita for a typical weekday. Typically, projects that are farther from other complementary land uses, such as jobs and commercial activities and in areas without transit or active transportation infrastructure (bike lanes, sidewalks, etc.) generate more driving than development near complementary land uses with more robust transportation options.

SB 743 does not prevent a city or county from continuing to analyze delay or LOS as part of other plans (i.e., General Plan), studies, congestion management and transportation improvements, but these metrics may no longer constitute the basis for transportation impacts under CEQA analysis as of July 1, 2020. For example, in the County, the General Plan identifies LOS as being a required analysis, and even though it will no longer be a requirement of CEQA, unless the General Plan is amended, LOS will continue to be analyzed as part of project review.

In response to changes in State law, the County has developed a Transportation Study Guide (TSG) to identify requirements for both CEQA VMT analysis and discretionary entitlement non-CEQA Local Mobility Analysis (LMA).

County General Plan Goals and Policies

The County's General Plan was adopted in August of 2011, before the passage of SB 743. Therefore, the Mobility Element was developed and planned based on the previous LOS requirements under CEQA. In addition to text in the Mobility Element that relates to transportation, there are also related goals in the Land Use, Housing, and Conservation and Open Space elements. For a list of General Plan goals related to transportation and assessing transportation impacts, please see **Appendix G**.

While SB 743 requires that LOS no longer be used for transportation impact assessments under CEQA, the General Plan contains policy M-2.1, which requires development projects to achieve a LOS "D" or better on all Mobility Element roads. The TSG proposes a methodology to meet the County General Plan requirement for LOS "D", outside of CEQA. The LMA provides a methodology to identify development-related circulation and access deficiencies, and specific operational, road safety, and adequate transportation infrastructure improvements to maintain LOS "D" with the addition of new projects.

Future actions by the County Board of Supervisors may include changes to the General Plan to complement the standards and methods of analysis contained in this TSG. In particular, changes to the Mobility and Land Use elements will most directly enhance the County's desired application of both VMT and LOS in transportation planning.

County Climate Action Plan and Active Transportation Plan

The County Climate Action Plan (CAP), adopted in February 2018, and the County Active Transportation Plan (ATP), adopted in October 2018, also support the intent of SB 743. The CAP has two GHG emissions reduction strategies related to VMT. CAP Strategies T-1 and T-2 focus on reducing VMT and shifting towards alternative modes of transportation, focusing density in unincorporated villages, conserving open space and agricultural lands, and implementing infrastructure improvements to provide for active transportation. A transportation demand management (TDM) ordinance, being developed as a measure of the CAP, will be an important tool for non-residential projects to use when mitigating VMT impacts while also reducing GHG emissions. The CAP and ATP identify capital improvements related to pedestrian and bicycle infrastructure improvements that SB 743 mitigations could fund in the future.

1.2. Purpose

The TSG provides criteria on how projects should be evaluated for consistency related to the County's transportation goals, policies and plans, and through procedures established under CEQA. The TSG establishes the contents and procedures for preparing a Transportation Study in the County of San Diego. The TSG aids in determining appropriate mitigation under CEQA, as well as site specific improvements to the transportation system to accommodate project traffic.

Reasons to perform a transportation study:

- Provide information to the public and decision-makers.
- Implement CEQA and County General Plan policies.
- Provide a method for analyzing the transportation effects of development projects.
- Provide applicants with transportation-related project and site planning recommendations.
- Establish a framework for transportation mitigation measures and project conditions for plans and projects.

1.3. Objectives

The following objectives are intended to provide consistency between local, regional and state policies in forecasting, describing and analyzing the effects of land development on transportation and circulation for all transportation modes and users:

- Provide clear direction to applicants and consultants to better meet expectations, increase the efficiency of the review process, and minimize delays.
- Provide scoping procedures and recommendations for early coordination during the planning/discretionary phases of a land development project.
- Provide guidance in determining when, what type, and how to prepare a Transportation Study.
- Help achieve consistency, uniformity and accuracy in the preparation of a Transportation Study.
- Promote quality assurance in transportation studies by agreeing to the assumptions, data requirements, study scenarios, and analysis methodologies.
- Provide consistency and equity in the identification of measures to mitigate the transportation impacts generated by land development.
- Assist County staff in developing objective recommendations and project conditions of approval as part of the land development discretionary review process.
- Help to ensure that County transportation studies are in conformance with all applicable County, region and state regulations, including legislative requirements as part of CEQA.

1.4. CEQA vs. Non-CEQA Transportation Analysis

The County TSG is a comprehensive manual for both CEQA VMT analysis and discretionary/ entitlement non-CEQA LMA. The TSG provides guidance for the two elements of transportation analyses needed to comprehensively assess the potential effects from new development to the County's roadway and mobility system.

CEQA Transportation Analysis (VMT Analysis)

CEQA requires VMT analysis for compliance with state policies to evaluate a project's potential impacts related to VMT significance criteria. The VMT analysis will:

- Enable proposed development projects to comply with current CEQA requirements as a result of the implementation of SB 743.
- Outline the County's VMT significance thresholds, screening criteria, and methodology for conducting the transportation VMT analysis.
- Help determine if mitigation is required to offset a project's significant VMT impacts.
- Identify VMT reduction measures and strategies to mitigate potential impacts below a level of significance.
- Reduce the need to widen or build roads through effective use of the existing transportation network and maximizing the use of alternative modes of travel throughout the County.

Non-CEQA Transportation Analysis related to General Plan Requirements

Site Access Scoping Review

A Site Access Review is required by the County of San Diego for all projects. A Site Access Review is conducted by County staff and the applicant as part of the Scoping Agreement to confirm safe ingress and egress between the project site and public transportation network. Site access driveways and/or the intersection(s) that provides access to County Public Roads are included in the Scoping Review.

Local Mobility Analysis (LMA)

An LMA is required by the County General Plan to assess transportation effects and ensure orderly development, public safety, adequate infrastructure, and consistency with the General Plan. The LMA analysis will:

- Ensure that the local transportation system is adequate to serve the project and that improvements identified in the General Plan are constructed when needed consistent with the County's Public Road Standards.
- Address issues related to operations and safety for all transportation modes.
- Ensure consideration and potential conditioning of the County's Active Transportation Plan for bicycle and pedestrian facilities.
- Identify the necessary operational transportation entitlement conditions for land development projects.
- Outline the County's screening criteria, study area, and methodologies to assess the potential need for off-site operation and safety improvements to the project study area transportation network.

- Establish measures of effectiveness to maintain transportation LOS consistent with the County's General Plan Mobility Element.
- Facilitate on-site project access and roadway frontage design infrastructure improvements to serve the project and the surrounding community.

1.5. Process Overview

The TSG is intended for use by County staff, project applicants, consultants, other agencies/jurisdictions, as well as the general public and decision makers, to evaluate transportation effects of proposed land development projects going through the environmental and discretionary planning/entitlement process within the jurisdiction of the County of San Diego.

Preparer Qualification Requirements

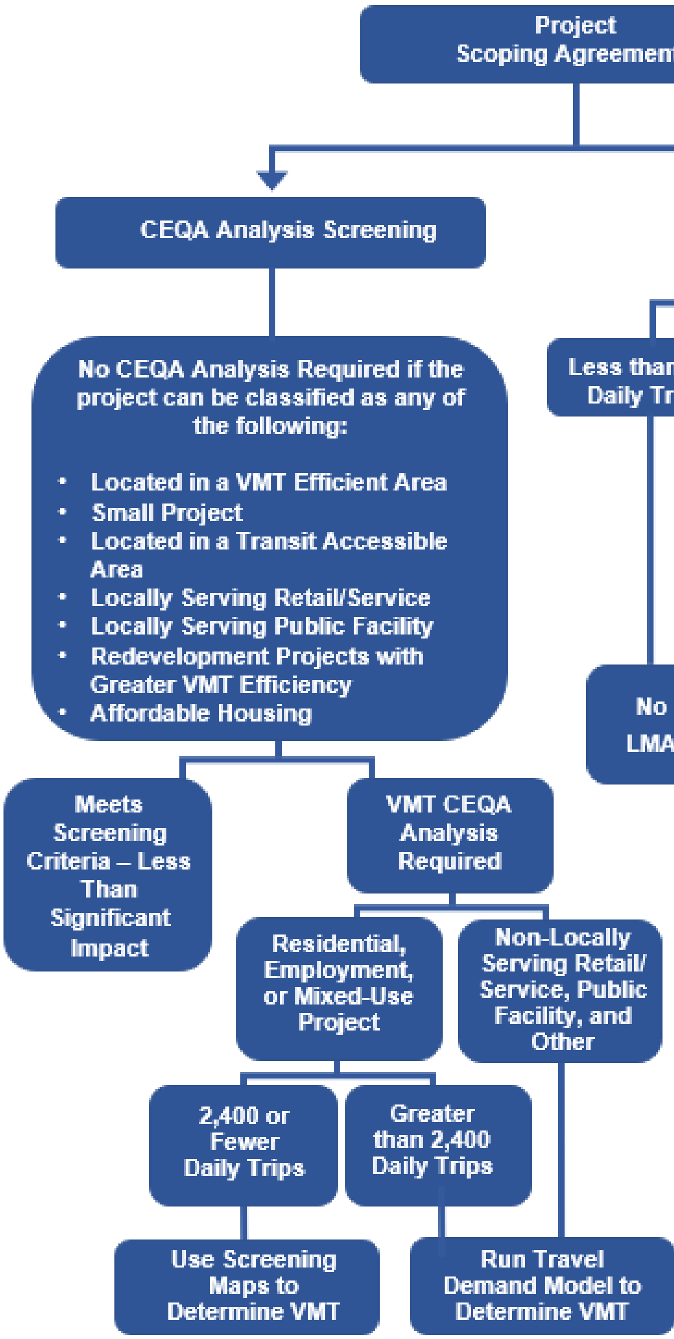
Transportation Studies must be prepared under the supervision of a registered Traffic Engineer who has specific training and experience in preparing transportation studies. All transportation studies must be stamped by a California Registered Traffic Engineer or equivalent as approved by County Planning & Development Services (PDS) or Department of Public Works (DPW).

County Review and Outside Agency Coordination

Transportation Studies for land development projects will be reviewed by County PDS and DPW.

If a County project affects another agency or jurisdiction, such as Caltrans, SANDAG, MTS, NCTD, or neighboring cities, coordination with that agency or jurisdiction may be required and will be identified in the scoping review process. County of San Diego staff can provide guidance and contact information for other agencies or jurisdictions.

FIGURE 1 – SCOPING FRAMEWORK FOR TRANSPORTATION STUDIES



**A project may require: LMA analysis only, CEQA analysis only, LMA and CEQA analysis, or no LMA or CEQA analysis*

Outline of Study Preparation and Review Process

The following summarizes the typical process for completing a Transportation Study in the County of San Diego:

- **Step 1 – Determine Study Requirements:** The applicant completes a Scoping Agreement for Transportation Studies (Appendix A – Scoping Agreement for Transportation Studies) that summarizes the proposed project description, location, site plan, site access, estimated trip generation and trip distribution, study area, methodology requirements, and any other specific issues to be addressed in the Transportation Study. The Scoping Agreement also includes preliminary screening criteria to determine if the project is screened out from CEQA Transportation Analysis and information to determine if a LMA is required.
- **Step 2 – Scoping Review and Agreement:** The completed project Scoping Agreement is submitted to the County of San Diego, along with the required fee deposit for review and approval. The County will either provide a letter confirming the Scoping Agreement or communicate other requirements. The applicant's consultant may request a meeting to clarify the draft work scope and the County's feedback. The Scoping Agreement will determine the type of Transportation Study that will be needed.
- **Step 3 – Conduct Transportation Study and Submit Draft:** The applicant's consultant will prepare the Transportation Study consistent with the requirements established in Steps 1 and 2 (and as outlined in the TSG) and will submit a draft to the County (Appendix B – Transportation Impact Study Format). The County will provide written comments on the draft study. During this process, the applicant's consultant may request a meeting with County staff to clarify study requirements or comments received on the draft study.
- **Step 4 – Submit Final Transportation Study:** The applicant's consultant will address all County comments and produce a Final Transportation Study to be approved by staff. Multiple iterations of study review may be necessary to adequately address all staff comments. It is critical that staff and the traffic consultant coordinate closely during the review process to ensure productive and efficient communications in achieving the mutual goal to finalize the Transportation Study. A record identifying how each comment was addressed should also accompany the Final Transportation Study. Depending on whether the Transportation Study included a VMT analysis, a LMA, or both, the final mitigation recommendations or improvements will be either in the CEQA Findings and/or the discretionary Conditions of Approval.

The County may update the TSG on an as-needed basis to reflect the best state of practice methodologies and changes in CEQA requirements. As such, the County will continually review the TSG for applicability and coordinate with other jurisdictions and professionals to ensure the most recent guidance and best practices are being applied for land development review and transportation analysis.

The TSG is not binding on any decision-maker and should not be substituted for the use of independent professional judgment and evaluation of evidence in the record. The County also reserves the right to request further, project specific, information in its evaluation that may not be identified or described in this document.

2. Transportation Study Initiation

If a project requires a discretionary action, the applicant and County staff will determine the Transportation Study requirements according to TSG.

The Transportation Study process begins with the applicant's consultant filling out a Scoping Agreement form (**Appendix A**), which serves as an application for transportation study scoping.

2.1. Types of Transportation Studies

CEQA and LMA requirements should be determined separately, as CEQA VMT analysis and/or LMA may apply to any type of transportation study. The following types of transportation studies (or a combination) may be required:

1. **No Transportation Analysis Required:** If a project meets screening criteria for CEQA VMT analysis and LMA, a Transportation Study will not be required.
2. **CEQA VMT Analysis Only:** Transportation studies where only CEQA VMT analysis is required because the project meets LMA screening criteria.
3. **LMA Only:** Transportation studies where only an LMA (Focused LMA or Full LMA) is required because the project meets CEQA VMT screening criteria.
4. **CEQA VMT and LMA Analysis:** Transportation studies that include both CEQA VMT analysis and a LMA (Focused LMA or Full LMA). This is required for projects that are not screened out based on the County's screening criteria outlined in following section.

2.2. Transportation Study Screening Criteria

Discretionary projects may need to complete a Transportation Study as identified in Tables 1 and 2. A project's consistency with the General Plan, estimated daily trips, project location, and other project characteristics will determine the type of study that is required based on the CEQA VMT and LMA screening criteria presented in Tables 1 and 2, respectively.

TABLE 1 – CEQA VMT SCREENING

CEQA VMT Screening Criteria
1. Small Residential and Employment Projects
• Less than 110 daily vehicle trips (trips are based on the number of vehicle trips after any alternative modes/location-based adjustments are applied)
2. Projects Located in VMT Efficient Areas

• Use location-based screening maps (consistent with the project land uses)
3. Locally Serving Retail Projects
• Projects that are 50,000 square feet or less
4. Locally Serving Public Facilities
• Public facilities that serve the local community including transit centers, public schools, libraries, post office, park-and-ride lots, other government offices, parks/trail heads, and passive public uses.
5. Redevelopment Projects with Lower Total VMT
• The proposed project's total daily project VMT is less than the existing land use's total daily VMT.
6. Affordable Housing
• 100% affordable housing

TABLE 2 – TYPE OF LMA BY DAILY PROJECT TRIPS

	Focused LMA	Full LMA
Consistent with General Plan	250-499 Daily Trips	500 or greater Daily Trips
Inconsistent with General Plan	N/A	250 or greater Daily Trips

For purposes of determining the LMA type, trips are based on the number of vehicle trips after any internal capture and alternative modes/location-based adjustments are applied but before adjustments for pass-by are taken.

Types of LMAs

- **Focused Local Mobility Analysis:** Applies only to a project consistent with the General Plan and forecast to generate 250 to 499 daily trips. A Focused LMA analysis is conducted for such projects to confirm that the project does not have an effect on the safety and operations of the transportation system and does not require a Full LMA.
- **Full Local Mobility Analysis**: Applies to a project consistent with the General Plan and forecast to generate 500 or more daily trips, or a project that is inconsistent with the General Plan and is forecast to generate over 250 daily trips. A Full LMA is required to ensure traffic operations and safety of the roadway network in the proximate area of the project, as well as ensure the local transportation system is adequate to serve the project and is consistent with County General Plan goals and policies.

2.3. Completing the Scoping Agreement Form

The applicant's consultant will prepare a Scoping Agreement (**Appendix A**) before coordinating with the County. This ensures that all the information necessary to determine study requirements is compiled and readily accessible.

The following main items are required to complete the Scoping Agreement:

Project Location

- Project location & vicinity map.
- Project Community Planning Area.
- Zoning and community plan land use designation of the project site (demonstrate consistency).

Detailed Project Description

- Land uses and intensities.
- Gross parcel acreage and net developable acreage or building square footage or number of proposed residential units.
- Number of parking spaces: vehicle (including accessible spaces), bicycle (racks and secure storage), motorcycle.

Site Plan

- Driveway locations and access type (ex. Full access, partial access, right in/out only).
- Pedestrian access, bicycle access and on-site pedestrian circulation.
- Location/distance of closest existing transit stop (measure as walking distance to project entrance/or middle of parcel).
- Location of any planned trails identified in the CTMP within ¼ mile of the project location.

CEQA Transportation Analysis Screening

- Project Type Screening
- Project Location Screening

LMA Study Area and Scenarios

- Study area and scenarios for LMAs are discussed further in Chapter 4.

LMA Trip Generation and Distribution

- Identify the number of new daily and peak hour driveway vehicle-trips added by the project as described in this section.

- Trip generation rates are commonly expressed in trips per unit of development – for example, trips per housing unit or trips per thousand square feet – and are derived by averaging trip generation data collected from existing land uses.

For San Diego County, the following trip generation sources should be used:

- The current edition of the Institute of Transportation Engineer's Trip Generation Manual and Trip Generation Handbook. The Trip Generation Manual provides average trip generation rates for a wide variety of land-use categories that is a nationally recognized transportation planning data source and industry standard.
- For unique land uses, trip generation should be derived from locally observed data that includes trip generation samples from at least three (3) similar facilities. The facilities selected as samples should be approved by County Staff prior to data collection.
- For existing facilities that are being expanded, trip generation should be determined by surveying the existing use to generate a project specific trip generation rate.
- The most detailed project information should be used to determine a project's trip generation estimate. For example, if the project's building square footage and the project acreage are both known, the building square footage is more detailed; therefore, should be used to estimate the trip generation.

Distribution of project trips throughout the study area can be estimated using two methods:

- Manual estimation using existing traffic volumes, location of complementary land uses, and engineering judgement. The trip distribution should be clearly communicated on a map that shows the percent of project traffic on each roadway in the vicinity of the project site. Manual estimation is appropriate for projects performing a Site Access Study, Focused LMA, or project's that generate less than 1,000 daily trips.
- Use the current version of the SANDAG Regional Travel Demand Model to perform a select zone analysis. The SANDAG Regional Travel Demand Model should be used to determine the trip distribution for projects that generate 1,000 or greater daily trips.

Additional information on trip generation, including trip reductions are discussed further in Chapter 4.

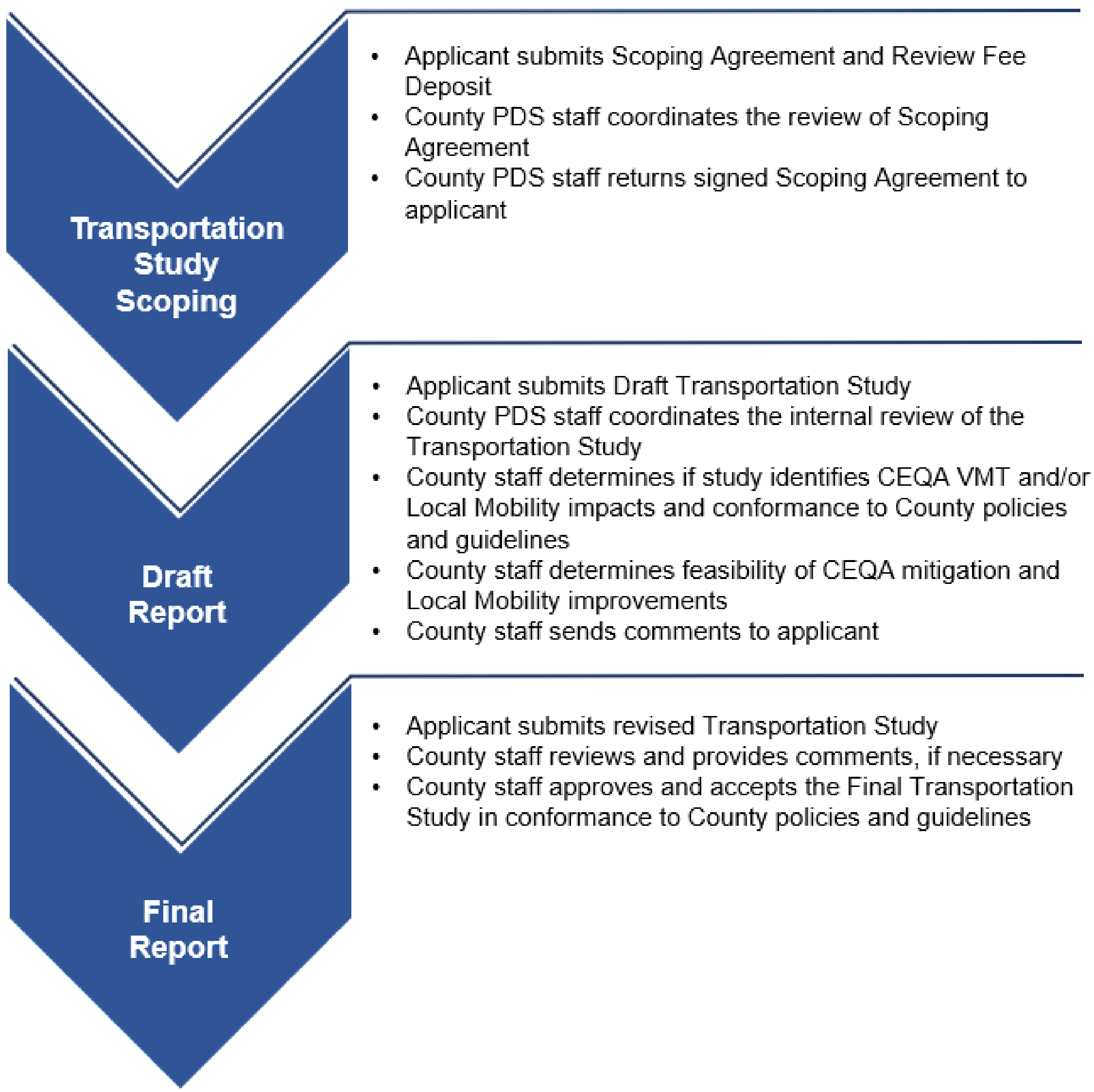
2.4. Submittal Instructions

The Scoping Agreement will be submitted as follows:

1. Scoping Agreement will be submitted to Planning & Development Services by the Applicant/Consultant. The Scoping Agreement form is available on the County PDS website (https://www.sandiegocounty.gov/content/sdc/pds.html).
2. Applicant/Consultant submits a completed Scoping Agreement including a fee deposit.
3. Staff begins the Scoping Agreement review and approval processes.
4. Staff sends a completed and signed Scoping Agreement to the Consultant.

5. Consultant submits a draft Transportation Study including a fee deposit.
6. Staff completes initial review.
7. If required, comments are submitted to the consultant and a revised Transportation Study is submitted. Additional review cycles may be required.
8. Upon completion, staff issues a final notice to the Applicant and the final Transportation Study is accepted for public review.

FIGURE 2 – TRANSPORTATION STUDY PROCESS OVERVIEW (PROJECT PLANNING REVIEW)



3. CEQA Requirements for Transportation VMT

3.1. Overview

SB 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing LOS with VMT and providing streamlined review of land use and transportation projects that will help reduce future VMT growth. This shift in transportation impact focus is expected to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce GHG emissions, encourage infill development, and improve public health through more active transportation.

In January 2019, the Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. The Office of Planning and Research (OPR) published its latest Technical Advisory on Evaluating Transportation Impacts in CEQA to the California Natural Resources Agency in December 2018. This Technical Advisory provides recommendations on how to evaluate transportation impacts under SB 743. These changes include elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant CEQA transportation impacts. CEQA Guidelines section 15064.3 states that "Generally, vehicle miles traveled is the most appropriate measure of transportation impacts" and the OPR guidance recommends the use of VMT as the preferred CEQA transportation metric. SB 743 includes the following two legislative intent statements:

1. "Ensure that the environmental impacts of traffic, such as noise, air pollution, and safety concerns, continue to be properly addressed and mitigated through the California Environmental Quality Act."
2. "More appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions."

To comply with the new legislation, the County of San Diego has identified VMT analysis methodology, establishment of VMT thresholds for CEQA transportation impacts, and identification of possible mitigation strategies. The VMT analysis will:

- Enable proposed development projects to comply with current CEQA requirements as a result of the implementation of SB 743.
- Describe the County's CEQA significance thresholds, screening criteria, and methodology for conducting the transportation VMT analysis.
- Determine if mitigation is required to offset a project's significant VMT impacts.

- Identify VMT reduction measures and strategies to mitigate potential impacts below a level of CEQA significance.
- Reduce the need to widen or build roads through effective use of the existing transportation network and maximizing the use of alternative modes of travel throughout the County.

VMT is a metric that accounts for the number of vehicle trips generated and the length or distance of those trips. VMT does not directly measure traffic operations but instead is a measure of network use or efficiency, especially if expressed as a function of population or employment (i.e. VMT per Resident). VMT tends to increase as land use density decreases and travel becomes more reliant on the use of the automobile due to the long distances between origins and destinations. VMT also serves as a proxy for impacts related to energy use, air pollution emissions, GHG emissions, safety, and roadway maintenance. The relationship between VMT and energy or emissions is based on fuel consumption. The traditional use of VMT in environmental impact analysis is to estimate mobile air pollution emissions, GHGs, and energy consumption.

3.2. Metrics and Methodology for Calculating VMT

Transportation VMT analysis for CEQA should be conducted using the SANDAG Regional Travel Demand Model. The model outputs can be used to produce VMT per Resident, VMT per Employee, Total VMT per Service Population, and Total VMT. Any other model used for VMT analysis shall be approved by PDS staff prior to submittal.

VMT per Resident

VMT per Resident is established by summing up total daily VMT generated by residents of a geographic area and dividing by the population of that geographic area. Total daily VMT includes all trip tours made by residents: home-based and non-home-based trip tours (i.e. all VMT for a resident for the entire day regardless of trip purpose or origin/destination).

To analyze the VMT per Resident for a proposed project, total daily VMT generated by project residents is divided by the project resident population.

SANDAG has a procedure to produce VMT per Resident; however, the SANDAG procedure to produce this metric only includes VMT generated within the SANDAG region by residents of the SANDAG region. To account for VMT generated by residents of the SANDAG region traveling outside of the region, the SANDAG model data must be appended with the VMT that occurs by SANDAG region residents outside of the region. The steps necessary to include VMT from all trips that enter or exit the SANDAG region are explained in the Trip Length Adjustment section below.

VMT per Employee

VMT per Employee is established by summing the total daily VMT generated by resident employees[1] of a geographic area and dividing by the number of employees of that geographic area. Total daily VMT

[1] Resident employees both live and work in the SANDAG region.

includes all trip tours made by employees, not just work-related trips (i.e. all VMT for a resident for the entire day regardless of trip purpose or origin/destination). Employees whose work location is specified as home are not included in the calculations. To analyze the VMT per Employee for a proposed project, the total daily VMT produced by the project's employees is divided by the total number of employees. The procedure developed by SANDAG to calculate VMT per Employee by TAZ only accounts for VMT generated within the SANDAG region by employees who are also residents of the SANDAG region. Employees that live outside of the region and travel into the SANDAG region for work are not accounted for because of the nature of the calculation.

VMT per Service Population

VMT per Service Population is established by dividing the total VMT with at least one trip end in a geographic area by the population plus employment of that geographic area. The total VMT includes all internal VMT, internal to external, and external to internal VMT (in other words all VMT regardless of geographic boundaries). Since this metric combines VMT for residents and employees and reflects how accessible all land uses are (for example, geographies with higher density, more shopping, and more jobs will have lower VMT per Service Population) it can be used to evaluate multiple types of projects. To analyze the VMT per Service Population for a proposed project, the project's total VMT is divided by the project population plus employment.

Total VMT (Origin-Destination Method)

The total VMT (origin-destination method) within a geographic area can be calculated directly from model outputs by multiplying the origin-destination (O-D) trip matrix by the final assignment skims (O-D Method VMT). The total VMT value should be appended to include VMT from all trips that enter or exit the SANDAG region, as explained in the Trip Length Adjustment section below.

Total VMT (Boundary Method)

Total daily VMT within a given area can be measured by multiplying the daily volume on every roadway segment by the length of every roadway segment within the area. This is called Boundary Method VMT. Examples of Boundary Method VMT are VMT within the SANDAG region, VMT within a defined planning area, or VMT within the market area to be served by the project.

Trip Length Adjustments

Trip length adjustments for trips leaving the SANDAG Model Area can be made by using the California Statewide Travel Demand Model (CSTDM).

Adjusting the length of trips leaving a model boundary requires appending extra distance at the model gateway zone (or external centroid) connectors. This process results in new gateway distances that are weighted based on the amount and location of external travel origins and destinations.

The first step of this process is to determine trip volume leaving or entering the model boundary. These are referred to as internal-to-external (IX) and external-to-internal (XI) trips. This data can be generated either from O-D trip matrices or by conducting a select zone analysis to track trips to the model gateways. The volume at the gateways for this purpose should not include external-to-external (XX) through trips.

Determining the full length of trips leaving or entering a model boundary requires an O-D dataset that includes flows between the model area and the area external to the model. The California Statewide Travel Demand Model (CSTDM) should be used to develop the O-D dataset.

The next step requires determining the gateway(s) based on the SANDAG model which trips from the O-D data source would travel through. The trip length adjustment process ultimately requires calculating the weighted average distance beyond each model gateway. The process of calculating trip lengths external to the SANDAG model region for trips entering or exiting the SANDAG model area using the CSTDM is described below:

- Create correspondence between Study Area TAZs within SANDAG model to the Statewide Model TAZs.
- Add “Gate” attribute to CSTDM roadway network links and set “Gate” equal to “gateway id” only for those links identified as the locations corresponding to the SANDAG model gateways.
- Add “Gate_Dist” attribute to CSTDM roadway network links and set “Gate_Dist” equal to the link distance for those links outside the SANDAG model boundary. All the CSTDM roadway links inside the SANDAG model boundary will have a “Gate_Dist” attribute of 0.
- Run a highway skim on the CSTDM roadway network to skim the shortest travel time between each O-D pair, tracking the gateway and distance outside the SANDAG model boundary.
- For each gateway, summarize the average distance beyond the SANDAG model boundary weighted by volume at each gateway.
- Tag the gateway distance from the above step using CSTDM to the gateways in the SANDAG model and multiply to the gateway volume from the SANDAG model to determine the gateway external VMT to the SANDAG model. Make sure not to double-count any overlap distance that’s already accounted for in the VMT calculation from the SANDAG model.

Table 3 shows the base year (2012) weighted average distance beyond the SANDAG model boundary for trips passing through each model gateway, as calculated using the methodology above.

TABLE 3 – TRIP DISTANCES OUTSIDE SAN DIEGO COUNTY FOR ENTERING AND EXITING TRIPS

Gateway		Distance Outside San Diego County (miles)	
Route	County	IX Trips	XI Trips
I-8	Imperial	70.16	69.20
SR-78	Imperial	54.07	58.90
SR-79	Riverside	71.71	62.54
Pechanga Pkwy	Riverside	35.89	30.91
I-15	Riverside	24.86	24.81
I-5	Orange County	60.54	62.81

3.3. VMT Analysis for Land Use Projects

3.3.1. Screening Criteria for CEQA VMT Analysis

The requirements to prepare a detailed transportation VMT analysis apply to all land development projects, except those that meet at least one of the screening criteria. A project that meets at least one of the screening criteria below would have a less than significant VMT impact due to project characteristics and/or location.

1. *Projects Located in a VMT Efficient Area*

A VMT efficient area is any area with an average VMT per Resident, VMT per Employee, or VMT per Service Population 15 percent below the baseline average for the Unincorporated County. Land use projects may qualify for the use of VMT efficient area screening if the project can be reasonably expected to generate VMT per Resident, per Employee, or per Service Population, respectively, that is similar to the existing land uses in the VMT efficient area. Screening maps for each metric can be found in **Appendix C**.

Residential projects located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for residential projects is any area with an average VMT per Resident 15 percent below the baseline average for the Unincorporated County.

Employment projects located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for employment projects is any area with an average VMT per Employee 15 percent below the baseline average for the Unincorporated County.

Mixed-Use projects located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for mixed-use projects is any area with an average VMT per Service Population 15 percent below the baseline average for the Unincorporated County. Alternatively (or if a project is not screened out using the VMT per Service Population map), a project can screen each component of the mixed-use using the appropriate screening criteria for each land use.

Retail/Service projects located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for retail/service is any area with an average VMT per Service Population 15 percent below the baseline average for the Unincorporated County.

2. Small Residential and Employment Projects

Projects generating less than 110 daily vehicle trips (trips are based on the number of vehicle trips calculated using national ITE trip generation rates with any alternative modes/location-based adjustments are applied) may be presumed to have a less than significant impact absent substantial evidence to the contrary[2].

3. Projects Located in a Transit Accessible Area

Projects located within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor[3] may be presumed to have a less than significant impact absent substantial evidence to the contrary. Note that Sprinter stations are considered major transit stops. This presumption may not apply if the project:

- Has a Floor Area Ratio of less than 0.75.
- Includes more parking for use by residents, customers, or employees of the project than required by the County.
- Is inconsistent with SANDAG's most recent Sustainable Communities Strategy (SCS).
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

4. Locally Serving Retail/Service Projects

Local serving retail/service projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail/service generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

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[2] For projects with varying trip generation on different days of the week it is appropriate to determine the average trip generation for purposes of determining if a project meets the small project screening criteria. Typically, land uses have consistent trip generation throughout the week or the majority of the week (for example, residential uses have similar levels of trip generation on weekdays and even on weekends, offices have consistent trip generation on weekdays, the majority of the days in a week). There are some project types that have varying trip generation throughout the week. The procedure for determining ADT would be to produce average daily trip generation accounting for the variance of trip generation throughout the week or month.

[3] Major transit stop: A site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (PRC § 21064.3). High quality transit corridor: A corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute periods (PRC § 21155).

5. Locally Serving Public Facilities and Other Uses

Public facilities that serve the surrounding community or public facilities that are passive use may be presumed to have a less than significant impact absent substantial evidence to the contrary. These do not include facilities or uses that would attract users from outside the vicinity of the use. The following are examples of locally serving facilities and uses:

- Transit centers
- Schools
- Libraries
- Post offices
- Park-and-ride lots
- Local health/medical clinics
- Law enforcement and fire facilities
- Local parks and trailheads
- Government offices
- Communication and utility buildings
- Water sanitation buildings
- Waste management buildings

6. Redevelopment Projects with Greater VMT Efficiency

Where a project replaces existing VMT-generating land uses, the project may be presumed to have a less than significant impact if the total project VMT is less than the existing land use's total VMT, absent substantial evidence to the contrary.

7. Affordable Housing

An affordable housing project may be presumed to have a less than significant impact absent substantial evidence to the contrary if 100 percent of units are affordable.

3.3.2. VMT Thresholds of Significance

Projects that do not meet the above screening criteria must include a detailed evaluation of the VMT produced by the project. The significance thresholds and specific VMT metric used to measure VMT are described by land use type below.

- **Residential**: 15 percent below the Unincorporated County average VMT per Resident.
- **Employment (Office/Commercial/Industrial)**: 15 percent below the Unincorporated County average VMT per Employee or 15 percent below the Unincorporated County average VMT per Service Population.
- **Retail/Service**: A net increase in total area VMT or 15 percent below the Unincorporated County average VMT per Service Population.
- **Mixed-Use**: 15 percent below the Unincorporated County average VMT per Service Population or each project component evaluated per the appropriate metric based on land use type (i.e. residential, office/commercial, and retail).
- **Regional Recreational**: A net increase in total regional VMT or 15 percent below the Unincorporated County average VMT per Service Population.

- **Regional Public Facilities**: A net increase in total regional VMT or 15 percent below the Unincorporated County average VMT per Service Population.
- **Other Project Types**: **Appendix D** provides a list with unique project types and identifies which land use category they fall within for analysis purposes.

For large land use plans, such as Specific Plans or Community Plan Updates the land use plan should be compared to the region overall. Comparison to the region is appropriate because large land use plans can have an effect on regional VMT (similar to how a regional retail project affects regional VMT). The following thresholds apply to large land use plans:

- **Residential:** Aggregate all residential land uses for the build-out year of the plan and compare the resulting build-out year VMT per Resident to the existing regional average. The threshold is 15 percent below the existing regional average VMT per Resident.
- **Employment:** Aggregate all employment land uses for the build-out year of the plan and compare the resulting build-out year VMT per Employee to the existing regional average. The threshold is 15 percent below the existing regional average VMT per Employee.
- **Retail/Service**: Evaluate the effect that adding these land uses has on regional VMT. The threshold is any increase in regional VMT.

3.3.3. VMT Analysis Procedures

For projects which meet one of the screening criteria for CEQA VMT analysis, no additional analysis is necessary. For projects that must provide a detailed evaluation of the VMT produced by the project, guidance is provided below on how to conduct transportation VMT analysis given the project type.

Project Type	Determine Average VMT by Maps	SANDAG Modelling Required
Residential, Employment, or Mixed-Use	Less than 2,400 un-adjusted driveway trips	Greater than 2,400 un-adjusted driveway trips
Non-Locally Serving Retail/Service, Public Facility, or Other	N/A	All Projects

1. Residential Projects

For projects that generate less than 2,400 daily unadjusted driveway trips (e.g. 240 or less single family residential units, 300 or less multi-family residential units, or 400 or less apartments): Identify the location of the project on the County's Resident VMT per Resident map. The project's VMT per Resident will be considered the same as the VMT per Resident of the TAZ it is located in. The project also has the option to use the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) to determine the project's VMT per Resident.

For projects that generate greater than 2,400 daily unadjusted driveway trips: Input the project into the SANDAG Regional Travel Demand Model for SANDAG (year that is used to determine the VMT thresholds) to provide the project's VMT per Resident. To perform the analysis, all project land uses should be input, and the VMT per Resident should be determined using the same method/scripts that SANDAG utilizes to calculate the VMT per Resident metric.

2. Employment Projects

For projects that generate less than 2,400 daily unadjusted driveway trips: Identify the location of the project on the County's VMT per Employee map. The project's VMT per Employee will be considered the same as the VMT per Employee of the TAZ it is located in. The project also has the option to use the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) to determine the project's VMT per Resident.

The project applicant may choose to substitute VMT per Service Population for VMT per Employee in the procedure described above.

For projects that generate greater than 2,400 daily unadjusted driveway trips: Input the project into the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) for SANDAG to provide the project's VMT per Employee. To perform the analysis, all project land uses should be input, and the VMT per Employee should be determined using the same method/scripts that SANDAG utilizes to develop the VMT per Employee metric.

The project applicant may choose to substitute VMT per Service Population for VMT per Employee in the procedure described above. VMT per Service Population should be determined using the methodology described in Section 3.2.

3. Retail/Service Projects

Calculate the change to area VMT using the SANDAG Travel Demand Model. To calculate the change in area VMT, the regional retail component of the project should be input into the travel demand model (year that is used to determine the VMT thresholds). The "with project regional retail" area VMT produced by the model run is compared to the "no project" area VMT.

Alternatively, if the project applicant choses VMT per Service Population as their analysis metric, input the project into the SANDAG Regional Travel Demand Model for SANDAG to provide the project's VMT per Service Population. VMT per Service Population should be determined using the methodology described in Section 3.2.

4. Mixed Use Projects

For projects that generate less than 2,400 daily unadjusted driveway trips: Identify the location of the project on the County's VMT per Service Population map. The project's VMT per Service Population will be considered the same as the VMT per Service Population of the TAZ it is located in. The project also has the option to use the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) to determine the project's VMT per Resident.

For projects that generate greater than 2,400 daily unadjusted driveway trips: Input the project into the SANDAG Regional Travel Demand Model for SANDAG to provide the project's VMT per Service Population. Compare back to the appropriate threshold to determine if the impact is significant.

All project land uses should be input, and the VMT per Service Population metric should be determined using the methodology described in Section 3.2,

OR, evaluate each individual project component per the appropriate metric based on land use type (i.e. residential, office/commercial, and retail) as described above.

5. *Other Project Types*

Input the project into the SANDAG Regional Travel Demand Model for SANDAG to provide the project's applicable VMT metric. To perform the analysis, all project land uses should be input, and the VMT metric that is appropriate based on the land use type should be determined using the methodology described in Section 3.2.

6. Apply VMT Reductions

If the project includes TDM measures, the reduction in VMT due to each measure shall be calculated and can be applied to the project analysis. There are several resources for determining the reduction in VMT due to TDM measures, such as the California Air Pollution Control Officers Association (CAPCOA) Quantifying GHG Mitigation Measures (2010) (Quantification Report) and the SANDAG Mobility Management Guidebook/VMT Reduction Calculator Tool (see Mitigation Section below).

The VMT reductions associated with project TDM should be applied to the appropriate metric(s) based on the project land uses. If the project does not include any TDM, then no reduction would be taken.

The resulting VMT values should be compared to the appropriate threshold in section 3.4 to determine whether the project results in a significant CEQA transportation impact due to VMT. Further information on VMT reduction and mitigation is provided in Section 3.5.

3.4. VMT Analysis for Transportation Projects

For transportation projects, any project that results in an increase in additional motor vehicle capacity (such as constructing a new roadway or adding additional vehicle travel lanes on an existing roadway) has the potential to increase vehicle travel, referred to as "induced vehicle travel."

Appendix E contains a list of transportation projects that, absent substantial evidence to the contrary, do not require an induced travel/VMT analysis since they typically do not cause substantial or measurable increases in VMT.

For all other projects, a VMT analysis must be done. To calculate the change in area (boundary method) VMT, the project should be input into the travel demand model. The "with project" area VMT produced by the model run is compared to the "no project" area VMT. A net increase in area VMT indicates that the project has a significant impact.

3.5. VMT Reduction and Mitigation Measures

To mitigate VMT impacts, the project applicant must reduce VMT, which can be done by either reducing the number of automobile trips generated by the project or by reducing the distance that people drive. The following strategies are available to achieve this:

1. Modify the project's site design and built physical characteristics to reduce VMT generated by the project.
2. Implement programmatic TDM measures to reduce VMT generated by the project.

Strategies that reduce single occupant automobile trips or reduce travel distances are called TDM strategies. There are several resources for determining the reduction in VMT due to TDM measures such as the CAPCOA Quantification Report and the SANDAG Mobility Management Guidebook/VMT Reduction Calculator Tool.

- CAPCOA Quantification Report
- SANDAG Mobility Management Guidebook/VMT Reduction Calculator Tool

The County is exploring programmatic options for addressing significant transportation VMT impacts such as a VMT Impact Fee Program, VMT Exchange, and/or a VMT Bank. These options would offer a regional approach for achieving VMT reductions and are briefly described as follows:

- VMT Impact Fee Program – This concept resembles a traditional impact fee program in compliance with the mitigation fee act and uses VMT as a metric. The nexus for the fee program would be a VMT reduction goal consistent with the CEQA threshold established by the County. The main difference from a fee program based on a metric such as vehicle LOS is that the VMT reduction nexus results in a capital improvement program (CIP) consisting largely of transit, bicycle, and pedestrian projects. These types of fee programs are recognized by case law as an acceptable form of CEQA mitigation if they can demonstrate that the CIP projects will be fully funded and implemented.
- VMT Exchanges – This concept (along with VMT banks) borrows mitigation approaches from other environmental analysis such as wetlands. The concept relies on an applicant agreeing to implement a predetermined VMT reducing project or proposing a new one in exchange for the ability to develop a VMT generating project. The mitigation projects may or may not be located near the applicant's project site. The concept requires a facilitating entity (such as the SANDAG or the County) to match the VMT generator (the development project) with the VMT reducing project and ensure through substantial evidence that the VMT reduction is valid. VMT Banks – This concept attempts to create a monetary value for VMT reduction (e.g., credits) such that an applicant could purchase VMT reduction credits. The money exchanged for credits could be applied to local, regional, or state level VMT reduction projects or actions. Like all VMT mitigation, substantial evidence would be necessary that the projects covered by the Bank would achieve expected VMT reductions and some form of monitoring may be required. This is more complicated than a simple exchange and would require more time and effort to set up and implement. The verification of how much VMT reduction is associated with each dollar or credit would be one of the more difficult parts of the program.

3.6. Cumulative VMT Impacts

Since VMT is a composite metric that will continue to be generated over time, a key consideration for cumulative scenarios is whether the rate of VMT generation gets better or worse in the long-term. If the rate is trending down over time consistent with expectations for air pollutant and GHGs, then the project level analysis may suffice. With the adoption of the CAP, the County identified strategies and measures to reduce the County's contribution of GHG emissions to the atmosphere to meet the State's 2020 and 2030 GHG emissions targets, and to demonstrate progress towards the 2050 GHG reduction goal; thus the VMT trend in the County can be considered downward.

For projects that require GPAs or are inconsistent with the General Plan, a cumulative VMT analysis is required. A project would result in a significant project-generated VMT impact under cumulative conditions if the applicable cumulative project-generated VMT thresholds are exceeded.

Measuring the 'project's effect on VMT' is necessary especially under cumulative conditions to fully explain the project's impact. A project effect on VMT under cumulative conditions would be considered significant if the cumulative link-level boundary VMT per Service Population (based on the Unincorporated County average) increases under the plus project condition compared to the no project condition.

Please note that the cumulative no project shall reflect the adopted RTP/SCS; as such, if a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be considered less than significant.

4. Local Mobility Analysis

4.1. Local Mobility Analysis Overview

The authority for requiring non-CEQA transportation analysis and potentially requiring project improvement conditions to address identified deficiencies lies in the County's Site Plan review authority and General Plan policies to promote orderly development, promote public safety, and to ensure land development site planning and the needed infrastructure are adequate.

The LMA evaluates the effects of a proposed development project on traffic operations and safety for the roadway network in the proximate area of the project. The LMA will:

- Ensure that the local transportation system is adequate to serve the project and that improvements identified in the General Plan are constructed when needed consistent with the County's Public Road Standards.
- Address issues related to operations and safety for all transportation modes.
- Ensure consideration of the County's Active Transportation Plan for bicycle and pedestrian facilities.
- Identify the necessary transportation entitlement conditions for land development projects.
- Outline the County's screening criteria, study area and methodologies to assess the potential need for off-site transportation operation and safety improvements to the project study area roadway network.
- Establish measures of effectiveness to maintain transportation LOS consistent with the County's General Plan Mobility Element.
- Facilitate on-site project access and roadway frontage design infrastructure improvements to serve the project and the surrounding community.

4.2. LMA and General Plan Consistency

The LMA is intended to implement the County's General Plan by ensuring:

- A safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities.
- Development projects to provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where an unacceptable level of service has been accepted by the County.
- New or expanded transportation facilities that are phased with and equitably funded by the development that necessitates their construction.

- Roads are designed to be safe for all users and compatible with their context and consistent with County Public Road Standards.
- A multi-modal transportation system that provides for the safe, accessible, convenient, and efficient movement of people and goods.
- A public transit system that reduces automobile dependence and serves all segments of the population.
- Bicycle and pedestrian networks and facilities that provide safe, efficient, and attractive mobility options as well as recreational opportunities for County residents.
- A safe, scenic, interconnected, and enjoyable non-motorized multi-use trail system developed, managed, and maintained according to the County Trails Program, Regional Trails Plan, and the Community Trails Master Plan.

4.3. Determining Study Requirements

4.3.1. Screening Criteria

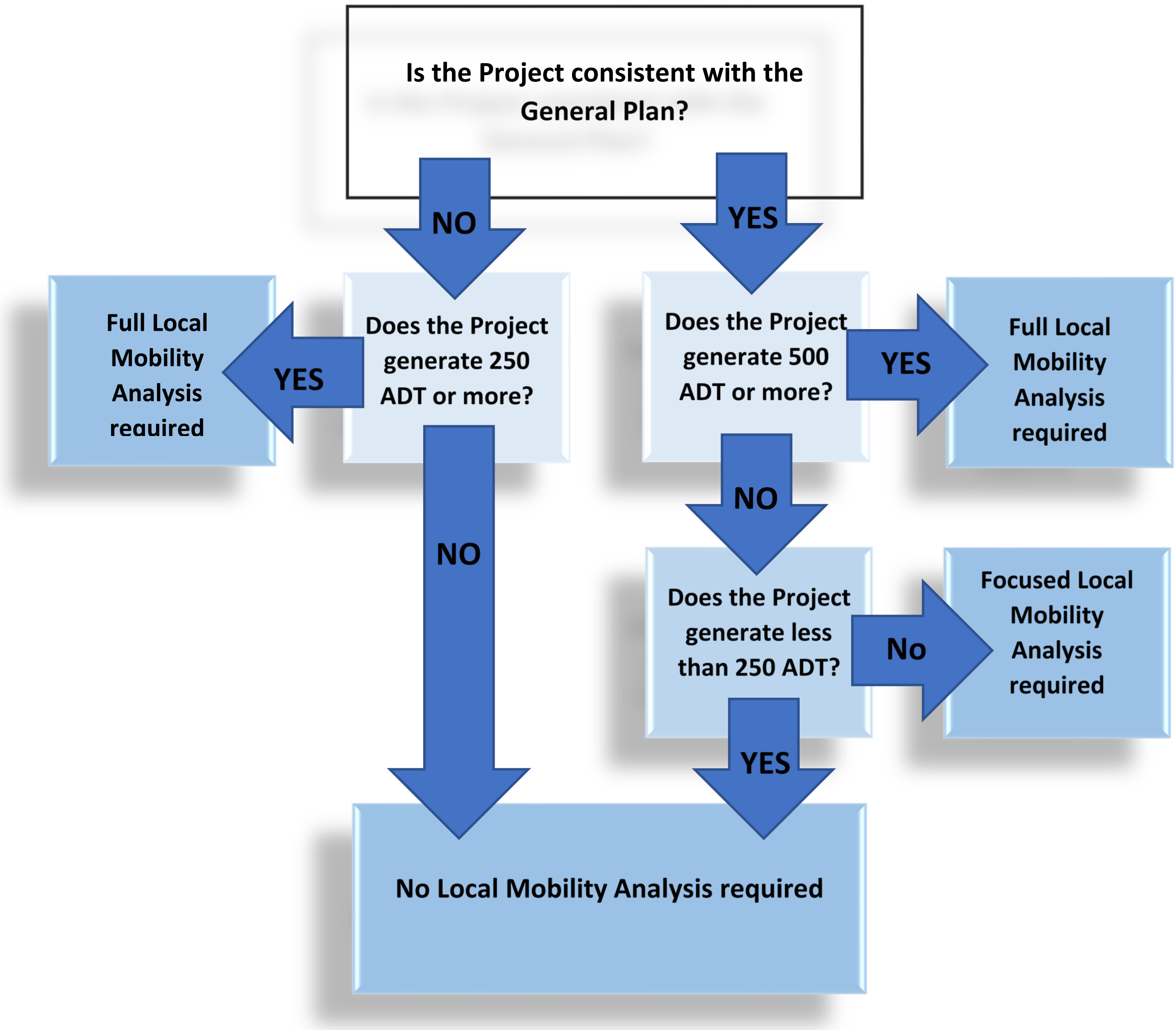
Discretionary projects may need to complete an LMA. The project's consistency with the General Plan and estimated daily trips will determine the type of LMA that is required based on Table 4.

TABLE 4 - DETERMINING LOCAL MOBILITY ANALYSIS TYPE

	Focused LMA	Full LMA
Consistent with General Plan	250-499 Daily Trips	500 or greater Daily Trips
Inconsistent with General Plan	N/A	250 or greater Daily Trips

For purposes of determining the LMA type, trips are based on the number of vehicle trips after any internal capture and alternative modes/location-based adjustments are applied but before adjustments for pass-by are taken.

FIGURE 3 - DETERMINING LOCAL MOBILITY ANALYSIS TYPE



4.4. Analysis Requirements

4.4.1. Study Area

The extents of the LMA study will be determined for each mode based on the LMA type and travel mode, as follows:

Vehicle

Determine the required study (Focused LMA or Full LMA) based on the consistency with the General Plan, forecasted daily project trips, and the criteria listed in Table 5.

TABLE 5 - EXTENT OF STUDY FOR VEHICLE (INTERSECTION) ANALYSIS

	Focused LMA	Full LMA
Land Use Consistent with General Plan	**250-499 Daily Trips** Site Access driveways and intersections that receive 50% or more of the total peak hour project generated trips (25 trip minimum) or have known operational concerns*	**500 or greater Daily Trips** Site Access driveways and intersections where at least 50 project peak hour trips are added or have known operational concerns (if the project does not contribute 50 peak hour trips total to any intersection, then the study intersections will be intersections that receive 50% or more of the total peak hour project generated trips)*
Land Use Inconsistent with General Plan	**N/A**	**250 or greater Daily Trips** Site Access driveways and intersections where at least 25 project peak hour trips are added or have known operational concerns*

For purposes of determining the LMA type, trips are based on the number of vehicle trips after any internal capture and alternative modes/location-based adjustments are applied but before adjustments for pass-by are taken. Study intersections for Focused and Full studies are determined by number of project trips at the intersection, or if the project creates safety or operational concerns identified in the Scoping Agreement.

*The number of intersections to be included for LMA will be identified in the Scoping Agreement.

For larger projects, a roadway segment assessment may be appropriate and requested by County staff.

Active Transportation

Assessment of pedestrian, bicycle, transit, and trail facilities will be identified in Scoping Agreement. Identification of potential active transportation improvements through the LMA could also be utilized in VMT mitigation where applicable.

Pedestrian:

Documentation of existing and planned pedestrian facilities and basic deficiencies (missing sidewalk, curb ramps, and major obstructions) within ¼-mile walking distance measured from each pedestrian access point (for example, driveways, internal project sidewalk connections to the street, etc.).

Bicycle:

Documentation of existing and planned bicycle facilities and basic deficiencies (bike lane gaps, obstructions) within one-mile bicycling distance measured from the center of the intersection formed by each project driveway.

Transit:

Identification of the closest transit routes and stops to the project within ¼ mile walking distance and documentation of amenities at existing transit stops (i.e. shelters, maps, benches, etc.).

Trails:

Documentation of all planned trails and pathways identified in the County's CTMP within ¼ mile of the project site.

4.4.2. Site Access and Circulation Evaluation Criteria

The LMA should address the following site-specific topics:

- Appropriate access management standards for median openings and spacing between major driveway connections.
- Potential sight distance problems.
- Potential pedestrian or bicycle conflicts.
- Relationship of internal circulation facilities to public streets.
- Sufficiency of driveway length at major entrances.
- On-site circulation as it impacts the public roadway system or access to public transportation and bicycle/pedestrian network.
- Potential for shared access among developments, including alternate access roads.

4.4.3. Data Collection and Study Periods

- Counts should be no more than two years old unless older counts are demonstrated to be still valid for Existing Conditions. Counts older than four years old must be updated.

- The LMA should provide tables and map figures of the traffic count data. Technical Appendices should include original traffic count data sheets.
- Traffic counts should typically be conducted during AM and PM peak periods on Tuesdays, Wednesdays, or Thursdays, unless approved by County staff. For typical commute hours, the peak hour will fall between 7:00-9:00 AM and 4:00-6:00 PM.
- Other peak hours, off-peak, or special event peak periods, may also be required depending on the project location and type of use. If the study necessitates a weekend analysis, Saturday from 11:00 AM to 1:00 PM will be the analyzed peak period.
- Traffic data should not be collected on weeks that include a holiday and non-school session time periods, unless approved by County staff.

4.4.4. Other Data Collection Considerations

Other considerations in data collection documentation and analysis should incorporate all applicable components that relate to the transportation network, which may include:

- Speed limits and average/85th percentile vehicle speed.
- Parking characteristics (on-street parking presence and type, bus stops).
- Signing (static, dynamic or variable) and pavement markings.
- School zone.
- Signal phasing and timing plans.
- Intersection control type.
- Right turn and left turn treatments.
- Railroad crossing location.
- Ramp metering.
- Pedestrian counts.
- Bicycle counts.
- Transit stops (type, frequency/schedule, dwell time, trip length, bus blockage).
- Roadway classification (functional class, rural/urban designation, access class, area type).
- Cross section elements (number, width and purpose of lanes, shoulder type and width, median type and width, pavement type and rating condition, cross slope, sidewalk, bicycle lane).
- Geometry (horizontal and vertical alignment, storage lengths, intersection/interchange configurations, auxiliary lanes).
- Pedestrian and bicycle accommodation.

- Transit (location, position, proportions with shelters and benches).
- Roadside (clear zone width, lateral clearance, driveway counts).

4.4.5. Study Scenarios

The following scenarios should be evaluated for the LMA:

- ***Existing Conditions:*** Existing traffic volumes. Document existing geometrics (i.e., roadway/intersection configurations, sight distance, turn lane storage, presence of closely spaced or offset driveways, etc.).

  Document existing traffic volumes and peak-hour levels of service in the study area.
- ***Opening Year Conditions***: The Opening Year (without project) traffic volumes should be derived by using an ambient growth factor applied to the existing traffic volumes. The proposed ambient growth factor should be submitted by the consultant and approved by County staff as part of the Scoping Agreement to determine the Opening Year conditions.
- ***Opening Year Plus Project****:* The project's generated traffic is added to the Opening Year Conditions to evaluate the *plus project* conditions.
- ***Phased Analysis*** (if necessary): For phased developments, include projections for the year that each phase of the development is planned to be complete. Forecast performance measures should be indicated both without and with the development in the year that each phase is planned to be complete. Either multi-phased development and/or construction phase especially if early phased development will overlap with construction activities.
- ***Build-out/Horizon Year:*** For General Plan Amendments (GPA), a General Plan Buildout/Horizon Year analysis (without and with the project) will be required. For GPAs, the LMA scope is expanded to identify potential new near-term and long-range traffic effects that were not previously identified in the Adopted General Plan analyses. The expanded GPA LMA includes a more comprehensive study area and a comparative Buildout assessment of the Adopted versus the Proposed GPA and the effects to the County's long-range Mobility Element roadway network.

4.4.6. Trip Generation

The applicant's consultant should identify the number of new daily and peak hour driveway vehicle-trips added by the project as described in this section.

Trip generation rates are commonly expressed in trips per unit of development - for example, trips per housing unit or trips per thousand square feet - and are derived by averaging trip generation data collected from existing land uses.

For San Diego County, the following trip generation sources should be used:

- The current edition of the Institute of Transportation Engineer's (ITE) Trip Generation Manual and Trip Generation Handbook. The Trip Generation Manual provides average trip generation rates and best-fit equations developed through regression analysis.

- For unique land uses, trip generation should be derived from local empirical data that includes trip generation samples from at least three (3) similar facilities. The facilities selected as samples should be approved by County Staff through Scoping Agreement prior to data collection.
- For existing facilities that are being expanded, trip generation should be determined by surveying the existing use to generate a project specific trip generation rate.
- The most detailed project information should be used to determine a project's trip generation estimate. For example, if the project's building square footage and the project acreage are both known, the building square footage is more detailed; therefore, should be used to estimate the trip generation.

4.4.7. Trip Reductions

Reasonable reductions to trip rates may also be considered, including:

Internal Capture

For mixed-use projects it is appropriate to estimate the interaction between the project uses. For example, for a project that has retail, residential, and office, with compatible supporting land uses within a ¼ mile walking distance, trip reductions may be used. Most trip generation data is for stand-alone, single land uses and does not account for the interaction between land uses for a mixed-use project.

Trip internalization for mixed-use developments (if applicable) should be calculated using state of the practice methodologies. The ITE Trip Generation Handbook provides a procedure for calculating internal trips for mixed-use projects. SANDAG's mixed-use trip generation or (MXD) methodology may also be considered. The applicant's consultant may also propose a method for determining adjustments to trip generation for mixed-use projects, with approval from County staff through the Scoping Agreement.

Trip generation adjustments to account for internal capture should be applied to the raw trip generation calculated for each land use.

Alternative Modes

Most trip generation data is based on suburban locations with primarily auto trips. Transit, bicycling, and walking is not generally captured in the trip generation data. For projects that will have alternative modes, transit use, bicycling, and walking must be specifically acknowledged to reduce the trip generation (after the internal capture step).

Accounting for alternative modes includes considerations for project proposed (or required) TDM measures. Consultant should propose the alternative modes reduction factor for the project to be reviewed and approved by County staff identified in the Scoping Agreement.

SANDAG trip reduction factors may also be considered for developments within ¼ mile walking distance to a local transit station.

Pass-By & Diverted Trips

Properly estimating the number of pass-by trips is important because even though pass-by trips do not add extra trips to the surrounding roadway system, such trips impact the traffic at the driveways and all the turning movements expected at these driveways. The percentage of pass-by and diverted link trips should be estimated based on data provided by ITE or actual surveys of similar land uses. The pass-by reduction should not exceed 10% of the adjacent street volume.

Typically, pass-by trips will not be added to the study intersections (except for accounting for them at project driveways). Typically, diverted link trips are added to all study intersections along with the net new project trips, unless there is specific justification to demonstrate where the trips are diverting from.

Credit for Existing Uses

For redevelopment projects, it may be appropriate to apply a “trip credit” to account for vehicle trips being generated by an existing use that will be redeveloped. The existing use should be operating at the time of data collection, and traffic counts should be performed to determine the appropriate trip credit. The “trip credit” should be applied after internal capture and alternative modes are accounted for.

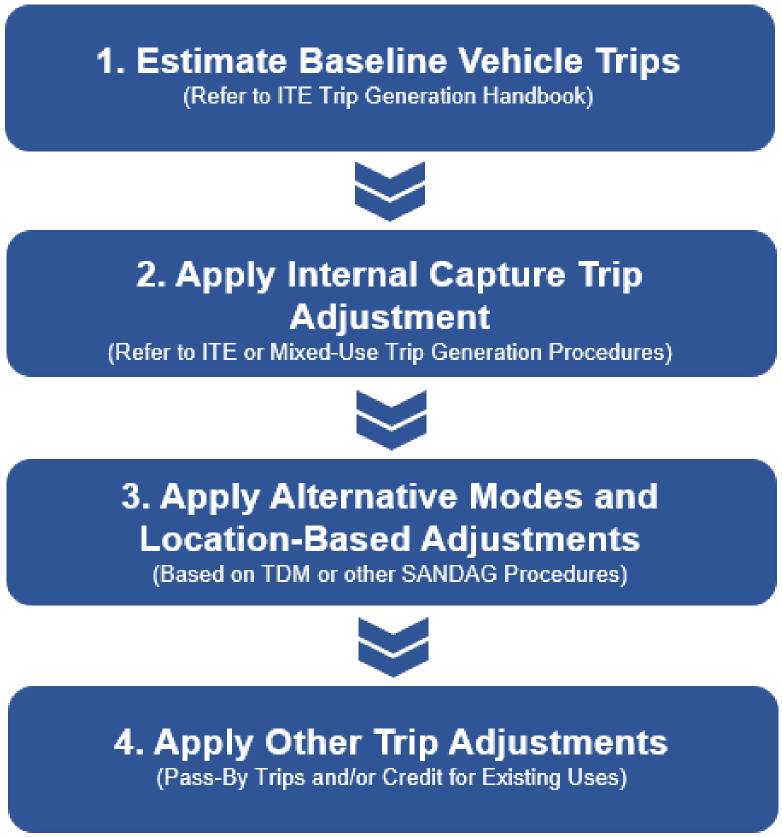
Truck Traffic

For projects that anticipate the generation of significant truck traffic (typically a project that that estimates that truck traffic will account for 25% or more of the total project trip generation), all truck trips should be converted to passenger car equivalents (PCE) for the capacity analysis. Typically, the PCE that should be applied is 2.5 passenger cars for each truck trip.

Other Jurisdictions

Caltrans or adjacent jurisdictions may use different trip reduction rates. Early consultation with reviewing agencies is strongly recommended and must be documented in the Scoping Agreement.

FIGURE 4 - PROJECT TRIP GENERATION FLOW CHART



4.4.8. Trip Distribution

The following describes the procedure for assigning project trips to the roadway network. Trip distribution can be determined from zip code data, census data, market research, travel demand models, existing travel patterns, and/or the locations of complementary land uses, and professional engineering judgment. Trip distribution assumptions should be consistent for developments of the same use in the same areas. Trip distribution for the County can be estimated using two methods:

- Manual estimation using procedures described above for existing traffic volumes, location of complementary land uses, and engineering judgement. The trip distribution should be clearly communicated on a map that shows the percent of project traffic on each roadway in the vicinity of the project site. Manual estimation is appropriate for projects performing a Site Access Study, Focused LMA, or project's that generate less than 1,000 daily trips.
- Use the current version of the SANDAG Regional Travel Demand Model to perform a select zone analysis. The SANDAG Regional Travel Demand Model should be used to determine the trip distribution for projects that generate 1,000 or greater daily trips.

A preliminary trip distribution pattern should be submitted with the Scoping Agreement for County staff review.

4.5. LMA Methodology

4.5.1. Signalized Intersections Methodology

Traffic operational impacts at signalized intersections should be analyzed using standard or state-of-the-practice procedures such as Highway Capacity Manual (HCM) analysis. At isolated intersections that are not heavily congested, deterministic methods that apply HCM equations for each intersection in isolation can be used. HCM 6th Edition is the latest version which reflects current state-of-the-practice methodology. There are several software packages that use deterministic methods such as Synchro, Vistro (previously Traffix), and Highway Capacity Software. The HCM methodology assigns a LOS grade to an intersection based on estimated delay.

For intersections that are closely spaced, have a unique geometry, or are part of a congested corridor, micro-simulation analysis should be performed. Micro-simulation can more accurately evaluate intersections with unique characteristics or in congested systems because the method accounts for how intersections within a system interact with one another. For example, if a vehicle queue extends from an intersection and blocks a different intersection, micro-simulation will account for that condition, whereas deterministic methods will not. Micro-simulation should also be considered when determining required turn lane storage if the analyst believes deterministic methods are not producing reasonable maximum or 95th percentile queue lengths. There are several micro-simulation software packages such as SimTraffic (which is a module of Synchro) and Vissim.

It is recommended that the methodology and software proposed for use is coordinated with County staff as part of the Scoping Agreement process. County staff may also request the consultant provide micro-simulation electronic files for review.

The following provides general guidelines for the parameters necessary to perform the analysis. For evaluating existing and project buildout conditions within five years of commencement of the LMA, the parameters should generally be based on field measurements taken during traffic data collection or field observation. For new study intersections or to analyze a buildout year that is beyond five years of commencement of the LMA, the guidelines in **Table 6** can be used to determine input parameters.

TABLE 6 - SIGNALIZED INTERSECTIONS PARAMETERS

Parameter	Guidance
Intersection Delay	Average intersection delay (and associated HCM level of service) should be reported for signalized intersections.
Peak Hour Factor (PHF)	Use the measured PHF by intersection approach that is obtained during traffic data collection. For new intersections or to analyze conditions beyond five years of commencing the LMA, refer to the HCM and maintain consistency across analysis periods, scenarios, and intersections.
Saturation Flow Rate	Use typical saturation flow rate presented in the HCM. The current typical saturation flow rate is 1,800 vehicles per hour per lane.

Signal Timing	Obtain signal timing plans from the appropriate agency and use the timing (by time of day if provided) for the analysis. For new traffic signals use a maximum cycle length of 120 seconds for intersections near freeway interchanges or at the intersection of two arterial roadways. For all other conditions use a maximum of 90 seconds. For all conditions, ensure that the minimum pedestrian crossing times are utilized.
Conflicting Pedestrians and Pedestrian Calls	Use pedestrian count data if available. If not available refer to the HCM for appropriate minimum values.
Heavy Truck Percentage	If available, use observed values from field observations or traffic counts. If unavailable, the minimum recommended value is 3%. Heavy truck percentages should be higher on truck routes.
Lane Utilization Factor	If applicable, adjust the lane utilization factor based on field observations. Otherwise, refer to the HCM.
Queue & Storage Analysis	HCM should be utilized to compare turn volumes with the length of available storage.

An improvement is required at a signalized intersection if any of the following are triggered:

- Consistent with County General Plan Policy, any intersection that is operating at an acceptable LOS or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS E or F should identify improvements to improve operations to LOS D or better.
- Any signalized study intersection that is operating at LOS E or F without project traffic where the project increased delay by 5.0 or more seconds should identify improvements to offset the increase in delay.
- If the left turn volume exceeds 100 vehicles per hour, an exclusive left turn lane is recommended.
- If the left turn volume exceeds 150 vehicles per hour and posted speed 45 mph or greater, a protected left turn signal phase is recommended.
- If the left turn volume exceeds 300 vehicles per hour, a second left turn lane is recommended.
- If the right turn volume exceeds 150 vehicles per hour, a dedicated right turn lane is recommended.
- The project causes the 95th percentile queue at a turn lane to exceed the existing turn lane length/storage.

The following types of typical improvements for signalized intersections:

- Addition of left or right turn lanes.
- Lengthening a turn lane.
- Signal timing/phasing/coordination/equipment improvements or transportation system management (TSM).
- ADA signal accessible improvements.
- The County may also require upgrades to meet current design standards or better accommodate pedestrian and bicycle mobility consistent with the County Active Transportation Plan.

4.5.2. Unsignalized Intersections Methodology

Traffic operational impacts at unsignalized intersections (all-way stop, side-street stop, and roundabout intersections) should be analyzed using standard or state-of-the-practice procedures consistent with acceptable LOS as outlined in the County General Plan. The software packages and methods described for signalized intersections also apply to stop controlled intersections.

All-way stop intersections and roundabouts should be reported for the entire intersection average value.

Minor side-street stop intersections should be reported for the worst-case movement.

An improvement is required at side street stop unsignalized intersection if:

- The project causes the average intersection delay to be LOS E or F during the peak hour.
- If the worst-case movement is currently operating at LOS E or F:
    - The project adds 5 or more seconds of *overall intersection.*

      AND
    - The project adds ten (10) or more trips to the worst-case movement OR 50 or more trips to the overall intersection.
- The intersection meets the peak hour traffic signal warrants after the addition of project traffic per the *California Manual on Uniform Traffic Control Devices* (CA MUTCD–latest edition). An investigation of the need for a traffic control signal may also include an analysis of factors related to the existing operations and safety at a study intersection and the potential to improve these conditions. A warrant analysis is not required for right turn in/right turn out only intersections or driveways that are physically restricted by raised center median.

An improvement is required at all-way stop and roundabout unsignalized intersection if:

- The project causes the average intersection delay to be LOS E or F during the peak hour.
- The project adds 5 or more seconds of delay to an intersection that is currently operating at LOS E or F during the peak hour.

- The intersection meets the peak hour traffic signal warrants after the addition of project traffic per the *California Manual on Uniform Traffic Control Devices* (CA MUTCD–latest edition). An investigation of the need for a traffic control signal may also include an analysis of factors related to the existing operations and safety at a study intersection and the potential to improve these conditions. A warrant analysis is not required for right turn in/right turn out only intersections or driveways that are physically restricted by raised center median.

The following types of typical improvements improve operations for unsignalized intersections:

- Install All-Way Stop Control.
- Install Two-Way Stop Control.
- Provide Left Turn Lane.
- Provide Right Turn Lane.
- Install Bypass Lane.
- Install Center Acceleration Lane.
- Install new traffic control device (Perform intersection control evaluation (ICE), see below).
- The County may also require upgrades to meet current design standards or better accommodate pedestrian and bicycle mobility consistent with the County ATP.

4.5.3. Intersection Control Evaluation (ICE)

The selection of the appropriate intersection control evaluation (ICE) should be guided by performance-based evaluations that objectively consider the range of project solutions and control strategies for a given project context. Traffic operations and safety performance are key inputs into the ICE framework. Consistent with the California MUTCD, the County of San Diego recognizes the roundabout as a standard form of intersection control. Roundabouts can provide increased efficiency of operations and enhanced safety. Should a project recommend the construction of a new signalized intersection or control measure, the County recommends the intersection be further analyzed using Caltrans ICE methodology. If the analysis screening indicates that a roundabout should be evaluated, the analysis should be conducted using one of the following methodologies: SIDRA or RODEL. These models are consistent with HCM 2010 and HCM Edition 6 models.

There are various reference and informational guides that discuss applications, designs, and performance characteristics of different intersection types and control strategies are available to support screening, analyzing and designing roundabouts.

https://safety.fhwa.dot.gov/intersection/ice/fhwasa18076/fhwasa18076.pdf

https://safety.fhwa.dot.gov/intersection/innovative/roundabouts/

https://dot.ca.gov/programs/traffic-operations/intersection-evaluation-control

It is recommended that early consultation occur with County staff when the Transportation Study determines the need for a new intersection control measure. A roundabout option should be screened early in the draft Transportation Study. During this process, the applicant's consultant may request a meeting with County staff to clarify study requirements or comments received on the draft study related to the need to conduct an ICE study.

4.5.4. Roadway Segments Methodology

Intersections are typically the constraint when analyzing traffic operations. However, in some cases for larger projects, a roadway segment assessment may be appropriate and requested by County staff.

Roadway segment analysis should be performed using thresholds from the latest HCM methodology that reflects the current state-of-the-practice. The HCM methodology assigns a LOS grade to the roadway segment and is evaluated based on acceptable LOS as identified in the County General Plan and Public Road Standards based on facility classification type.

https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/references/rtcref/ch3.1.8/2014-12-19_CountyofSanDiego2012_PublicRoadStandards.pdf

4.5.5. Site Access, Safety, and Other Analyses

The proper application of access management and basic site planning principles is essential to all transportation analysis. The design of site circulation, parking, and access should also easily accommodate bus and pedestrian movements. The following factors should be considered when evaluating existing and/or post-project traffic conditions to address identified traffic operations and safety concerns:

1. Intersection phasing and queuing
2. Inadequate weaving distance with increasing traffic volumes
3. Inadequate deceleration length with increasing traffic volumes
4. Speed differentials from vehicles slowing or stopping
5. Inadequate decision sight distance
6. Access management
7. Driveway location and design
8. Bicycle, pedestrian and transit accessibility

Table 7 - Safety Treatments by Facility Type

Facility Type	Treatment
Freeways	Ensure intersection and freeway ramps capacity and storage don't spill onto local roadways
Roadways	Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or otherwise to improve safety
Intersections	Addition of through lane(s), right turn lane(s) and left turn lane(s)
	Left and/or right turn lane pocket length (queue length)
	Intersection control measures and coordination (stop control, signal, roundabout)
	Intersection geometrics for heavy vehicle traffic (e.g. curb returns)
Driveways	Sight distance
	Driveway length and gated entrances
	Corner clearance
	Number or driveways
Access Management	Raised median and two-way-left-turn lanes
	Sight distance improvements
	Access and signal spacing
	Gap analysis
Complete Streets - Bicycle, Pedestrian & Transit	Infrastructure
	Accessibility
	Bus turnouts
Parking	Parking plans and restrictions
Traffic Calming	Vertical deflections (speed humps, speed tables, and raised intersections), horizontal shifts, roadway narrowing, etc.

Construction

All projects should anticipate construction impacts with new development. To the extent possible, operational analysis should include information about project construction schedule such as duration, hours or operations, any required grading, potential haul routes, traffic control plans and street closure.

Active Transportation Assessment

The County of San Diego's Active Transportation Plan (ATP) is a multi-objective plan that balances environmental, economic, and community interests; implements the County's General Plan; and aligns with multiple County initiatives. The ATP identifies goals, objectives, and actions related to improving safety to reduce auto collisions with cyclists and pedestrians, increasing accessibility and connectivity with an active transportation network, and improving public health by encouraging walking and biking.

The pedestrian, bicycle, and trail facilities assessment is intended to determine a project's potential effect on Active Transportation facilities in the vicinity of the proposed project. The deficiencies could be *physical*, through removal or modification of existing facilities. The deficiencies could also be based on *demand* if the project is adding bicycle and pedestrian trips to inadequate facilities.

https://www.sandiegocounty.gov/content/sdc/pds/advance/ActiveTransportationPlan.html

Pedestrian: Documentation of existing and planned pedestrian facilities and basic deficiencies (missing sidewalk, curb ramps, and major obstructions) within ¼-mile walking distance measured from each pedestrian access point (for example, driveways, internal project sidewalk connections to the street, etc.).

The project should construct sidewalks to close sidewalk gaps adjacent to the project site.

The project should remove sidewalk obstructions that limit the pedestrian access route to less than four feet adjacent to the project site.

The project should construct curb ramps/meet accessibility standards for any intersections adjacent to the project site.

The project can consider adding traffic calming and pedestrian related signal timing changes (leading pedestrian interval signal timing) to accommodate an increase in pedestrian demand on roadways and intersections adjacent to the project site.

Bicycle: Documentation of bicycle facilities and basic deficiencies (bike lane gaps, obstructions) within ½ mile bicycling distance measured from the center of the intersection formed by each project driveway.

The project should construct (or preserve space for) any planned bicycle facility per the County's Active Transportation.

The project could consider upgrading adjacent bicycle facilities by adding upgraded treatments (such as green bike lane paint, buffers, etc. where appropriate) to accommodate an increase in bicycle demand.

The project should construct any planned bicycle facilities adjacent to the project frontage to be consistent with the County's Mobility Element and Active Transportation Plan.

Trails: The County Trails Program will be utilized to develop a system of interconnected regional and community trails and pathways. These trails and pathways are intended to address an established public need for recreation and transportation but will also provide health and quality of life benefits associated with hiking, mountain biking, and horseback riding throughout the County's biologically diverse environments. The County Trails Program involves both trail development and management on public, semi-public, and private lands.

https://www.sandiegocounty.gov/content/sdc/pds/community-trails-master-plan.html

Documentation of all planned trails and pathways identified in the County's CTMP within ¼ mile of the project site.

The project should construct any planned pathways along the project's frontage to be consistent with the County's Mobility Element and CTMP.

Documentation of all planned or existing trails that bisect any portion of the project's parcel(s).

For project parcels that include a planned trail, early coordination with County Trails Staff is strongly encouraged to determine trail alignment and any potential easements that may be requested or required.

County Design Exception Request (DER) Process

The LMAs should identify and provide a brief summary of proposed and approved DERs. The LMAs should contain a reference to the detailed design exception documentation (separate documents that are included in LMA Technical Appendices).

Fire/Emergency Services

LMAs for large residential projects (over 50 units/500 ADT) and non-conforming GPA projects should provide a high-level discussion regarding secondary/emergency access and emergency evacuation planning with the local Fire District and emergency service agencies. The LMA should include a reference to supporting project documentation that addresses secondary/emergency access and emergency evacuation planning in a more comprehensive manner.

Appendix A: Scoping Agreement for Transportation Studies

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ATTACHMENT A

Scoping Agreement for Transportation Studies

General Project Information and Description

Project Information

Project Name:	
Project PDS Number:	
Project Location:	

Project Description

Land Uses and Intensities:	
Gross and Developable Acreage:	
Number of Vehicle Parking Spaces:	
Bicycle Storage Capacity:	
Motorcycle Spaces:	

Consultant

Name of Firm:	
Project Manager:	
Address:	
Telephone:	

Trip Generation

Source:	**Pass-by Trips:**
Total Daily Trips:	**Diverted Trips:**
Internal Capture Rate:	**Trip Credit:**
Alternative Modes:	**Net Daily Trips:**

General Plan Consistency

Is this project consistent with the General Plan? ☐ **Yes** ☐ **No**

Site Plan

Attach 11x17 copies of the project location/vicinity map and site plan containing the following:

- Driveway locations and access type
- Pedestrian access, bicycle access, and on-site pedestrian circulation
- Location and distance to closest existing transit stop (measure as walking distance to project entrance or middle of parcel
- Location of any planned trails identified in the Community Trails Master Plan (CTMP) within ¼ mile of the project location

CEQA Transportation Analysis Screening

Project Type Screening

1) Select the Land Uses that apply to your project 2) Answer the questions for each Land Use that applies to your project *(if "Yes" in any land use category below then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis)*	Screened Out **Yes**	Not Screened Out **No**
☑ **1. Small Projects:**		
a. Does the project result in 110 daily trips or less?	☐	☑
☐ **2. Small Service/Retail Project:**		
a. Is the project less than 50,000 square feet?	☐	☐
☐ **3. Mixed-Use Project:**		
a. Is the project location screened out based on the SANDAG screening map for VMT/service population?	☐	☐
☐ **4. Locally Serving Retail/Public Facility/Recreational**		
a. Is the project locally serving: Retail OR Public Facility OR Recreational?	☐	☐
☐ **5. Redevelopment Project:**		
a. Does the project result in a net decrease in total Project VMT than the existing use?	☐	☐
b. If the project is to redevelop an affordable housing site, are all proposed units affordable housing units? Mark "No" for projects that replace affordable housing with market rate units	☐	☐

Project Location Screening (if not screened based on project type) – Part 1

Is this project located within a grey area (area with little to no existing land use) on the applicable County screening maps for the project land use type?	☐ **Yes**	☐ **No**
If "yes", the project cannot be screened based on location. If "No", proceed to Part 2.		

Project Location Screening (if not screened based on project type) – Part 2

1) Select the Land Uses that apply to your project 2) Answer the questions for each Land Use that applies to your project *(if "Yes" in any land use category below then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis)*	Screened Out **Yes**	Not Screened Out **No**
☐ **1. Residential**		
a. Is the project location screened out using the County screening maps for VMT/resident?	☑	☐
☐ **2. Employment**		
a. Is the project location screened out using the County screening maps for VMT/employee or VMT/service population?	☐	☐
☐ **3. Retail/Public Facility/Recreational**		
a. Is the project location screened out using the County screening maps for VMT/service population?	☐	☐

Local Mobility Analysis

Type of Local Mobility Analysis (LMA)

☐ **Site Access Study**	249 daily trips or less
☐ **Focused LMA**	250 to 499 daily trips and consistent with the General Plan
☐ **Full LMA**	500 or greater daily trips and consistent with the General Plan, or 250 or greater daily trips and inconsistent with the General Plan

Trip Distribution

☐ **Select Zone (Model Series______________)**	Projects that generate greater than 1,000 daily trips
☐ **Manual Estimation**	Site Access Studies, Focused LMAs, or project's that generate less than 1,000 daily trips
Provide exhibit detailing trip distribution and trip assignment for review.	

Study Intersections (and Roadway Segments) **(NOTE: Subject to change based of staff review)**

1.	**6.**
2.	**7.**
3.	**8.**
4.	**9.**
5.	**10.**
Attach a separate page if the number of study locations exceeds 10.	

Other Jurisdictions

Is this project located within one mile of another Local Jurisdiction?	☐ **Yes** ☐ **No**
If so, name of Jurisdiction:	

Specific Issues to be addressed within the Study
(in addition to requirements described in the Guidelines – to be filled out by County Staff)

1.
2.
3.
4.
5.

Recommended by:

Consultant's Representative	Date
Scoping Agreement Submitted on	Date
Scoping Agreement Re-submitted on	Date

Approved Scoping Agreement:

County of San Diego Transportation Specialist	Date

Appendix B: Transportation Study Format

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Transportation Study Format Outline

The outline below provides organizational guidance for the various sections of a typical transportation study. When a project is screened from CEQA VMT analysis or local mobility analysis, the section is not required in the transportation study.

COVER PAGE

TABLE OF CONTENTS (Including a list of tables, maps, and figures)

GLOSSARY OF TERMS AND ACRONYMS

EXECUTIVE SUMMARY

a) Table summarizing CEQA impacts and mitigation measures.
b) Table summarizing LMA findings and proposed improvements.

INTRODUCTION

1.0 Project and Study Description.
- 1.1 Purpose of the Transportation Study.
- 1.2 Project location and vicinity map (Exhibit).
- 1.3 Project size and description.
- 1.4 Existing and proposed land-use and zoning.
- 1.5 Site plan and proposed project (Exhibit).
- 1.6 Proposed project opening year and analysis scenarios.

CEQA VMT ANALYSIS

2.0 Project VMT per capita, per employee, and/or per service population for all analysis scenarios.
3.0 Project effect on VMT for all analysis scenarios.
4.0 Identification of VMT impacts.
5.0 Proposed VMT mitigation measures.

LOCAL MOBILITY ANALYSIS

6.0 Methodology and Thresholds.
7.0 Existing Conditions.
- 7.1 Existing roadway network.
- 7.2 Existing traffic control and intersection geometrics (Exhibit).
- 7.3 Existing traffic volumes – AM and PM peak hour and ADT (Exhibit).
- 7.4 Existing level of service (LOS) at intersections (Table).
- 7.5 Existing bicycle facilities (Exhibit).
- 7.6 Existing pedestrian and trail facilities (Exhibit).
- 7.7 Existing transit facilities (Exhibit).

8.0 Project Traffic.
- 8.1 Trip generation (Table).
- 8.2 Trip distribution and assignment (Exhibit).
- 8.3 Project AM and PM peak hour turning movement volumes (Exhibit).

9.0 Opening Year Analysis.

- 9.1 Opening Year No Project Analysis.
    - 9.1.1 AM and PM peak hour turning movement volumes (Exhibit).
    - 9.1.2 Intersection level of service (Table).
- 9.2 Opening Year Plus Project Analysis.
    - 9.2.1 AM and PM peak hour turning movement volumes (Exhibit).
    - 9.2.2 Intersection level of service (Table).
    - 9.2.3 Identification of intersection deficiencies and improvements.

10.0 Phased Year Analysis (if necessary).
- 10.1 Project phase description (including construction overlap) and projections.
- 10.2 Phased Year No Project Analysis.
    - 10.2.1 AM and PM peak hour turning movement volumes (Exhibit).
    - 10.2.2 Intersection level of service (Table).
- 10.3 Phased Year With Project Analysis.
    - 10.3.1 AM and PM peak hour turning movement volumes (Exhibit).
    - 10.3.2 Intersection level of service (Table).
    - 10.3.3 Identification of intersection deficiencies and improvements.

11.0 Build-out/Horizon Year Analysis (for GPAs only).
- 11.1 Build-out/Horizon Year No Project Analysis.
    - 11.1.1 AM and PM peak hour turning movements volumes (Exhibit).
    - 11.1.2 Intersection level of service (Table).
- 11.2 Build-out/Horizon Year Plus Project Analysis.
    - 11.2.1 AM and PM peak hour turning movement volumes (Exhibit).
    - 11.2.2 Intersection level of service (Table).
    - 11.2.3 Identification of intersection deficiencies and improvements.

12.0 Traffic Signal Warrant Analysis.

13.0 Site Access Analysis.

14.0 Safety and Operation Improvement Analysis.

15.0 Active Transportation Analysis.
- 15.1 Pedestrian Analysis.
    - 15.1.1 Existing and planned facilities (Exhibit).
    - 15.1.2 Deficiencies.
    - 15.1.3 Proposed improvements.
- 15.2 Bicycle Analysis.
    - 15.2.1 Existing and planned facilities (Exhibit).
    - 15.2.2 Deficiencies
    - 15.2.3 Proposed improvements.
- 15.3 Trails.
    - 15.3.1 Existing and planned facilities (Exhibit).
    - 15.3.2 Proposed improvements.

16.0 Improvements and Recommendations.
- 16.1 Proposed improvements at intersections.
- 16.2 Proposed improvements at roadway segments.

16.3 Recommended improvements categorized by whether they are included in a fee plan or not (identify if these improvements are included in an adopted fee program).

APPENDIX

A. Approved scoping agreement.
B. Traffic counts.
C. Intersection analysis worksheets.
D. VMT and TDM calculations.
E. VMT and TDM mitigation calculations.
F. Signal warrant worksheets.

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Appendix C: VMT Efficient Area Screening Maps

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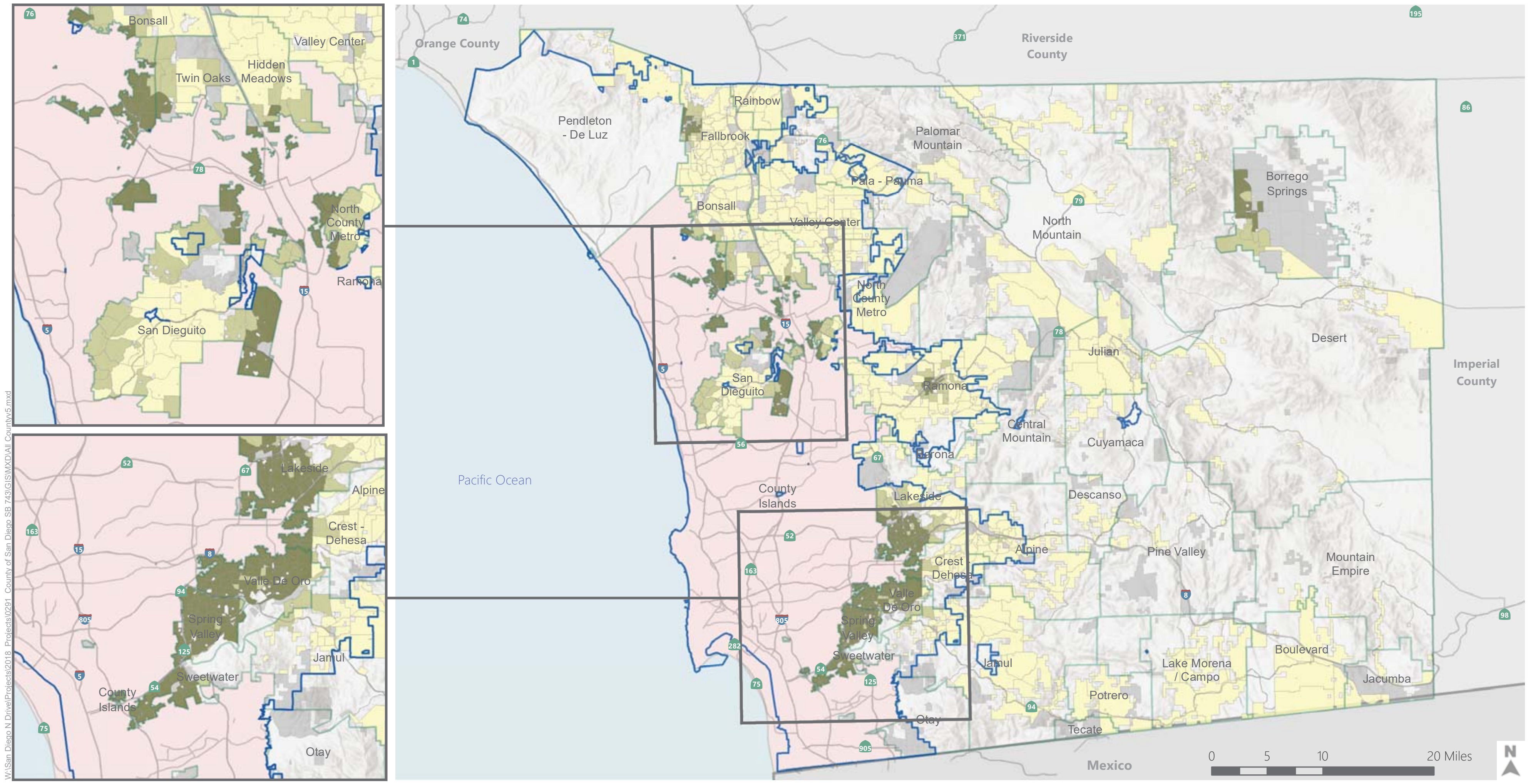


Legend

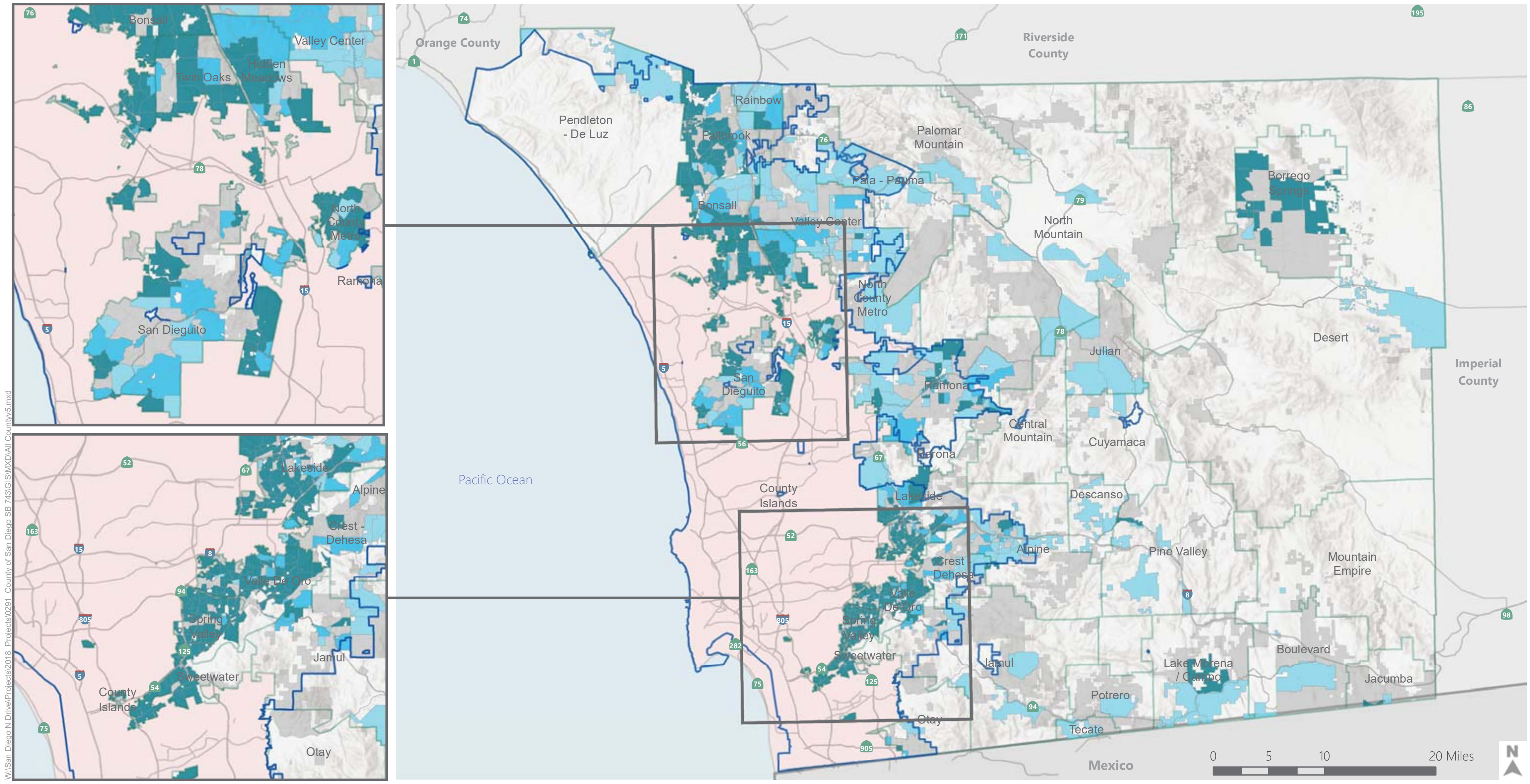
- At least 15% below the Unincorporated County Average
- 0% to 15% below the Unincorporated County Average
- Above the Unincorporated County Average
- Areas with insufficient data to determine average VMT
- San Diego County Incorporated Cities
- Community Plan Area
- County Water Authority Boundary

Unincorporated County Average = 32.54 Vehicle Miles Traveled/Resident

San Diego County VMT Per Resident by TAZ Relative to Unincorporated County Average*

*Based on the SANDAG Series 13 Base Year Model

May 1, 2020



Legend

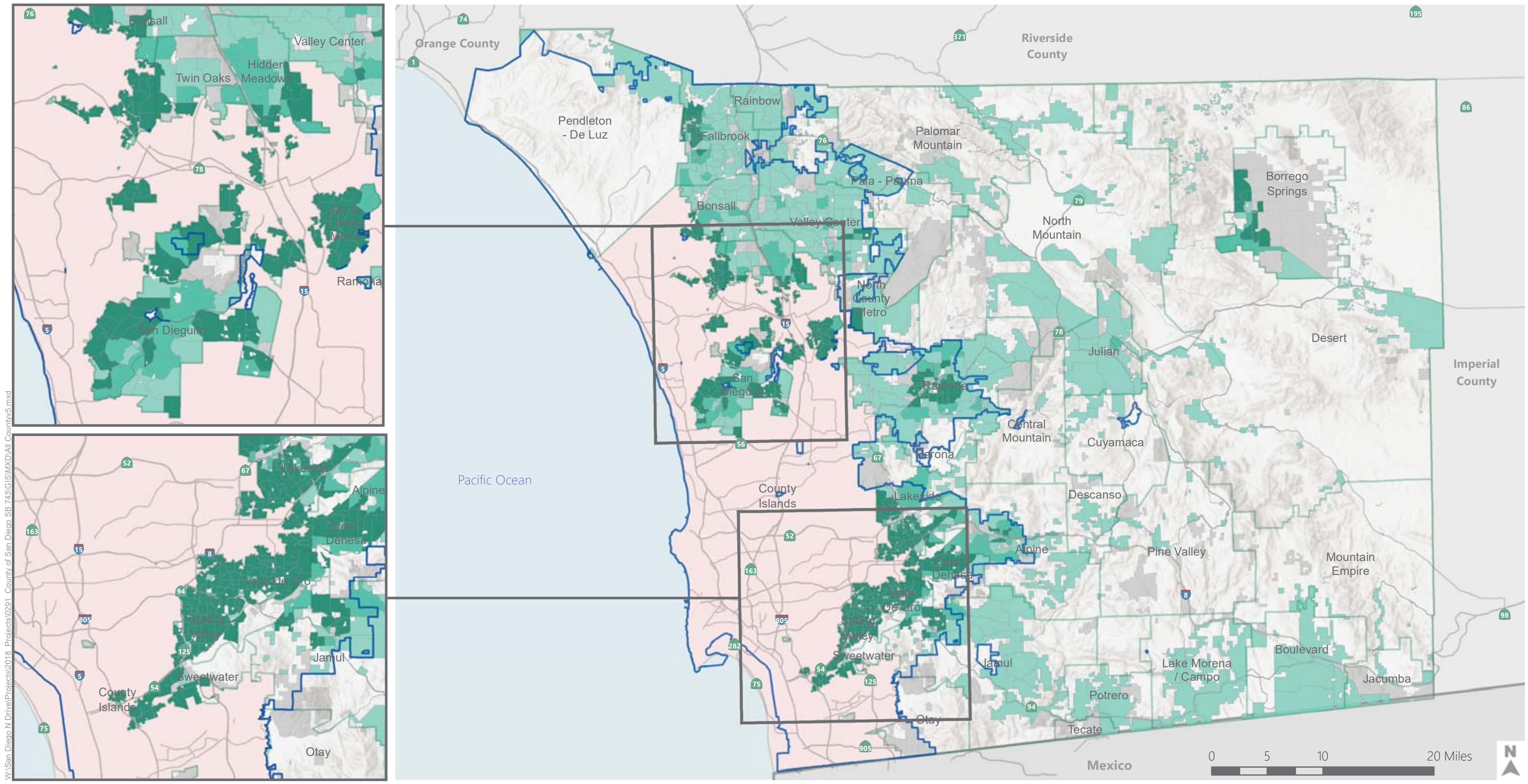
- At least 15% below the Unincorporated County Average
- 0% to 15% below the Unincorporated County Average
- Above the Unincorporated County Average
- Areas with insufficient data to determine average VMT
- San Diego County Incorporated Cities
- Community Plan Area
- County Water Authority Boundary

Unincorporated County Average = 37.55 Vehicle Miles Traveled/Employee

San Diego County VMT Per Employee by TAZ Relative to Unincorporated County Average*

*Based on the SANDAG Series 13 Base Year Model

May 1, 2020



Legend

- At least 15% below the Unincorporated County Average
- 0% to 15% below the Unincorporated County Average
- Above the Unincorporated County Average
- Areas with insufficient data to determine average VMT
- San Diego County Incorporated Cities
- Community Plan Area
- County Water Authority Boundary

Unincorporated County Average = 37.53 Vehicle Miles Traveled/Service Population

San Diego County VMT Per Service Population by TAZ Relative to Unincorporated County Average*

*Based on the SANDAG Series 13 Base Year Model

May 1, 2020

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Appendix D: Project Types Grouped by Land Use Category

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Project Types Grouped by Land Use Category

The following table provides a list of unique project types and the land use type they should be considered under for SB 743 screening and analysis.

Land Use Categories

Land Use Category for SB 743 Analysis for all Project Types

1. Residential Projects

The uses below generally fall within the County General Plan Land Use Designations of Village Residential, Semi-Rural Residential or Rural Lands Residential.

- Congregate Care Facility
- Estate Housing
- Mobile Home
- Multiple Dwelling Unit (all sizes)
- Retirement/Senior Citizen Housing
- Single Family Detached

2. Employment Projects

The uses below generally fall within the County General Plan Land Use Designations of General Commercial, Office Professional, Limited-Impact Industrial, Medium-Impact Industrial or High-Impact Industrial.

- Agriculture
- Hospital: Convalescent/Nursing
- Hospital: General
- Industrial/Business Park
- Scientific Research and Development
- Hotel (w/ convention facilities/restaurants)
- Motel
- Resort Hotel
- Military Base
- Commercial Office
- Corporate Headquarters/Single Tenant Office
- Medical Office
- Government Offices (Primarily Office with Employees)
- Industrial: Manufacturing/Assembly
- Industrial: Rental Storage
- Industrial: Truck Terminal
- Industrial: Warehousing

3. Retail and Service

The uses below generally fall within the County General Plan Land Use Designations of General Commercial, Neighborhood Commercial, Rural Commercial, or Village Core Mixed Use.

- Shopping Center
- Automobile Services
- Convenience Market Chain
- Discount Store/Discount Club
- Drugstore
- Furniture Store
- Lumber/Home Improvement Store
- Nursery
- Restaurant
- Specialty Retail Center/Strip Commercial
- Supermarket
- Financial Institution (Bank or Credit Union)
- Bowling Center
- Movie Theater
- Racquetball/Tennis/Health Club
- Sport Facility (Indoor or Outdoor)
- Winery
- Special Event Facility

4. Regional Public Facilities

The uses below generally fall within the County General Plan Land Use Designation of Public and Semi-Public Facilities.

• Airport • Cemetery • University • Community College	• House of Worship: General • House of Worship: Without School or Day Care • Bus Depot

5. Locally Serving Public Facilities

The uses below generally fall within the County General Plan Land Use Designation of Public and Semi-Public Facilities.

• Schools (unless determined to draw students from outside the local area) • Day Care Center/Child Care Center • Library • Department of Motor Vehicles • Government Offices (Primarily Serving Customers)	• Post Office • Park & Ride Lot • Transit Station • Neighborhood Park (developed or undeveloped)

6. Regional Recreational

The uses below generally fall within the County General Plan Land Use Designations of Rural Lands Residential, Rural Commercial, or Open Space- Recreation.

• Marina • Zoo • Aquarium	• Golf Course • Regional Park or Beach, Ocean, or Bay Park

Appendix E: Transportation Projects That Do Not Require VMT Analysis

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Transportation Projects That Do Not Require VMT Analysis

The following complete list is provided in the OPR Technical Advisory (December 2018, Pages 20-21) for transportation projects that "would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis:"

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such as median barriers and guardrails
- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow

- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

Appendix F: Justification/Rationale Screening Criteria and Threshold

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Appendix F: Justification/Rationale Screening Criteria and Threshold

This appendix provides context and justification/rationale for the screening criteria and thresholds for performing transportation VMT CEQA impact analysis.

Screening Criteria

Development projects are presumed to have less than significant impacts to the transportation system, and therefore would not be required to conduct a VMT analysis, if any of the following criteria are established.

1. Projects Located in a VMT Efficient Area (Location Based Screening Maps)

A VMT efficient area is any area with an average VMT per resident, VMT per employee, or VMT per service population 15 percent below the baseline average for the Unincorporated County. Land use projects may qualify for the use of VMT efficient area screening if the project can be reasonably expected to generate VMT per resident, per employee, or per service population, respectively, that is similar to the existing land uses in the VMT efficient area. Location-based screening maps are used to determine if a project is in a VMT efficient area.

Justification – This presumption is based on the Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) (OPR Technical Advisory), which provides that "residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with data from a travel survey or travel demand model can illustrate areas that are currently below threshold. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis." These maps are known as the "location-based screening maps." The OPR Technical Advisory also specifies that lead agencies, using more location specific information, may develop their own more specific information that includes more land uses. As such, the location-based screening maps are for residential uses (based on VMT per resident), employment uses (based on VMT per employee), and other uses (based on VMT/service population) that locate in a zone that has similar land uses to the proposed land use.

Note: The County has the discretion to determine thresholds including the appropriate geography to set thresholds by. The OPR Technical Advisory *discusses the "region or city" as an appropriate geography to establish average VMT and thresholds. Since the* OPR Technical Advisory *does not specifically define "region," a potential regional boundary that is logical for the County is the unincorporated county. The unincorporated area aligns with the region that the County has land use jurisdiction over and the General Plan, which contains the goals and policies that shape future growth within the County, is distinct from areas within incorporated* *cities. Since the unincorporated county land use context is diverse and different than the incorporated areas of the county, it is important to consider planning goals and policies that reflect the unincorporated area. To illustrate the diversity and difference between the unincorporated area and incorporated cities, the following statistics are helpful:*

- *San Diego County (incorporated and unincorporated areas combined) is approximately 4,526 square miles.*
- *The unincorporated area represents approximately 3,570 square miles or 79% of the land area.*
- *The unincorporated area represents approximately 16% of the countywide population.*

This demonstrates that the unincorporated county context is primarily rural in nature whereas the incorporated cities are largely suburban/urban in nature. A threshold based on the unincorporated county region allows the County to reflect the difference in land use context (rural, semi-rural, and village) as compared to the incorporated area and supports the County's ability to establish thresholds that reflect agency-specific goals and policies.

2. Small Projects

Projects generating less than 110 daily vehicle trips (trips are based on the number of vehicle trips calculated using ITE trip generation rates with any alternative modes/location-based adjustments are applied) may be presumed to have a less than significant transportation impact under CEQA absent substantial evidence to the contrary.

Justification – The OPR Technical Advisory states that "projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant impact." This is supported by the fact that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development, and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301(e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (e.g., general office building, single tenant office building, office park, or business park) generate or attract an additional 110-124 trips per 10,000 square feet according to the national publication Institute of Transportation Engineers (ITE) Trip Generation Manual. An alternative small project size is justified by using the same procedure described in the OPR Technical Advisory but using an alternative trip-generation model. Specifically, the fact that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development, and the project is not in an environmentally sensitive area. OPR evaluated the small project size assuming an office building. There are other sources of data to determine the trip generation of a project that could be used in justifying a small project size. Possible data sources available to the County include:

- National Publication of ITE Trip Generation, 9th Edition (2012) – Results in a small project size of 110 daily trips.
- National Publication of ITE Trip Generation, 10th Edition (2017) – Results in a small project size of 100 daily trips.

- SANDAG Not So Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (2002) – Results in 200 daily trips.
- Develop County specific trip generation rates; requires performing trip generation surveys at multiple locations to establish an average trip generation rate.

3. Projects Located in a Transit Accessible Area

Projects located within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor[1] may be presumed to have a less than significant impact absent substantial evidence to the contrary. Note that Sprinter stations are considered major transit stops. This presumption may not apply if the project:

- Has a Floor Area Ratio of less than 0.75.
- Includes more parking for use by residents, customers, or employees of the project than required by the County.
- Is inconsistent with SANDAG's most recent Sustainable Communities Strategy.
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Justification – The OPR Technical Advisory includes screening projects that are located near a major transit stop or near a stop along a high-quality transit corridor. Projects located near a major transit stop or near a stop along a high-quality transit corridor can help reduce VMT by increasing capacity for transit-supportive residential and/or employment densities in low VMT areas. The increased density that is associated with projects near high quality transit can increase transit ridership and therefore justify enhanced transit service which would in turn increase the amount of destinations that are accessible by transit and further increase transit ridership and decrease VMT.

4. Locally Serving Retail

Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

Justification – The OPR Technical Advisory provides that "because new retail development typically redistributes shopping trips rather than creating new trips, [2] estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the

---

[1] Major transit stop: A site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (PRC § 21064.3). High quality transit corridor: A corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute periods (PRC § 21155).

[2] Lovejoy, et al., Measuring the impacts of local land-use policies on vehicle miles of travel: The case of the first big-box store in Davis, California, The Journal of Transport and Land Use, 2013.

best way to analyze a retail project's transportation impacts." Local serving retail generally shortens trips as longer trips from regional retail are redistributed to new local retail.

5. Locally Serving Public Facilities and Other Uses

Public facilities that serve the surrounding community or public facilities that are passive use may be presumed to have a less than significant impact absent substantial evidence to the contrary. These do not include facilities or uses that would attract users from outside the vicinity of the use.

Justification – Similar to local serving retail, local serving public facilities would redistribute trips and would not create new trips. Thus, similar to local serving retail, trips are generally shortened as longer trips from a regional facility are redistributed to the local serving public facility.

6. Redevelopment Projects with Greater VMT Efficiency

Where a project replaces existing VMT-generating land uses, the project may be presumed to have a less than significant impact if the total project VMT is less than the existing land use's total VMT, absent substantial evidence to the contrary.

Justification – Consistent with the OPR Technical Advisory, "where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described (in the OPR Technical Advisory) should apply."

The OPR Technical Advisory states "If a residential or office project leads to a net increase in VMT, then the project's VMT per capita (residential) or per employee (office) should be compared to thresholds recommended above. Per capita and per employee VMT are efficiency metrics, and, as such, apply only to the proposed project without regard to the VMT generated by the previously existing land use."

Per the OPR Technical Advisory, if the project leads to a net increase in provision of locally-serving retail, transportation impacts from the retail portion of the development should be presumed to be less than significant. If the project consists of regionally-serving retail, and increases overall VMT compared to with existing uses, then the project would lead to a significant transportation impact.

7. Affordable Housing

An affordable housing project may be presumed to have a less than significant impact absent substantial evidence to the contrary if 100% of units are affordable.

Justification – Affordable residential projects generate fewer trips than market rate residential projects[3]. The OPR Technical Advisory also states that "Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations". Project by project

[3] Newmark and Hass, "Income, Location Efficiency, and VMT: Affordable Housing as a Climate Strategy", The California Housing Partnership (2015).

justification is necessary to demonstrate that an affordable housing project is expected to generate less VMT if it is not 100 percent affordable or not located in an infill location. A project located in a suburban context or in a village context within the county can be considered an infill location because those locations represent the areas within the county that have the most compact land use pattern (as compared to rural areas).

Thresholds

If a project is required to complete a VMT analysis, the project's transportation impacts under CEQA would be significant if the project's VMT exceeds the thresholds below.

1. Residential

Threshold – Fifteen percent below the Unincorporated County average VMT per resident.

Justification – The OPR Technical Advisory provides that "residential development that would generate vehicle travel that is 15 percent or more below the existing residential VMT per capita, measured against the region or city, may indicate a less-than-significant transportation impact." OPR notes that this was intended to achieve general consistency with both the Caltrans Statewide target for VMT reduction (15 percent by 2020) and the urban regional targets for greenhouse gas (GHG) emissions reductions established under SB 375 (13-16 percent for passenger vehicles by 2035). The County defines their region as the Unincorporated County for comparison purposes.

2. Employment (Office/Commercial/Industrial)

Threshold – Fifteen percent below Unincorporated County average VMT per employee.

Justification – The OPR Technical Advisory provides that "office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact." VMT per employee is an appropriate metric for commercial and industrial projects in addition to office projects since the SANDAG regional travel demand model includes employment uses as a broad category. In addition, commercial and industrial projects are similar to an office land use in that the majority of the VMT is generated by employees.

3. Regional Retail/Service

Threshold – A net increase in total area VMT or 15 percent below the Unincorporated County average VMT per service population

Justification – The threshold for retail/service projects within the County is consistent with the OPR Technical Advisory supplemented with the VMT per service population metric as appropriate. The service population metric provides a supplemental metric that captures all VMT associated with a project by including VMT associated with trips entering or exiting the modelling region, allowing for full accounting of project VMT.

The service population metric allows for comparison of the VMT efficiency of retail projects against all other land uses in the Unincorporated County. Using 15 percent below the Unincorporated County average as the threshold holds retail projects to a similar expectation of

VMT efficiency justified above for VMT per employee and VMT per capita. Supplementing the OPR Technical Advisory recommended retail threshold with the service population metric captures all VMT associated with a project by including VMT associated with trips entering or exiting the modelling region, allowing for full accounting of project VMT.

4. Mixed Use

Mixed Use projects contain a multiple land uses as a part of one project, such as residential, office, and retail.

Threshold – Fifteen percent below the Unincorporated County average VMT per service population or each project component evaluated per the appropriate metric based on land use type.

Justification – Evaluating each component of the project based on their land use type is consistent with the OPR Technical Advisory. The service population metric allows for comparison of the VMT efficiency of mixed-use projects against all other land uses in the Unincorporated County. Using 15 percent below the Unincorporated County average as the threshold holds mixed use projects to a similar expectation of VMT efficiency justified above for VMT per employee and VMT per capita. It also captures all VMT associated with a project by including VMT associated with trips entering or exiting the modelling region, allowing for full accounting of project VMT which is not possible using the VMT per employee metric.

5. Regional Recreational

Threshold – A net increase in total regional VMT or 15 percent below the Unincorporated County average VMT per service population.

Justification – The threshold for regional recreational projects within the County is consistent with the OPR Technical Advisory (applying the recommendations for regional retail uses) supplemented with the VMT per service population metric as appropriate. The service population metric allows for comparison of the VMT efficiency of regional recreational projects against all other land uses in the Unincorporated County. Using 15 percent below the Unincorporated County average as the threshold holds regional recreational projects to a similar expectation of VMT efficiency justified above for VMT per employee and VMT per capita. Supplementing the OPR Technical Advisory recommended threshold with the service population metric captures all VMT associated with a project by including VMT associated with trips entering or exiting the modelling region, allowing for full accounting of project VMT.

6. Regional Public Facilities

Threshold – A net increase in total regional VMT or 15 percent below the Unincorporated County average VMT per service population

Justification – Regional public facilities within the County can be analyzed consistent with the OPR technical advisory (applying the recommendations for regional retail uses) by measuring the net change in regional VMT and by using the VMT per service population metric as a supplement. The service population metric allows for comparison of the VMT efficiency of regional public facility projects against all other land uses in the Unincorporated County. Using 15 percent below the Unincorporated County average as the threshold holds regional public facilities to a similar expectation of VMT efficiency justified above for VMT per employee and VMT per capita. It also captures all VMT associated with a project by including VMT associated with trips entering or exiting the modelling region, allowing for full accounting of project VMT which is not possible using the VMT per employee metric.

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Appendix G: County General Plan Goals and Climate Action Plan Strategies Related to Transportation

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County General Plan Goals and Climate Action Plan Strategies Related to Transportation

The County adopted an update to its General Plan in 2011. The General Plan serves as the legal underpinning for land use decisions and is the County's vision about how the unincorporated area will grow. The term "element" refers to the topics that California law requires be covered in a general plan. In addition to the mobility element (sometimes called a circulation element), the other elements required in California include land use, housing, conservation, open space, noise, safety, and environmental justice for cities and counties with identified disadvantaged communities. Each of these provide a framework for analysis of transportation impacts that support the new method of CEQA analysis, while some will require an analysis outside of CEQA.

Land Use Element

The land use plan and development doctrine that sustain the intent and integrity of the Community Development Model and the boundaries between Regional Categories describes the overarching primacy of the Land Use Element. VMT efficient areas would be located along the western edge of the unincorporated areas by providing streamlining for villages within the County Water Authority boundary and closer to the employment and services centers in the unincorporated areas. Here are key Land Use Policies that influence transportation analysis.

> **Goal LU-5 Climate Change and Land Use.** Incorporate a mixture of uses within Villages and Rural Villages and plan residential densities at a level that support multi-modal transportation, including walking, bicycling, and the use of public transit, when appropriate. This is to support a reduction of vehicle trips within communities.
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> **Goal LU-9 Distinct Villages and Community Cores.** In villages, encourage future residential developments to achieve planned densities through multi-family, mixed use, and small-lot single-family projects that are compatible with community character.

Mobility Element

The Mobility Element includes several components including a description of the County's goals and policies that address the safe and efficient operation, as well as maintenance and management of the transportation network. The Mobility Element framework provides for a balanced, multi-modal transportation system for the movement of people and goods within the unincorporated areas of the County of San Diego. General Plan Policy M-2.1 requires a LOS D or higher for all roads. Criteria were established for 'Accepting a Road Classification with a LOS E and LOS F' when specific issues of community character or environmental constraints were considered. The buildout of the General Plan Mobility Element was estimated to have planning level costs of $2.39 Billion, a reduction of $4.4 Billion from the previous General Plan. The road network in the Mobility Element was studied in the General Plan Program EIR through impacts on LOS. Mitigation measures identified in the Program EIR were the goals and policies in the Mobility and Land Use Elements, as well as a required update to the Transportation Impact Program. On October 31, 2012, the Board adopted updates to the Transportation Impact Fee to implement the Mobility Element for the General Plan. The update overall reduced residential impact fees by 46% and commercial impact fees by 75%. The TIF is estimated to pay $535 Million towards the $2.39 Billion estimated to build out the Mobility Element. Implementation of the remaining Mobility Element would occur overtime to be paid for by private development, through State or Federal funds, grants, or the County's General Fund.

Here are key County General Plan Mobility Element Goals that direct how transportation analysis is performed to facilitate the implementation of the County General Plan vision:

Goal M1- A Balanced Road Network. A safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities.

Goal M2 – Responding to Physical Constraints and Preservation Goals. Level of Service Criteria. Require development projects to provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County.

Goal M3 – Transportation Facility Development. New or expanded transportation facilities that are phased with and equitably funded by the development that necessitates their construction.

GOAL M4 – Safe and Compatible Roads. Roads designed to be safe for all users and compatible with their context.

GOAL M5 – Safe and Efficient Multi-Modal Transportation System. A multi-modal transportation system that provides for the safe, accessible, convenient, and efficient movement of people and goods within the unincorporated County.

GOAL M6 – Efficient Freight Service Linked to Other Transportation Modes. Freight services that efficiently move goods and that are effectively linked to other transportation modes.

GOAL M8 – Public Transit System. A public transit system that reduces automobile dependence and serves all segments of the population.

GOAL M9 – Effective Use of Existing Transportation Network. Reduce the need to widen or build roads through effective use of the existing transportation network and maximizing the use of alternative modes of travel throughout the County.

GOAL M10 – Parking for Community Needs. Parking regulations that serve community needs and enhance community character.

GOAL M11 – Bicycle and Pedestrian Facilities. Bicycle and pedestrian networks and facilities that provide safe, efficient, and attractive mobility options as well as recreational opportunities for County residents.

GOAL M12 – County Trails Program. A safe, scenic, interconnected, and enjoyable non-motorized multi-use trail system developed, managed, and maintained according to the County Trails Program, Regional Trails Plan, and the Community Trails Master Plan.

The County adopted an Active Transportation Plan in October 2018 that updated the County's standards for bicycle facilities and classifications and included a Pedestrian Gap Analysis appendix that identifies potential sidewalk and pathway improvements in villages throughout the county. The updated bicycle facility classifications are included in the Mobility Element Appendix maps of the General Plan. The Board of Supervisors also adopted a Complete Streets Policy (J-38) along with the adoption of the Active Transportation Plan.

In recognition of SB 743 and new CEQA requirements for VMT analysis, and to ensure consistency with the County's General Plan Goals and Policies, the TSG includes criteria for properly assessing and mitigating VMT within the county, as well as procedures and methods for analyzing and identifying specific improvements to maintain LOS standards, and to address the safety and operations of the transportation system for all users.

Housing Element

The Housing Element objectives include improving housing affordability, assigning densities based on characteristics of the land, and locating growth near infrastructure, services and jobs. A key Housing Element Policy that influences transportation analysis is:

Goal H-1.3 Housing Near Public Services. Maximize housing in areas served by transportation networks, within close proximity to job centers, and where public services and infrastructure are available.

Conservation Open Space Element

There is a strong correlation between land use planning, transportation system planning, and the emission of air quality pollutants, GHG that contribute to global climate change. The General Plan recognized that the primary opportunities to reduce air quality pollutants and GHG emissions are in the urbanized areas of the County where there are land use patterns that can best support the increased use of transit and pedestrian activities since most GHGs and air pollutants result from mobile source emissions. The General Plan notes, "the unincorporated County can also be part of the solution by producing development patterns that contribute to reducing the dependence on the automobile and by promoting development with lower energy demands…A holistic approach to achieving sustainable communities requires the integration of a regionwide multi-modal transportation system with a significant reliance on single-occupant motor vehicles, along with buildings that consume less through design and efficient building materials." A key conservation element that influences transportation analysis is:

Goal COS-14 Sustainable Land Development. Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment.

Climate Action Plan

The County Climate Action Plan (CAP), adopted in February 2018, and the County Active Transportation Plan (ATP), adopted in October 2018, also support the intent of SB 743. Light duty vehicle emissions constitute approximately 43% of the total unincorporated GHG emissions. The CAP has two GHG emissions reduction strategies related to VMT, which reduce 40,673 metric tons of GHG emissions (about 2.7% of the amount emitted by on-road transportation in the unincorporated county). CAP Strategies T-1 and T-2 focus on reducing VMT and shifting towards alternative modes of transportation, focusing density in unincorporated villages, conserving open space and agricultural lands, and implementing infrastructure improvements to provide for active transportation. A transportation demand management (TDM) ordinance, being developed as a measure of the CAP, will be an important tool for non-residential projects to use when mitigating VMT impacts while also reducing GHG emissions. The CAP and ATP identify capital improvements related to pedestrian and bicycle infrastructure improvements that SB 743 mitigations could fund in the future.

Strategy T-1: Reduce Vehicle Miles. This strategy focuses on preserving open space and agricultural lands, and focusing density in the county villages. Conservation efforts will avoid GHG emissions from transportation and energy use associated with conveyance of water and solid waste services. Reductions in Vehicle Miles Traveled (VMT) resulting from this strategy will also improve air quality through reduced vehicle emissions and contribute to public health improvements by creating opportunities for active transportation choices.

Strategy T-2: Shift Towards Alternative Modes of Transportation. This strategy focuses on implementing infrastructure improvements to promote active transportation, and understanding commuters' transportation decisions in order to help people use the infrastructure in place for transit, ridesharing, walking, biking, and telework. The strategy also includes measures that sets performance standards for reducing employee commute trips at County facilities, parking management, and focusing development in the county villages. Reducing transportation emissions has a beneficial effect of improving public and community health through both enhanced air quality and mobility, and cost savings for community members by reducing fuel use.