Sunny Truck Service Center Project

DRAFT

ENVIRONMENTAL IMPACT REPORT

September 2019

State Clearinghouse Number 2019059077

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TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

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EXECUTIVE SUMMARY

ES.1 Introduction

This Executive Summary has been prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123(b), which states that an EIR should contain a brief summary of the Proposed Project and its consequences, and should identify the following:

1. Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect;

2. Areas of public controversy known to the lead agency, including issues raised by the agencies and the public; and

3. Issues to be resolved, including the choice among alternatives and how to mitigate the significant effects.

The City of Orland (City) is proposing the Sunny Truck Service Center Project (Project; Proposed Project). This Draft Environmental Impact Report (Draft EIR; DEIR) has been prepared by the City to analyze the potential environmental effects associated with implementation of the Proposed Project, in Orland, California. The DEIR analysis focuses on potential environmental impacts that could arise from implementation of the Proposed Project, as regulated and guided by the large number of federal, state, and local regulations, including ordinances, General Plan policies, and local resource plans. The DEIR is intended to provide a credible worst-case scenario of the impacts resulting from project implementation.

CEQA requires that the Lead Agency, in this case the City of Orland, consider the information contained in the EIR prior to taking any discretionary action. This DEIR may also be used by other public agencies that must make discretionary actions related to the Proposed Project.

ES.2 Project Location and Setting

The ±4.98-acre Project site is located at the southwest corner of the County Road 13/County Road HH intersection in unincorporated Glenn County, adjacent to the City of Orland, California.

The Project site corresponds to a portion of Section 23, Township 22 North, and Range 3 West (Mount Diablo Base and Meridian) of the "Orland, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1958, photo revised 1978) (see **Figure 1. Regional Location** and **Figure 2. Project Location**). The approximate center of the Project site is located at latitude 39.445638˚ and longitude -122.123424˚. The Project is located on five parcels including the following:

Accessor's Parcel Numbers

045-170-018	045-170-020	045-170-024
045-170-019	045-170-021	

The site is located within the northern Sacramento Valley in an area predominately occupied by agricultural and rural residential uses. However, this is an evolving area. There are commercial, industrial, and more dense residential uses within close proximity of the Project site. For example, the site is directly adjacent diagonally to the recently constructed Pilot Flying J commercial center which includes a truck fueling station, an auto fueling station, restaurants and a convenience mini market. Additionally, two mobile home parks are located less than ¼-mile away. Finally, the area directly north of the project site is zoned for commercial use and has been approved for the development of a hotel and restaurant by the City.

Adjacent uses include the vacant land, the industrial uses of Hardwood Creations, rural residential, and Interstate 5 (I-5) to the east, a trailer sales commercial lot, agricultural uses and rural residential to the south, agricultural uses and rural residential to the west and the Pilot Flying J truck stop, agricultural uses and vacant land to the north. See **Figure 3. Surrounding Uses**. The nearest home is directly adjacent to the Project's western boundary. Other residential uses are within 450 feet of the Project site.

ES.3 Description of Proposed Project

The Project includes a General Plan amendment, a prezone, use permit, lot line adjustment, site plan review, and an annexation by the City for five parcels on 4.98 acres currently within Glenn County jurisdiction. The current City of Orland General Plan land use designations for the five parcels are either Low Density Residential or High Density Residential and are proposed to be changed to Commercial. See **Figure 4 Proposed Prezoning** *and* **Figure 5. Lot Line Adjustment**. The proposed prezoning of the parcels are Highway Commercial (C-H) or Community Commercial (C-2).

The Proposed Project also includes the construction of an 11,800-square-foot truck service center. as well as, a 0.74-acre area set aside for potential future commercial development. See **Figure 6. Site Plan**.

The truck service center portion of the Project will consist of two buildings, wastewater treatment tanks, a paved parking lot including 11 parking spaces, landscaping, a western and southern boundary masonry wall, curbs gutters and sidewalks adjacent to the developed site on County Road 13 and County Road HH, and a trash enclosure.

The service center includes a truck wash building and a tire and oil service building. The truck wash building is an approximately 5,700-square-foot, single-story building and includes a two-bay truck washing facility, three restrooms, office/waiting room, breakroom, and a chemical room. The tire and oil service building is an approximately 6,120-square-foot, single-story building and includes two service bays, two storage rooms, an employee break room, two restrooms, and an office/waiting room. There is also an outdoor wash station between the two buildings. The outdoor wash station is used to washout the inside of the trailer van (Washout). Washout process requires only the use of water. See **Figure 7. Floor Plan**.

Parcels APN 045-170-021 and 045-170-024 are not a part of the proposed Truck Service Center project but are directly adjacent to the south and a logical annexation would include these parcels. No construction is planned for these parcels at this time.

ES.4 Project Alternatives

CEQA requires an evaluation of the comparative effects of a reasonable range of alternatives to the Proposed Project that would feasibly attain most of the project's basic objectives and that would avoid or substantially lessen any of the significant impacts of the Proposed Project. Three alternatives were evaluated: the No Project Alternative (Alternative 1), the No Future Commercial Alternative (Alternative 2) and the Truck Wash Only Alternative (Alternative 3). All alternatives were deemed feasible and reasonable alternatives to the Proposed Project. One alternative was rejected; that of an alternative site due to several aspects making this option infeasible. Alternative 2, No Future Commercial, was found to be the environmentally superior alternative.

ES.5 Initial Study

An Initial Study was completed for the Proposed Project. This Initial Study was noticed as to its availability for review in the Glenn County Transcript as well as the California State Clearinghouse. The 30-day public review period was from May 20 to June 18, 2019. No comments were received from the public or government agencies regarding the Initial Study analysis or the Proposed Project.

As a result of Initial Study analysis, the City determined that an EIR-level of analysis was required for specific impact areas. Those areas include noise, traffic, greenhouse gas emissions, air quality, energy, agriculture, biological resources, cultural and paleontological resources, and tribal cultural resources. These impact areas are the subject of this EIR.

ES.6 Areas of Controversy

No areas of controversy with Proposed Project were identified during the Initial Study public review period.

ES.7 Issues to be Resolved by the Lead Agency

The major issues to be resolved by the City of Orland as Lead Agency include the following:

- Whether the Draft EIR adequately describes the environmental impacts of the Proposed Project;
- Whether the recommended mitigation measures should be modified/adopted;
- Which among the Proposed Project and its Alternatives should be selected for approval.

ES.8 Summary of Impacts and Mitigation Measures

Table ES-1 presents a summary of environmental impacts analyzed in this Draft EIR, the mitigation measures proposed for those impacts (if required), and the level of significance after mitigation.

Table ES-1. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, SU = Significant and Unavoidable, LLC = Less than Cumulatively Considerable, CC = Cumulatively Considerable			
Agriculture			
Impact 3.1.1: The Project would involve the conversion of 2.0 acres of Prime Farmland to nonagricultural (commercial) use. However, according to the Land Evaluation and Assessment Model (LESA), the impact is not significant.	LTS	None required	LTS
Impact 3.1.2: The Project would not involve changes to the environment which could result in conversion of farmland to nonagricultural use. However, the LESA Model showed that this impact would not be significant.	LTS	None required	LTS
Impact 3.1.6: The Project, in combination with existing, approved, proposed, and reasonably foreseeable development in nearby areas of The City of Orland, would not result in the direct or indirect conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use.	LCC	None required	LCC
Air Quality			
Impact 3.2.1: The Project would not conflict with or obstruct implementation of the applicable air quality plan.	NI	None required	NI
Impact 3.2.2: The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).	LTS	None required	LTS

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Impact 3.2.3: The Project would not expose sensitive receptors to substantial pollutant concentrations during construction or operation.	LTS	None required	LTS
Impact 3.2.4: The Project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people).	NI	None required	NI
Impact 3.2.5: Implementation of the Proposed Project, along with any foreseeable development in the Project vicinity, would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	LCC	None required	LCC
Biological Resources			
Impact 3.3.1: The Project has potential to impact two special-status bird species: the Swainson's Hawk (*Buteo swainsoni*) and the burrowing owl *(Athene cunicularia)*. The Project also has potential to impact Migratory Bird Treaty Act-protected species, including Swainson's Hawk.	S	BIO-1 - Burrowing Owl Habitat Assessment There is potential for burrowing owls to occur at the Project site and the burrows, culverts, and other structures provide potential habitat. Prior to commencement of construction activities, a habitat assessment pursuant to CDFW protocol shall be performed by a qualified biologist to determine suitability of the Project site to provide burrowing owl habitat. If the habitat assessment affirms the presence of burrowing owl habitat, a formal burrowing owl survey shall be performed in accordance with CDFW guidance (CDFG 2012). If the formal burrowing owl survey affirms the presence of burrowing owls, the following mitigation shall be incorporated into Project construction activities: • The survey should identify all burrowing owl nests within 150 meters of the Project site (where accessible). • If active nests are found, a no-disturbance buffer around the nest should be established. The buffer distance would be established by a biologist in consultation with CDFW or the	LTS

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		CEQA lead agency. • The buffer should be maintained until the fledglings are capable of flight and become independent of the nest. This is to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Timing/Implementation: Prior to the initiation of construction activities Enforcement/Monitoring: City of Orland Planning Department and the Project construction lead. BIO-2 - Preconstruction Nesting Bird Survey There is potential for Swainson's hawks and birds protected under the MBTA to nest in the Project site. To ensure that protected nesting birds and any active nests are not harmed or disturbed, a preconstruction survey shall be conducted by a qualified biologist prior to construction as follows: • If construction would occur during the avian breeding season (March - September) a qualified biologist shall conduct a focused survey for nesting birds, including Swainson's hawk and burrowing owl, within 30 days prior to the beginning of construction. • The survey shall identify all bird nests including active raptor nests within the Project site, as well as Swainson's hawks/nests within accessible areas within 1,000 feet of the Project site, and burrowing owl nests (if warranted) within 500 feet of the Project site, where accessible. • If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a biologist in consultation with CDFW or the CEQA lead agency. • The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. • Once the young are independent of the nest, no further measures are necessary. Preconstruction nesting surveys are	

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		not required for construction activity outside the nesting season. *Timing/Implementation:* Prior to the initiation of construction activities *Enforcement/Monitoring:* City of Orland Planning Department and the Project construction lead.	
Impact 3.3.2: The Project would not impact sensitive biological communities, including riparian habitat or jurisdictional wetlands.	LTS	None required.	LTS
Impact 3.3.3: The Project would not impact migratory fish or wildlife species within a migratory wildlife corridor. However, the Project may impede the use of bat nursery sites.	S	BIO-3 - Bat Survey Prior to demolition of manmade structures within the Project site, a qualified biologist shall conduct a survey to determine if bats are present. If evidence of bat occurrence is found, the qualified biologist shall determine if the location where bats have been found is being utilized as a bat maternity site and provide mitigation measures acceptable to the City and CDFW. If bats are not found during the building survey, no further measures are necessary. *Timing/Implementation: Prior to the initiation of demolition activities* *Enforcement/Monitoring: City of Orland Planning Department and Project construction lead.*	LTS
Impact 3.3.7: The implementation of the Project, in combination with existing, approved, proposed, and reasonably foreseeable development in the immediate area of the Project, would result in the conversion of habitat and potential impacts to biological resources. However, implementation of mitigation measures **BIO-1** through **BIO-3** would eliminate potential for cumulatively considerable impacts.	LCC	None required.	LCC

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Cultural Resources			
Impact 3.4.1: The Project may cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. The Project would impact an onsite historic canal and may impact three offsite potential historic buildings. Excavation also has potential to impact unknown historic resources.	S	CUL-1 - OUWUA Permit Prior to the commencement of Project construction, the Applicant must obtain a permit from the Orland Unit Water Users Association (OUWUA) for the conversion of the potential historic canal segment to an underground pipeline. Obtaining a permit from OUWUA would ensure that OUWUA does not consider the canal an identified historic resource. Timing/Implementation: Prior to ground-disturbing construction activities Enforcement/Monitoring: City of Orland Planning Department and Orland Unit Water Users Association	LTS
Impact 3.4.2: Excavation for and construction of the Project may cause a substantial adverse change in the significance of an unknown archaeological resource.	S	CUL-2- Historic Period Resource Evaluation If future construction activities are planned for the parcels APN 045-170-021 and APN 045-170-024, the three historic period resources (OTW-003, OTW-004, and OTW-005) must be evaluated to determine if they are historic resources using NRHP or CRHR eligibility criteria. No construction activities may commence until evaluation of the three resources is complete. If it is determined that the resources are not NRHP- or CRHR-eligible resources, future construction activities may commence with no further mitigation for the potential historic resources. If the records search or evaluation by a qualified historical architect determines any of the resources are historic resources, the potential future project must incorporate mitigation to minimize the impacts to the historic resources. Timing/Implementation: Prior to potential future construction on parcels APN 045-170-021 and APN 045-170-024 Enforcement/Monitoring: City of Orland Planning Department	LTS
Impact 3.4.3: The Project has the potential to disturb unknown human remains, including those interred outside of formal cemeteries.	S	CUL-3- Discovery of Cultural or Human Deposits Protocol	LTS

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		If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find: • If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required. • If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the lead federal agency, the lead CEQA agency, and applicable landowner. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be eligible for inclusion in the NRHP or CRHR. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to their satisfaction. • If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (Assembly Bill [AB] 2641). The archaeologist shall notify the Butte County Coroner (as per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make	

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		recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction. *Timing/Implementation: During ground-disturbing construction activities* *Enforcement/Monitoring: City of Orland Planning Department*	
Impact 3.4.4: The Project has the potential to directly or indirectly destroy an unknown unique paleontological resource or site.	S	CUL-4 - Discovery of Paleontological Resource Protocol If subsurface deposits believed to be paleontological in origin are discovered during construction, then all work must halt within a 50-foot radius of the discovery and the County shall be notified immediately. A Qualified Professional Paleontologist shall be retained and empowered to halt or divert ground-disturbing activities. A plan for monitoring and fossil recovery must be completed and implemented before ground-disturbing activities can recommence in the area of the fossil find to allow for the recovery of the find. Recovered fossils shall be analyzed to a point of identification and curated at an established accredited museum repository with permanent retrievable paleontological storage. A technical report of findings shall be prepared with an appended itemized inventory of identified specimens and submitted with the recovered specimens to the curation facility. *Timing/Implementation: During ground-disturbing construction activities* *Enforcement/Monitoring: City of Orland Planning Department*	LTS

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Impact 3.4.5: The Proposed Project, along with any foreseeable development in the Project vicinity, could result in cumulative impacts to cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features). However, implementation of mitigation measures **CUL-1** through **CUL-4** would eliminate the potential for a significant cumulative impact.	LCC	None required.	LCC
Tribal Cultural Resources			
Impact 3.9.1: The Project has potential to impact unknown tribal cultural resources located at the Project site.	S	Implement measure CUL-3	LTS
Impact 3.9.5: Implementation of the Proposed Project, along with foreseeable development in the Project vicinity, would not result in cumulative impacts to tribal cultural resources following implementation of **CUL-3**.	LCC	None required.	LCC
Energy			
Impact 3.5.1: The Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	LTS	None required.	LTS
Impact 3.5.2: The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	None required.	LTS
Impact 3.5.4: Would the Proposed Project, when considered together with other development in the city and region, result in a significant conflict with an applicable land use plan adopted for the purpose of avoiding or mitigating an environmental effect	LTS	None required.	LTS

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Greenhouse Gas and Climate Change			
Impact 3.6.1: The Project would generate greenhouse gas (GHG) emissions during the operational phase that may have a significant impact on the environment and conflict with an applicable, plan or policy adopted for the purpose of reducing greenhouse gas emissions. Emissions would exceed the SMAQMD's interim screening level numeric bright-line threshold of 1,100 metric tons of CO2e annually; thus, not complying with AB 32 and the State of California GHG reduction goals.	S	None feasible, this impact is significant and unavoidable.	SU
Impact 3.6.2: The Project would contribute to cumulative GHG emissions that would conflict with the GHG reduction goals of AB 32.	CC	None feasible, this impact is significant and unavoidable.	CC, SU
Noise			
Impact 3.7.1: The Project would generate a substantial, permanent increase in ambient noise levels in excess of City standards due to noise produced by operation.	S	None feasible, this impact is significant and unavoidable.	SU
Impact 3.7.2: The Project would not result in generation of excessive groundborne vibration or groundborne noise levels.	LTS	None required	LTS
Impact 3.7.3: The Project is not located within the vicinity of a private, public airport, or public use airport. The Project would not expose people residing or working in the project area to excessive noise levels.	NI	None required	NI
Impact 3.7.4: The Project, when considered with future development, is likely to have a significant cumulative impact due to traffic noise and stationary noise sources.	CC	None feasible, this impact is significant and unavoidable.	CC, SU

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Transportation			
Impact 3.8.1: The Project would cause a conflict with the City of Orland's General Plan policy requiring a safe sidewalk system, which provides maximum opportunities for pedestrian traffic throughout the City. The Project may pose a hazard to pedestrian and bicyclist safety due to the absence of a pedestrian crossing along Commerce Lane (County Road HH).	S	TRAN-1 Create safe pedestrian crossing The Project proponents shall incorporate a crosswalk into improvements to the County Road HH / County Road 13 intersection and install sidewalks along the project frontage as development proceeds. With this improvement, pedestrians would be able to safely walk along and cross Commerce Lane and County Road 13. *Timing/Implementation: Prior to finalization of plans for project frontage improvements at the County Road HH / Road 13 intersection* *Enforcement/Monitoring: City of Orland Engineer and Project Proponents*	LTS
Impact 3.8.2: The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) regarding traffic level of service (LOS) or vehicle miles traveled (VMT).	LTS	None required	LTS
Impact 3.8.3: The Project would result in increased hazards due to left-turn conflicts at the County Road HH/ County Road 13 intersection.	S	TRAN-2 - Widen the southwest corner of the County Road HH / County Road 13 intersection The Project proponent shall be responsible for widening the intersection of County Road HH / County Road 13 to the satisfaction of the City Engineer. The road widening plans shall be approved by the City Engineer prior to finalization of plans for project frontage improvements. With this improvement the, large trucks would be able to turn without exiting the roadway or entering an adjacent lane. *Timing/Implementation: Prior to finalization of plans for project frontage improvements at the County Road HH / Road 13 intersection* *Enforcement/Monitoring: City of Orland Engineer and Project Proponents*	LTS

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Impact 3.8.4: Implementation of the Proposed Project would not result in inadequate emergency access in the Project area.	LTS	None required	LTS
Impact 3.8.5: In the *long term*, when considered with existing, proposed, planned, and approved development in the region, implementation of the Proposed Project would contribute to cumulative traffic volumes at the Newville Road/Southbound I-5 Ramps that would result in significant impacts to level of service and operations (greater than LOS C during non-peak hours and LOS D during peak hours).	CC	TRAN-3 - Newville Road / Southbound I-5 Ramps The Project shall contribute its fair share of three (3) percent of the cost to widen the Newville Road / SB I-5 Ramps intersection off-ramp to provide a separate right turn lane and installing a traffic signal. *Timing/Implementation: Prior to issuance of Building Permit* *Enforcement/Monitoring: City of Orland Engineer and Project Proponents* This improvement would result in Level of Service B conditions, which satisfy the City's minimum LOS D standard. Implementation would require work within the Caltrans right of way and an encroachment permit would be required. A traffic signal is identified in the City General Plan EIR and is in the City's traffic impact mitigation fee program. Because this improvement is not required solely as a result of the project, project proponents should contribute their fair share to the cost of this mitigation. With this mitigation, the project's cumulative impact would be less than cumulatively significant.	LCC
Impact 3.8.5: In the *long term*, when considered with existing, proposed, planned, and approved development in the region, implementation of the Proposed Project would contribute to cumulative traffic volumes on Newville Road/Northbound I-5 ramps that would result in significant impacts to LOS and operations (greater than LOS C during non-peak hours and LOS D during peak hours).	CC	TRAN-4 - Newville Road / Northbound I-5 Ramps The Project shall contribute its fair share of two (2) percent of the cost of installing a traffic signal at the Newville Road / NB I-5 ramps intersection. *Timing/Implementation: Prior to issuance of Building Permit* *Enforcement/Monitoring: City of Orland Engineer and Project Proponents* This improvement would result in Level of Service C conditions, which satisfy the City's minimum LOS D standard. Without this mitigation measure, LOS F is expected to result at the Newville Road / NB I-5 ramps intersection. Implementation will require work within the Caltrans right of way and an encroachment permit would be required. This improvement is identified in the City General Plan EIR and is in the City's traffic impact	LCC

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		mitigation fee program. Because this improvement is not required solely as a result of the project, project proponents should contribute their fair share to the cost of this mitigation. With this mitigation, the project's impact would be less than cumulatively significant.	
Impact 3.8.5: In the *long term*, when considered with existing, proposed, planned, and approved development in the region, implementation of the Proposed Project would contribute to cumulative traffic volumes at the Newville Road/County Road HH intersection that would result in significant impacts to LOS and operations (greater than LOS C during non-peak hours and LOS D during peak hours).	CC	TRAN-5 - Newville Road / County Road HH intersection The Project shall contribute its fair share of one (1) percent of the cost of installing a Traffic Signal at the Newville Road / County Road HH intersection. *Timing/Implementation: Prior to issuance of Building Permit* *Enforcement/Monitoring: City of Orland Engineer and Project Proponents* This improvement would result in Level of Service C conditions, which satisfy the City's minimum LOS D standard. This mitigation measure will ensure the satisfaction of traffic signal warrants at the Newville Road / County Road HH intersection, but because the traffic signal is also needed to ensure coordinated operation of the signals along SR 32 Implementation will require work within the Caltrans right of way and an encroachment permit would be required. This improvement is identified in the City General Plan EIR and is in the City's traffic impact mitigation fee program. Because this improvement is not required solely as a result of the project, project proponents should contribute their fair share to the cost of this mitigation. With this mitigation, the project's cumulative impact would be less than cumulatively significant.	LCC

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Impact 3.8.5: In the *long term*, when considered with existing, proposed, planned, and approved development in the region, implementation of the Proposed Project would contribute to cumulative traffic volumes on Newville Road that would result in significant impacts to LOS and operations (greater than LOS C on a two-lane arterial street).	CC	TRAN-6 - Traffic Signals on Newville Road The Project shall contribute its fair share of one (1) percent to the cost of coordinating traffic signals on Newville Road. *Timing/Implementation: Prior to issuance of Building Permit* *Enforcement/Monitoring: City of Orland Engineer and Project Proponents* To deliver LOS C conditions it would be necessary to widen SR 32 to provide additional lanes on the crossing structure. However, this improvement is not included in the General Plan EIR, or the City's traffic impact fee program. Widening the structure is not identified in the SR 32 TCR. Thus, there is no identified funding mechanism for a project of this magnitude and is unreasonable to expect that local development in Orland would be capable of funding this improvement. As noted earlier, short roadway segments can carry high traffic volumes but operate adequately when the intersections have the capacity to handle peak period traffic volumes at a good Level of Service. This is the case with the intersections on SR 32 which are expected to operate at LOS C or better with identified improvements. Coordinating the operation of the study area signals with the operation of the signals further east on SR 32 will be appropriate. Because this improvement is not required solely as a result of the project, project proponents should contribute their fair share to the cost of this mitigation. Implementation of this mitigation measure will require work within the Caltrans right-of-way and an encroachment permit would be required. Because Caltrans has not provided approval of work within its right-of-way and because of a lack of programmatic funding mechanism for the coordination of signals, this mitigation measure cannot be assumed to be implemented. As such, this impact would be considered cumulatively considerable and significant and unavoidable impact.	CC,SU

ES.9 References

CDFG. 2012. Guidance.

U.S. Geological Survey (USGS), 1958. "Orland, California" 7.5-minute Quadrangle. U.S. Department of the Interior.

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SECTION 1.0 INTRODUCTION

This Draft Environmental Impact Report (Draft EIR; DEIR) identifies and evaluates the potential environmental impacts associated with the implementation of the Sunny Truck Service Center Project (Proposed Project, Project). The Project applicant has submitted to the City of Orland (City) applications requesting a General Plan amendment, a prezone, use permit, lot line adjustment, and an annexation by the City for five parcels on 4.98 acres currently within Glenn County jurisdiction. The Project also includes the development of a truck service center.

1.1 Purpose and Use of the EIR

This DEIR was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] §§ 21000-21177) and the Guidelines for the Implementation of CEQA (California Administrative Code §§ 15000 et seq.). As described in CEQA Guidelines Section 15121(a), an EIR is a public informational document that assesses the potentially significant environmental impacts of a project, identifies ways to minimize the significant impacts, and describes a reasonable range of alternatives to the project. CEQA requires that an EIR be prepared by the agency with primary responsibility over the approval of a project (the lead agency).

The City is the lead agency for the Proposed Project. Public agencies are charged with the duty to consider and minimize environmental impacts of proposed development, where feasible, and are obligated to balance a variety of public objectives including economic, environmental, and social factors in their decision making. The City has determined that an EIR is the appropriate CEQA documentation due to the potential for significant environmental impacts that could result from approval of the requested actions and development of the Proposed Project. This Draft EIR evaluates the existing environmental resources in the area, analyzes potential impacts on those resources due to the proposed project (particularly as they relate to prior CEQA analyses and clearances), and if necessary, identifies feasible mitigation measures that could avoid or reduce the magnitude of those impacts. This EIR provides an analysis and evaluation of on- and offsite environmental impacts resulting from the construction and operation of the Proposed Project.

1.2 Known Trustee and Responsible Agencies

For the purpose of CEQA, the term *trustee agency* means a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of California. In CEQA, the term *responsible agency* includes all public agencies other than the lead agency that may have approval authority in some regard associated with the Proposed Project. Interested agencies may have a general interest in the proposal with respect to issues germane to their organization. The following agencies have been identified as potential responsible, trustee, or interested agencies with direct or indirect interest in the project:

- California Department of Conservation (DOC)
- California Department of Transportation, District 3 (Caltrans)

- California Department of Fish and Wildlife, Region 2 (CDFW)
- California Department of Forestry and Fire Protection (CAL FIRE)
- Glenn County Air Pollution Control District (GCAPCD)
- Glenn County Local Agency Formation Commission
- Regional Water Quality Control Board, Region 5 (RWQCB)

This EIR may also be used by other public agencies to issue approvals and permits related to the Proposed Project.

1.3 Type of Document

CEQA and the CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR is for a specific development project with defined parameters. As such, this EIR is a "project" EIR. Project EIRs are defined by CEQA Guidelines (Section 15161) as:

> "The most common type of EIR examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation."

1.4 Intended Use of the EIR

This Draft EIR is intended to evaluate the environmental impacts of the Project as well as the annexation by the City of five parcels. While not all of the parcels are proposed for development as a part of this DEIR, the possible future development of these areas are considered in this environmental analysis. This EIR in its final form will be used by the City in considering approval of the Proposed Project. In accordance with CEQA Guidelines Section 15126, the EIR will be used as the primary environmental document in consideration of all subsequent planning and permitting actions associated with the Project, to the extent such actions require CEQA compliance and as otherwise permitted under applicable law.

1.5 Environmental Impact Report Organization

Section 1.0 of the EIR provides an introduction to the Proposed Project, the purpose of the DEIR, a description of the organization of the DEIR, the intended uses of the DEIR, and a description of the public review process.

Section 2.0 provides a description of the Proposed Project.

Section 3.0 provides the environmental analysis of the Proposed Project. This includes the description of the regulatory and environmental setting, the analysis of environmental impacts, and a discussion of mitigation measures to reduce or eliminate

Section 4.0 discusses the alternatives and potential environmental impacts of implementing alternatives to the Proposed Project.

Section 5.0 addresses long-term effects of the Proposed Project, including cumulative impacts, growth-inducing impacts, and significant irreversible and/or unavoidable impacts.

Section 6.0 includes the references used to prepare the DEIR.

Section 7.0 provides a list of the DEIR preparers.

Section 8.0 includes a list of acronyms and abbreviations.

The Notice of Preparation (NOP) and Initial Study are presented in **Appendix A**. Technical reports for some resource areas are also provided in the appendices.

1.6 Environmental Review Process

1.6.1 Notice of Preparation and Initial Study

In accordance with CEQA Guidelines Section 15082, the City prepared a NOP of an EIR for the Project that was distributed to responsible agencies and the public for a 30-day comment period, beginning on May 20, 2019 and concluding on June 19, 2019. Along with the NOP , the Sunny Truck Service Center Project Initial Study (State Clearinghouse [SCH] #2019059077) was circulated by the City for the 30-day public review period.

CEQA Guidelines Section 15063 (c) provides the purpose and use of an Initial Study. Section 15063(c) is a follows:

(c) Purposes. The purposes of an Initial Study are to:

(1) Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration.
(2) Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration.
(3) Assist in the preparation of an EIR, if one is required, by:

(A) Focusing the EIR on the effects determined to be significant,
(B) Identifying the effects determined not to be significant,
(C) Explaining the reasons for determining that potentially significant effects would not be significant, and
(D) Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.

(4) Facilitate environmental assessment early in the design of a project;
(5) Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment;
(6) Eliminate unnecessary EIRs;
(7) Determine whether a previously prepared EIR could be used with the project.

The City did not receive any comments on the Initial Study. See **Appendix A** for the Initial Study.

1.6.2 Draft EIR

As a result of the Initial Study analysis, the City determined that an EIR-level analysis was necessary for certain impact areas for the Proposed Project. These impact areas include: Agriculture, Air Quality, Biological Resources, Cultural and Paleontological Resources, Energy, Greenhouse Gas and Climate Change, Noise, Transportation and Tribal Resources. This Draft EIR provides this analysis.

This document constitutes the Draft EIR. The Draft EIR contains a description of the Project, description of the environmental setting, identification of project impacts, and feasible mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives. Upon completion of the Draft EIR, the City will file the Notice of Completion (NOC) with the California Office of Planning and Research (OPR) to begin the public review period (PRC § 21161).

1.6.3 Public Notice/Public Review

Concurrent with the NOC, the City will provide public notice of the availability of the Draft EIR for public review and invite comment from the general public, agencies, organizations, and other interested parties. The public review and comment period is 45 days. Notice of the time and location of any public meetings and hearings will be published prior to the meeting/hearing in accordance with applicable law. All comments or questions regarding the Draft EIR should be addressed to:

Mr. Scott Friend
City Planner
City of Orland
815 Fourth Street
Orland, California 95963

Comments may also be sent to Mr. Friend via e-mail at: cityplanner@cityoforland.com.

1.6.4 Response to Comments/Final EIR

Following the public review period, a Final EIR (FEIR) will be prepared. The FEIR will respond to all comments received during the public review period that raise significant environmental concerns and may contain revisions to the Draft EIR, if necessary. The Draft EIR, as revised and combined with responses to comments, will constitute the Final EIR.

1.6.5 Certification of the EIR/Project Consideration

The City Planning Commission will review and make recommendation to the Orland City Council regarding certification of the EIR and action on the Proposed Project. The City Council will then review and consider the FEIR. If the City finds that the FEIR is "adequate and complete," the City may certify the FEIR. Upon review and consideration of the FEIR, the City may take action to approve, revise, or reject the Proposed Project. Any decision to approve the Project would be accompanied by written findings in accordance with CEQA Guidelines Section 15091 and Section 15093. A Mitigation Monitoring and Reporting Program (MMRP), as described below, must also be adopted for mitigation measures that have

been incorporated into or imposed on the Project to reduce or avoid significant effects on the environment. The MMRP will be designed to ensure that these measures are enforceable and carried out during Project implementation.

1.6.6 Mitigation Monitoring and Reporting Program

CEQA Section 21081.6(a) requires lead agencies to adopt an MMRP to describe measures that will be adopted and made a condition of Project approval in order to mitigate or avoid significant effects on the environment. The specific reporting or monitoring program required by CEQA is not required to be included in the EIR; however, it must be presented to the City Council for adoption.

Throughout the EIR, mitigation measures have been clearly identified and presented in language that will facilitate establishment of an MMRP. Any mitigation measures adopted by the City as conditions for approval of the Project will be included in an MMRP to ensure enforceability and verify compliance.

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SECTION 2.0 PROJECT DESCRIPTION

2.1 Project Location and Setting

The ±4.98-acre Project site is located at the southwest corner of the County Road 13/County Road HH intersection in unincorporated Glenn County adjacent to the City of Orland, California.

The Project site corresponds to a portion of Section 21, Township 22 North, and Range 3 West (Mount Diablo Base and Meridian) of the "Orland, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1958, photo revised 1978) (see **Figure 1. Regional Location** and **Figure 2. Project Location***).* The approximate center of the Project site is located at latitude 39.445638˚ and longitude -122.123424˚. The Project is located on five parcels including the following:

Assessor's Parcel Numbers		
045-170-018	045-170-020	045-170-024
045-170-019	045-170-021	

The Proposed Project site is directly adjacent to the City of Orland western boundary. The site is located within the northern Sacramento Valley in an area predominately occupied by agricultural and rural residential uses. However, this is an evolving area. There are commercial, industrial uses, and more dense residential uses within close proximity of the Project site. For example, the site is diagonally adjacent to the recently constructed Pilot/Flying J commercial center which includes a truck fueling station, an auto fueling station, restaurants and a convenience mini market. Additionally, two mobile home parks are located less than a ¼ mile away. Finally, the area directly north of the Project site is zoned for commercial use and has been approved for the development of a hotel and restaurant by the City.

2.1.1 Surrounding Land Uses

Adjacent uses include the vacant land, the industrial uses of Hardwood Creations, rural residential, and Interstate 5 (I-5) to the east, a trailer sales commercial lot, agricultural uses and rural residential to the south, agricultural uses and rural residential to the west and the Pilot/Flying J truck stop, agricultural uses and vacant land to the north. See **Figure 3. Surrounding Uses**. The nearest home is directly adjacent to the Project's western boundary. Other residential uses are within 450 feet of the Project site. There are also existing residential uses on the Project site. These will remain until such time that these parcels are developed for commercial uses.

2.2 Project Objectives

Project objectives are required to be provided in an EIR. CEQA Guidelines Section 15124(b) provides the reasoning for the inclusion of Project objectives. Section 15124(b) is as follows:

> (b) A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement

of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits.

The Project objectives are defined as follows:

1) Annex the Project site into the City of Orland to provide a catalyst for new economic development.

2) Develop an economically viable truck wash that is consistent with the City of Orland General Plan.

3) Provide business and job opportunities within the City of Orland.

4) Generate tax revenue to the City of Orland from new retail and commercial development within the project site.

5) Provide trucks traveling on Interstate 5 greater options for convenient truck wash and tire services.

6) Create varied lot sizes with a commercial Land Use Designation to allow for diverse uses.

7) Provide commercial opportunity near a major freeway interchange in order to minimize traffic generation on local streets.

8) Utilize existing utility features (sewer, water, joint trench) along Road HH (Commerce Lane).

9) Provide infrastructure improvements for public health and safety.

10) Encourage the development of these previously developed parcels with improved access and connectivity.

2.3 Existing Conditions

The Project site is a partially developed site with three single-family homes, a wooden barn, a steel storage building, and a small storage shed.

The Project site is relatively flat, with elevations ranging from 260 - 265 feet above mean sea level (AMSL) over the 4.98-acre site. No natural water ways such as rivers or creeks or land exist on the Project site.

2.4 Proposed Project

2.4.1 Project Characteristics

The Project includes a General Plan amendment, a prezone, use permit, lot line adjustment, a site plan review, and an annexation by the City for five parcels currently within Glenn County jurisdiction. Current and proposed land use designations for the five parcels are listed below. See **Figure 4. Proposed Prezoning**.

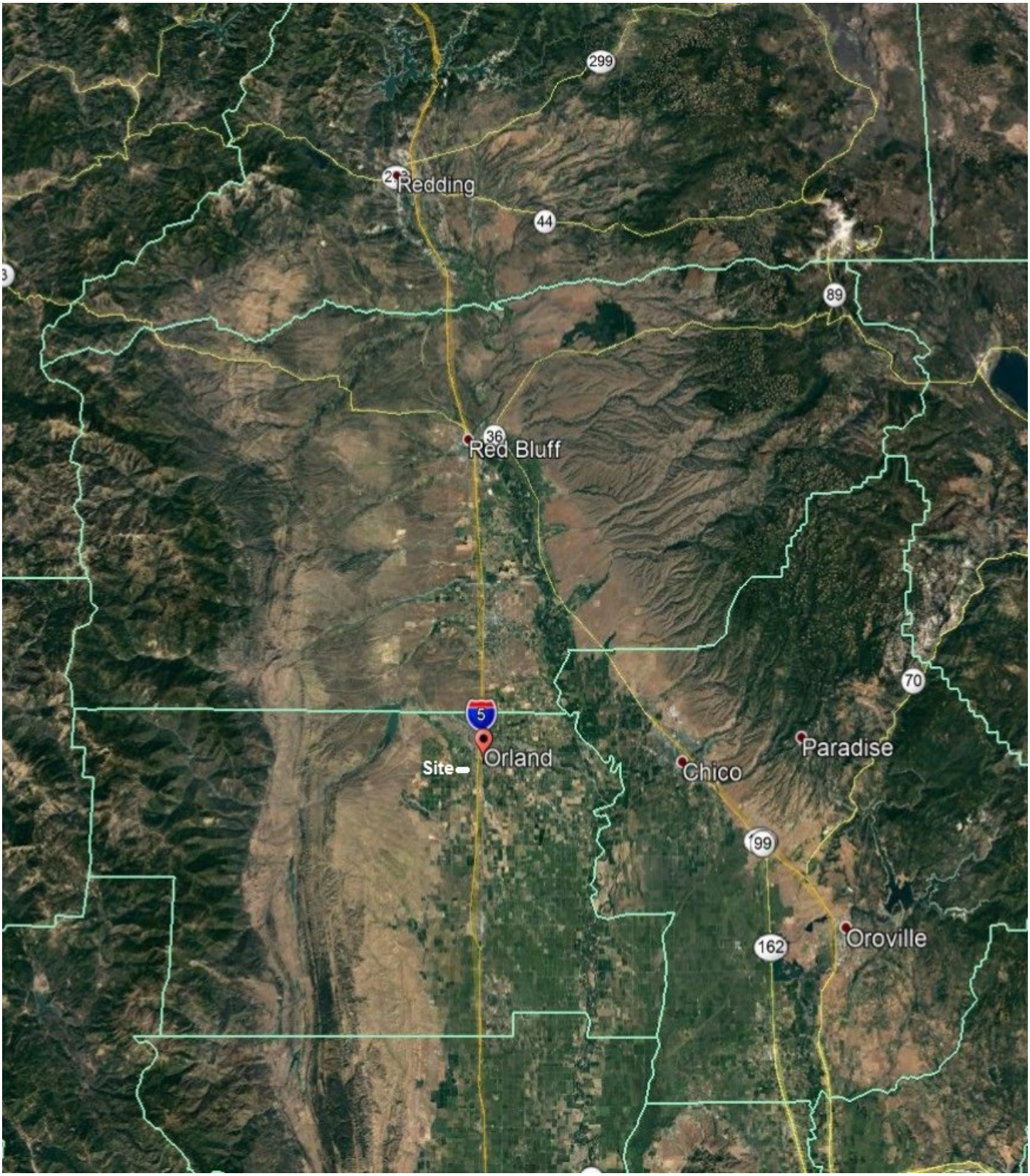

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Figure 1. Regional Location
Sunny Truck Service Center Project

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Figure 2. Project Location
Sunny Truck Service Center Project

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Figure 3. Surrounding Uses
Sunny Truck Service Center Project

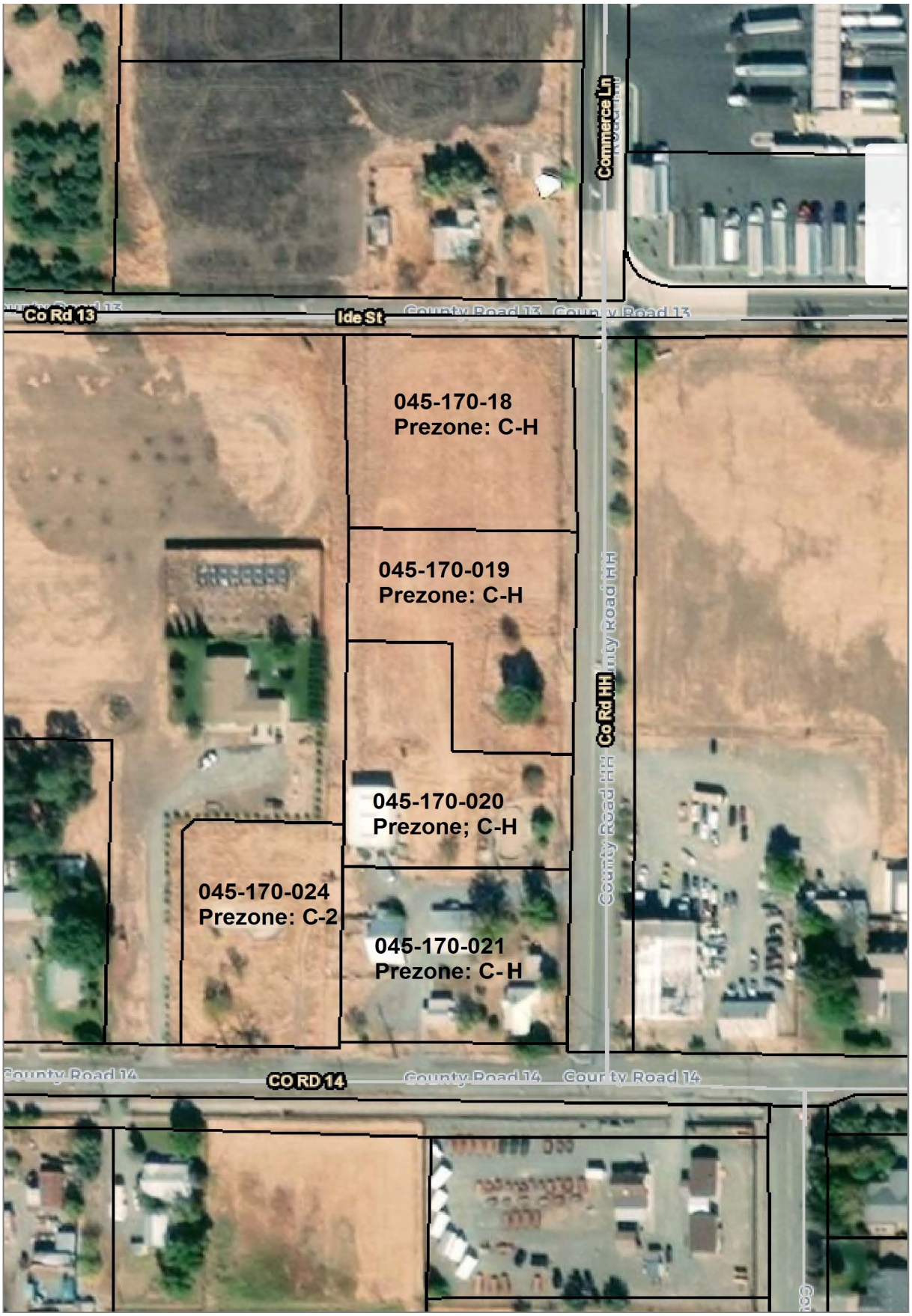

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Figure 4. Proposed Prezoning
Sunny Truck Service Center Project

Table 2-1. Parcel Land Use

Parcel APN	Acres	General Plan Designation (Glenn County)	General Plan Designation (Orland)		Proposed Prezoning (Orland)
			Current	Proposed	
045-170-018	1.19	Service Commercial	High Density Residential	Commercial	C-H
045-170-019	0.95	Service Commercial	High Density Residential	Commercial	C-H
045-170-020	0.93	Service Commercial	High Density Residential	Commercial	C-H
045-170-021	0.99	Service Commercial	High Density Residential	Commercial	C-H
045-170-024	0.92	Service Commercial	Low Density Residential	Commercial	C-2

Notes: C-H = Highway Commercial, C-2 = Community Commercial

While the Project site is currently under the jurisdiction of Glenn County, the site has been previously assigned land use designations in the City's General Plan because it is within the City of Orland General Plan Planning Area. As shown, the current City of Orland General Plan land use designations for the five parcels are either Low Density Residential or High Density Residential and are proposed to be changed to Commercial.

The proposed prezoning of the parcels are Highway Commercial (C-H) or Community Commercial (C-2). Glenn County's current General Plan land use designation for the five parcels is Service Commercial. However, once the Project site is annexed by the City, these land use designations are no longer valid.

Land Use Comparison

Table 2-2 Land Use Comparison identifies the existing and proposed land uses and the maximum densities that these uses could yield. As shown, in **Table 2-1** above, the existing City of Orland General Plan land use designation for the Project site is Low Density and High Density Residential. Prezoning these land uses as indicated in the General Plan would result in a prezoning of R-1 and R-3. The General Plan identifies the maximum number of dwelling units per acre by use type. For Low Density Residential this density is six dwelling units (du) per acre (ac) and 25 du/ac for High Density Residential. Under existing conditions, using these factors and the parcel acreages, the total number of residential units possible for the Project site would be 107, 102 of which would be multifamily units. This land was not counted on to meet the City's 2014-2021 Regional Housing Needs Allocation (RHNA) and therefore rezoning of other land to meet the RHNA is not required.

As discussed above, the Project proposes a land use change. This change would result in prezoning the Project site to C-H and C-2. The Orland General Plan also identifies the maximum building coverage for the Commercial land use at 60 percent per acre. Using these factors, the Proposed Project would have a maximum building square footage of 80,015 square feet as shown in Table **2-3**. Please note however,

these maximum square footages do not take into account the area required for parking, site constraints, landscaping, setbacks, development type, and other factors that would limit the potential square footage. The actual square footage would most likely not reach the maximum potential.

Table 2-2. Land Use Comparison

Parcel APN	Proposed Acres	Existing Potential		Proposed Potential	
		Prezoning (Max Density/Ac)	Maximum Units	Prezoning (Max Building Coverage/Ac)	Maximum Building Sq. Ft
045-170-018	1.19	R-3 (25 du/ac)	30	C-H (0.74 ac as proposed 60% building coverage)	19,341
045-170-019	0.95	R-3 (25 du/ac)	24	C-H (2.28 ac as proposed)	11,800 as proposed
045-170-020	0.93	R-3 (25 du/ac)	23		
045-170-021	0.99	R-3 (25 du/ac)	25	C-H (60% building coverage)	25,613
045-170-024	0.92	R-1 (6 du/ac)	5	C-2 (60% building coverage)	23,261
Total	4.98		107		80,015.
				Un-Proposed Commercial Total[1]	**68,215**

Notes: 1) Potential future commercial square footage: 80,015 sq. ft. – the Truck Service Center 11,800 sq. ft. = 68,215 sq. ft.

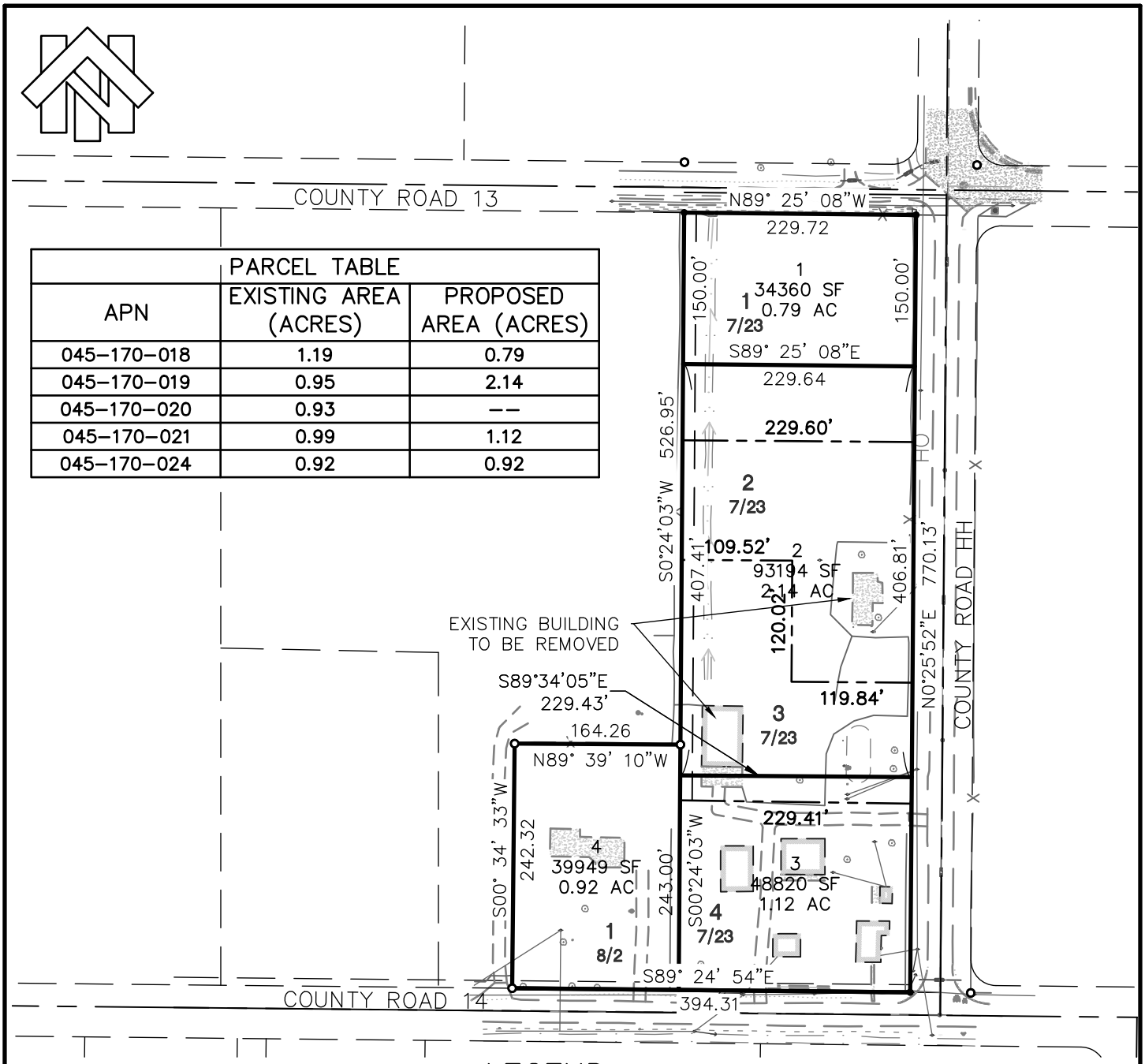
The Proposed Project includes a Lot Line Adjustment/Merger involving three parcels to merge parcels APNs 045-170-019 and 045-170-020 into one lot and reduce the size of parcel APN 045-170-018. The merged lot will have a resulting size of 2.13 acres and the reduce lot will be reduced from 1.19 acres to 0.74 acres. See **Figure 5. Lot Line Adjustment** for the proposed lots.

2.4.2 Sunny Truck Service Center Project Description

The Proposed Project also includes the construction of an 11,800-square-foot truck service center, as well as two parcels set aside for potential future commercial development. See **Figure 6. Site Plan**.

The truck service center portion of the Project will consist of two buildings, waste-water treatment tanks, a paved parking lot including 11 parking spaces, landscaping, a western and southern boundary masonry wall, curbs gutters and sidewalks adjacent to the developed site on County Road 13 and County Road HH, and a trash enclosure.

PARCEL TABLE		
APN	EXISTING AREA (ACRES)	PROPOSED AREA (ACRES)
045–170–018	1.19	0.79
045–170–019	0.95	2.14
045–170–020	0.93	––
045–170–021	0.99	1.12
045–170–024	0.92	0.92



NOTE

THIS PLAT DOES NOT CONSTIUTE A LEGAL DESCRIPTION OF THE LOTS OR PARCELS DEPICTED AND DOES NOT SHOW ALL EASEMENTS OF RECORD ON OR AFFECTING SAID LOTS OR PARCELS.

LEGEND

———	EXISTING PROPERTY LINE FOR SURROUNDING PARCELS
———	PROPERTY BOUNDARY
——— – – ———	EXISTING PARCEL LINE TO BE REMOVED
——— – – ——— – – ———	PROPOSED PROPERTY LINE
2 / 7/23	PARCEL NUMBER PER MB 7 PG 23
1 / 8/2	PARCEL NUMBER PER MB 8 PG 2

NORTHSTAR ... Designing Solutions
111 MISSION RANCH BLVD. SUITE 100, CHICO, CA 95926
PHONE: (530) 893-1600 www.northstareng.com

JOB NO. 16–197

DRAWN BY NS. E. DATE DECEMBER 2016
CHECKED _____ SCALE 1"=150'

APPROVED _____
PUBLIC WORKS DIRECTOR

LOT LINE ADJUSTMENT NO. 17– YADWINDER SOHAL, RAJVINDER SHERGILL AND TIRATH BAGRI

EXHIBIT "B"

The service center includes a truck wash building and a tire and oil service building. The truck wash building is an approximately 5,700-square-foot single-story building and includes a two-bay truck-washing facility, three restrooms, office/waiting room, breakroom, and a chemical room. The tire and oil service building is an approximately 6,120 square foot, single-story building and includes two service bays, two storage rooms, an employee break room, two restrooms, and an office/waiting room. There is also an outdoor wash station between the two buildings. The outdoor wash station is used to wash out the inside of the trailer van (Washout). The washout process requires only the use of water. See **Figure 7. Floor Plan**.

APNs 045-170-021 and 045-170-024 are not a part of the proposed Truck Service Center project but are a part of the General Plan Amendment, Prezoning and Annexation. No construction is planned for these parcels at this time.

Employees and Operations

At minimum there will be a total of six employees at the Project site during operation. The hours of operation will be from 6:00 a.m. to 9:00 p.m. Monday through Friday and 7:00 a.m. to 7:00 p.m. on Saturday and Sunday.

The number of trucks serviced daily as a part of the oil/tire operation is estimated to be approximately five to 10. The applicant anticipates that the number of trucks to use the truck washing facilities on a daily basis will be 20 to 25[1]. Anticipated deliveries to the site are estimated at one per week. These deliveries include approximately 20 to 50 tires and 300 to 500 gallons of oil. There will also be three truck trips per month to remove and dispose of used oil and tires.

Potable water is proposed to be used for the truck wash. A recycled water system is not proposed. The anticipated amount of water used on a daily basis is approximately 1,500 gallons. Additionally, approximately 1,200 gallons per day of wastewater will be produced at the Project.

The truck wash will use soap and rinse chemicals typically used in this type of process. No blower/dryers will be used at the truck wash.

Project Construction Timing

Construction of the Truck Service Center Project is anticipated to begin in the spring of 2020.

[1] The traffic study performed by KD Anderson utilized an anticipated 150 daily truck trips for the traffic analysis. However, this is considered the worst-case scenario and it is unlikely that the trips generated would reach 150 per day.

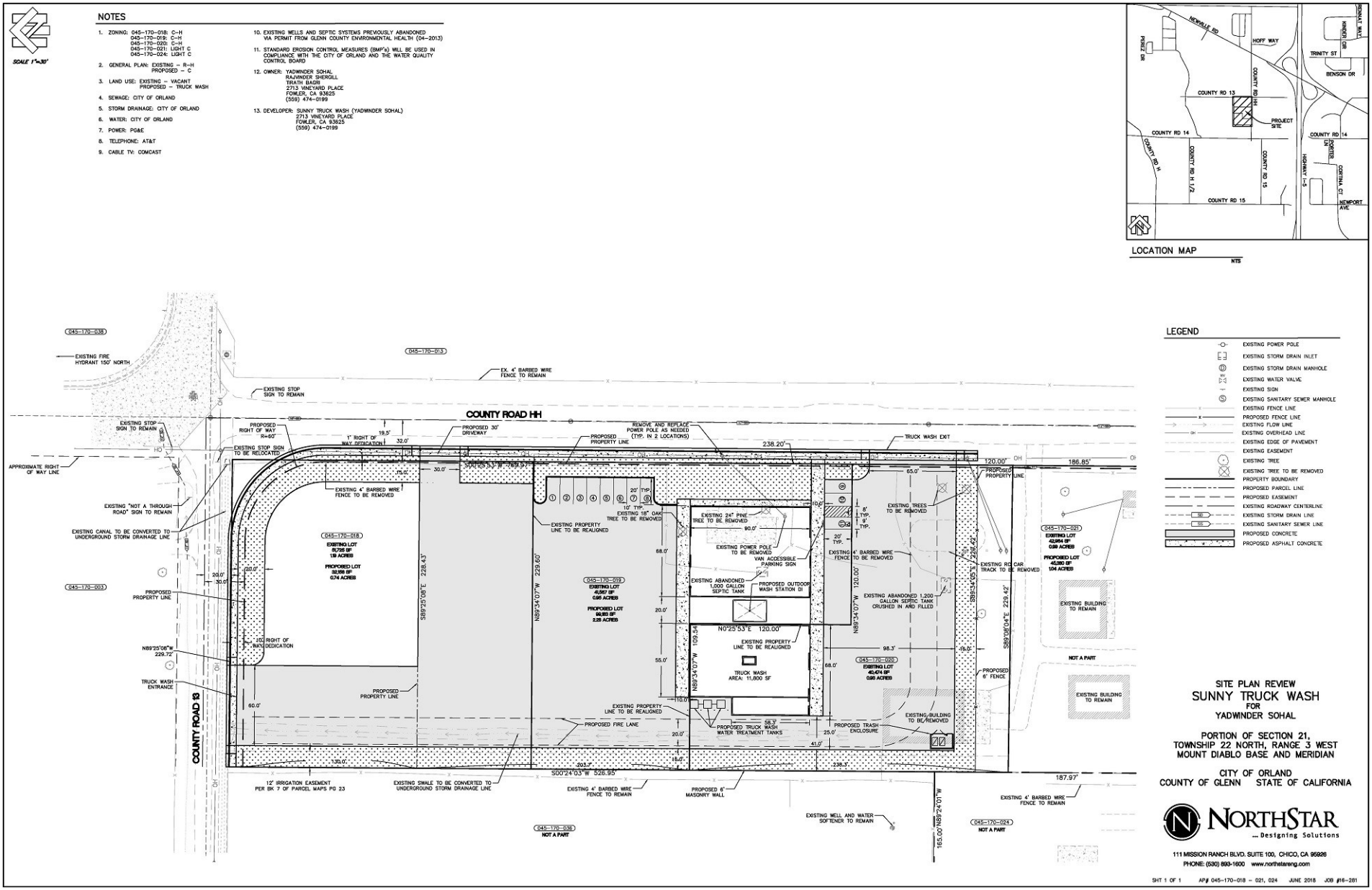


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Figure 6. Site Plan
Sunny Truck Service Center Project

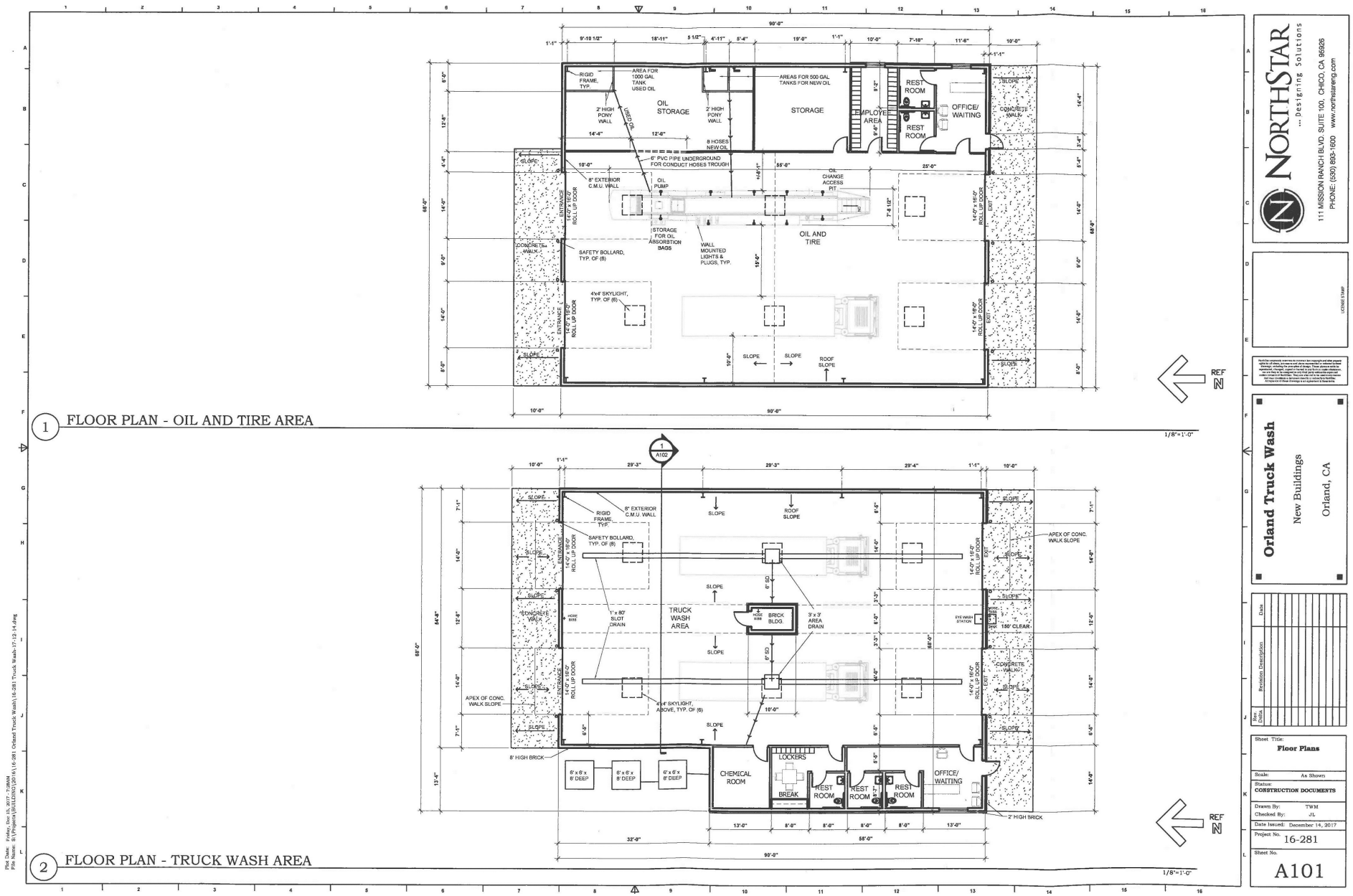

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Figure 7. Floor Plan
Sunny Truck Service Center Project

2.5 Regulatory Requirements, Permits, and Approvals Regulatory Requirements, Permits, and Approvals from Other Public Agencies

2.5.1 Project Relationship to Existing Planning Documents

General Plan

California State law requires cities and counties to prepare a general plan describing the location and types of desired land uses and other physical attributes in the city or county. General plans are required to address land use, circulation, housing, conservation, open space, noise, and safety. The City of Orland General Plan is the City's basic planning document and provides a comprehensive, long-term plan for physical development in the City. Upon annexation, the Proposed Project will be located entirely within the City and will require a General Plan amendment to be developed as proposed. The Proposed Project will be required to abide by all applicable goals and policies included in the City's adopted General Plan.

Zoning Ordinance

The City of Orland Zoning Ordinance implements the policies of the General Plan by classifying and regulating the land uses and associated development standards in the City. As discussed previously, development of the Project as proposed would require a prezoning of the property to H-C and C-2 in order to be consistent with the City's Zoning Ordinance allowed uses. A City Council approval of the prezoning would be required for development of the Project. This prezoning is a part of the Project and is considered in this Draft EIR.

2.5.2 Permits and Approvals

As the lead agency, the City has the ultimate authority for Project approval or denial. The Proposed Project may require the following discretionary approvals and permits by the City for actions proposed as part of the Project:

- Approval of the General Plan Amendment
- Approval of the Prezoning
- Approval of the Annexation
- Approval of the Lot Line Adjustment
- Certification of the EIR

In addition to the above City actions, the Project may require approvals, permits, and entitlements from other public agencies for which EIR may be used, including, without limitation, the following:

- California Department of Fish and Wildlife (CDFW), Region 2
- California Department of Transportation (Caltrans), District 3
- Glenn County Air Pollution Control District (GCAPCD)
- Glenn County Local Agency Formation Commission

2.6 References

U.S. Geological Survey (USGS), 1958 "Orland, California" 7.5-minute Quadrangle. Photorevised 1978. U.S. Department of the Interior.

SECTION 3.0 ENVIRONMENTAL ANALYSIS

The following is an introduction to Project-specific and cumulative environmental analysis and general assumptions used in the analysis. The reader is referred to the individual technical sections of this DEIR regarding specific assumptions, methodology, and significance criteria used in the analysis.

3.0.1 Introduction

The Initial Study completed for the Proposed Project determined that the Project would not result in impacts to the physical environment in the following areas:

- Aesthetics
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildfire

However, the Initial Study also determined that the Proposed Project may have the potential to impact the physical environment in the following areas and as such, these areas are discussed in this DEIR:

- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas and Climate Change
- Noise
- Transportation
- Tribal Cultural Resources

This section provides a detailed discussion of the environmental settings, impacts associated with the Proposed Project, and mitigation measures designed to reduce significant impacts to a less than significant level (as required) for the following resources: To assist the reader in comparing information about the various environmental issues, each section presents information under the following headings:

- Environmental Setting
  - The existing environment within and in the vicinity of the Proposed Project is described.
- Regulatory Setting
  - Relevant federal, state, and local regulations pertaining to each issue area.
- Thresholds of Significance
  - Relevant thresholds of significance as identified by CEQA or other relevant standards.
- Environmental Impacts

- The nature and extent of project impacts relative to the issue areas listed above are analyzed. These analyses address direct (or primary effects of the Proposed Project) as well as indirect (or secondary) effects. Where applicable, impacts are identified as short-term or long-term.

- Mitigation Measures
  - Mitigation measures to reduce or eliminate project impacts are provided, as applicable.
- Residual Impacts After Mitigation
  - A discussion of the significance of each impact after mitigation is provided.

3.0.2 Analysis Assumptions Generally Used To Evaluate The Impacts Of The Project

Baseline Environmental Conditions Assumed in the Draft EIR

Section 15125(a) of the CEQA Guidelines requires that an EIR include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published. The CEQA Guidelines also specify that this description of the physical environmental conditions is to serve as the baseline physical conditions by which a lead agency determines whether impacts of a project are considered significant. For the Proposed Project, the physical environment as it existed at the time the NOP was published serves as the baseline.

The environmental setting conditions of the Project area and the surrounding area are described in detail in the technical sections of this Draft EIR (see **Sections 3.1 through 3.18**). In general, these setting discussions describe the setting conditions as they existed when the NOP for the Project was released on May 22, 2019.

Definition of Cumulative Setting

CEQA Guidelines Section 15130(a) requires that an EIR "discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." CEQA Guidelines Section 15130(b) states, "The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

For this Project, the cumulative setting conditions considered in this Draft EIR generally encompass the cumulative setting conditions considered in the City of Orland General Plan and include buildout of the development projects shown in **Table 3.0-1**. However, the cumulative setting varies for each environmental issue area, depending on the resources affected and any relevant boundaries, such as the Northern Sacramento Valley Air Basin for air quality resources. Each technical section of the Draft EIR includes a description of the geographic extent of the cumulative setting for that resource based on the characteristics of the environmental issues under consideration as set forth in CEQA Guidelines Section 15130(b).

Table 3.0-1. Cumulative Projects

Project	Location	Type	Units/Size	Status
Simplot Grower Solutions	1536 Railroad Ave. Orland	Expansion of existing ag. fertilizer facility	40,150 sq. ft.	Approved
Commerce Plaza - Hotel/Restaurant	NW corner of Commerce Lane and Co Rd 13, Orland	CUP extension for a hotel and restaurant	80-room hotel, 6,000-sq.-ft.-restaurant	Pending

Consideration of Cumulative Impacts

Each technical section in the Draft EIR considers whether the Project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). The determination of whether the Project's impact on cumulative conditions is considerable is based on applicable public agency standards, consultation with public agencies, and/or expert opinion.

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SECTION 3.1 AGRICULTURAL AND FORESTRY RESOURCES

This section describes the agricultural resources of the Project site and discusses potential impacts focusing on the conversion of farmland.

The Initial Study completed for the Proposed Project determined that the Project would have a less than significant impact or no impact in the following impact analysis areas:

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

2. Would the project conflict with existing zoning for, or cause the rezoning of, forestland (as defined in PRC § 12220(g)), timberland (as defined by PRC § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

3. Would the project result in the loss of forestland or conversion of forestland to non-forest use?

No comments were received discussing the impact analysis areas shown above by the public and agencies during the Initial Study public review period. As such, these analysis areas are not evaluated in this EIR.

3.1.1 Environmental Setting

Agriculture

According to the California Department of Conservation (DOC), Glenn County had 576,502 acres of agricultural land in 2006, 161,683 acres of which were considered Prime Farmland. Prime Farmland is defined as land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields. By 2016, acreage of agricultural land in Glenn County had increased slightly to 574,733 acres. However, Prime Farmland had decreased to 158,117 acres, a loss of 3,566 acres. Farmland of Statewide Importance, Unique, and Farmland of Local Importance all had during the same time period resulting in a net gain in agricultural land of 341 acres (DOC 2016a).

Approximately 2.0 acres of the site is identified as Prime Farmland while the remaining 2.98 acres are identified as Other Land by DOC (DOC 2019a). See **Figure 8 Farmland Designations**.

Farmland Classification and Rating System

The Farmland Mapping and Monitoring Program (FMMP), administered by the DOC, maps agricultural areas based on soil quality and land use with categories such as Prime Farmland, Farmland of Statewide Importance, and Grazing Lands. More information about these classifications is provided below.

Farmland Mapping and Monitoring Program

The FMMP was established in 1982 to continue farmland mapping efforts begun in 1975 by the US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). The USDA's intent was

to produce agricultural resource maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the USDA developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria, which classified land's suitability for agricultural production. Suitability included both the physical and chemical characteristics of soils and the actual land use. Important Farmland Maps are derived from the USDA soil survey maps using the LIM criteria. Important Farmland Maps for California are compiled using the modified LIM criteria. The minimum mapping unit is 10 acres unless otherwise specified. Units of land smaller than 10 acres are incorporated into the surrounding classification. The Important Farmland Maps identify five agriculture-related categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land.

Storie Index Rating System

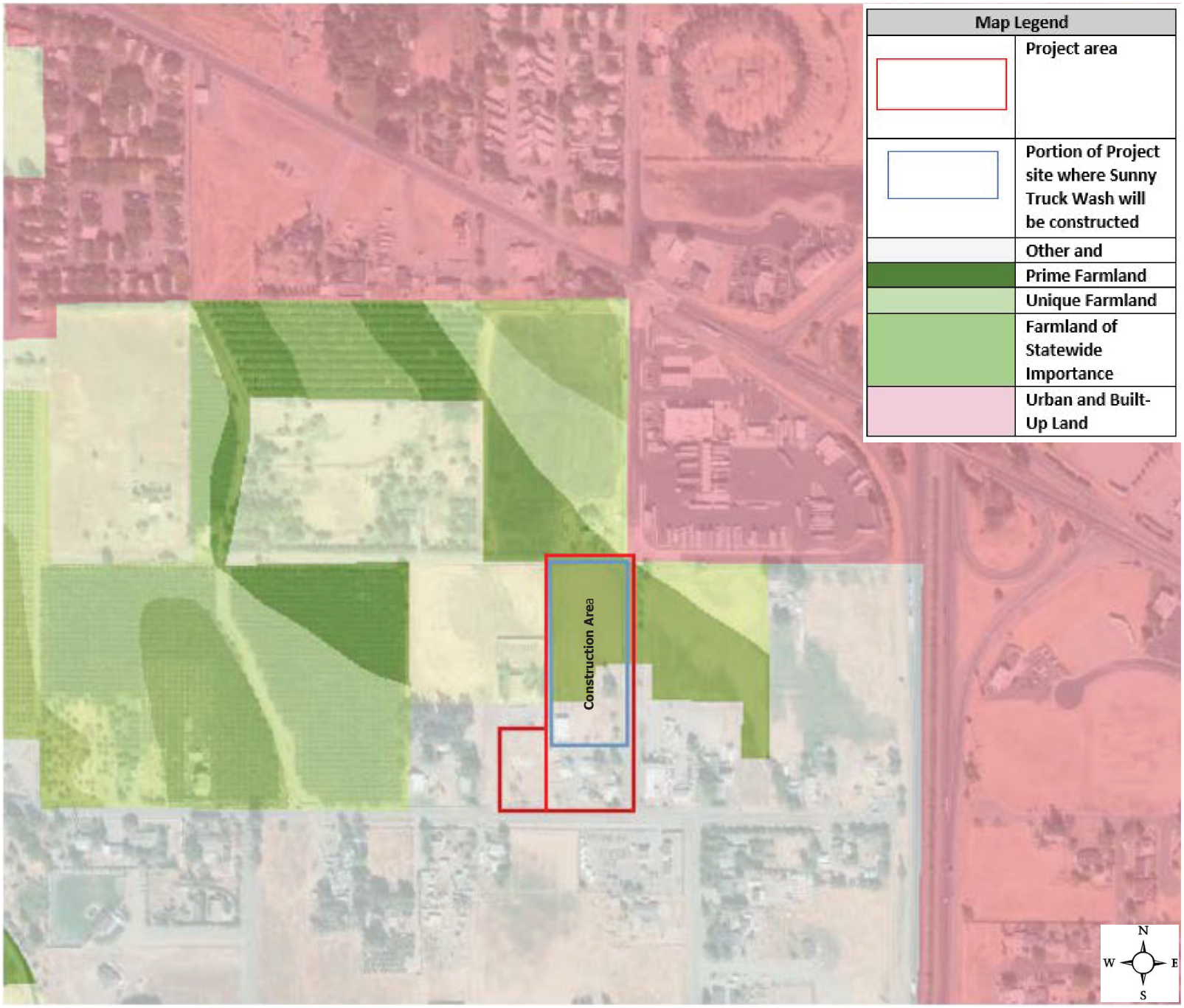
An additional method to determining farmland in California is the California Revised Storie Index. The Storie Index Rating System ranks soil characteristics according to their suitability for agriculture. Ratings range from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production, to Grade 6 soils (less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The Storie Index assesses the productivity of a soil from the following four characteristics: Factor A, degree of soil profile development; Factor B, texture of the surface layer; Factor C, slope; and Factor X, manageable features, including drainage, microrelief, fertility, acidity, erosion, and salt content. A score ranging from 0 to 100 percent is determined for each factor, and the scores are then multiplied together to derive an index rating (NRCS 1992).

As shown in **Table 3.1-1**, according to the USDA NRCS (2019), approximately 59.9 percent of the Project site is comprised of Wyo loam, deep over gravel. This soil is considered to has a Grade 1-Excellent on the Storie Index. See **Appendix B** for the NRCS Soils Report.

Table 3.1-1. Project Soil Storie Index

Soil Map Unit	Soil	Acreage	Percentage of Site	Storie Index
105	Cortina very gravelly sandy loam, moderately deep	2.0	40.1	Grade 4 Poor
165	Wyo loam, deep over gravel	2.94	59.9	Grade 1 Excellent

Source: NCRS 2019
Note: This rating considers the land vacant and therefore is difference than the DOC farmland identification system which identifies developed lands and result in different acreages.



Map Date: *5/23/2019*
Photo (or Base) Source: *California Department of Conservation*

Figure 8 Farmland Designations

Sunny Truck Service Center Project

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3.1.2 Regulatory Framework

Federal

Natural Resources Conservation Service

Farmland Protection Policy Act: The NRCS, a federal agency within the USDA, is the primary agency responsible for implementation of the Farmland Protection Policy Act (FPPA). The purpose of the FPPA is to minimize federal programs' contribution to the conversion of farmland to nonagricultural uses by ensuring federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. The NRCS provides technical assistance to federal agencies, state and local governments, tribes, or nonprofit organizations that desire to develop farmland protection programs and policies.

State

California Department of Conservation

The DOC administers and supports a number of programs, including the FMMP, the California Agriculture Land Evaluation and Site Assessment Model (LESA), and the Williamson Act. These programs are designed to preserve agricultural land and provide data on the conversion of agricultural land to urban use (DOC 2019b).

Farmland Mapping and Monitoring Program: The Important Farmland Inventory System initiated in 1975 by the USDA NRCS classifies land based on ten soil and climatic characteristics. The DOC started a similar system of mapping and monitoring for California in 1980, known as the FMMP.

Under the CEQA, the lead agency is required to evaluate agricultural resources in environmental assessments at least in part based on the FMMP. The state's system was designed to document how much agricultural land in California was being converted to nonagricultural land or transferred into Williamson Act contracts. The definitions of Important Farmland types are provided in the FMMP discussion in the Environmental Setting subsection above.

California Agriculture Land Evaluation and Site Assessment (LESA) Model: The California Agriculture LESA model was developed in 1997 based on the federal LESA system. It can be used to rank the relative importance of farmland and the potential significance of its conversion on a site-by-site basis. The California LESA model considers the following factors: land capability, Storie Index, water availability (drought and non-drought conditions), land uses within 1/4 mile, and protected resource lands (e.g., Williamson Act lands) surrounding the property. A score can be derived and used to determine if the conversion of a property would be significant. Under CEQA, lead agencies may refer to the LESA model in their environmental analysis but are not required to do so.

Local

City of Orland General Plan 2008-2028

The County recognizes that agriculture has a significant role in the City of Orland's economy and as such, has provided a number of policies for the protection of these lands. Maintaining agricultural buffer zones and ensuring adequate water supply is a primary focus of the policies. Those policies listed in the Open Space, Conservation, and Public Facilities Element of the City of Orland's 2008-2023 General Plan that pertain to the Proposed Project are listed below.

Space, Conservation, and Public Facilities Element - Agriculture

Goal 5.1: Promote and protect the continued viability of agriculture surrounding Orland.

Policy 4.1.B: Direct urban development to areas where agricultural operations are already constrained by existing non-agricultural uses.

Policy 5.1.C: During the project review process, address the impacts of siting sensitive uses in areas where conflicts with agricultural production and processing activities may result. The City may require buffers between the new urban use and the existing agricultural use as outlined in the Administrative Guidelines for Implementation of General Plan Agricultural Buffering Policies.

Program 5.1.C.1: Buffers shall be physically and biologically designed to avoid conflicts between agricultural and non-agricultural uses. The biological design should ensure that the buffer does not provide a host environment for pests or carriers of disease which could potentially impact farming operations.

Program 5.1.C.2: Buffers shall normally be located on the parcel proposed for non-agricultural use.

Program 5.1.C.3: Buffers should primarily consist of a physical separation between agricultural and non-agricultural uses. The appropriate width shall be determined on a site-by-site basis, taking into account the type of existing agricultural uses, the nature of the proposed development, the natural features on the site, and any other factors and project design features that affect the specific situation.

Program 5.1.C.4: In addition to physical separation, the following buffer options should be considered:

- Green Belts/ open space
- Parks and recreation areas
- Roads

- Fences
- Walls
- Waterways
- Vegetative screens/trees

These buffering options may be used in any combination to most effectively reduce conflicts arising from adjacent incompatible uses.

Program 5.1.C.5: An ongoing maintenance program for the buffer which may include vector controls.

Program 5.1.C.6: Policies indicating that buffer restrictions may be removed if all adjacent parcels have been irreversibly converted to nonagricultural uses.

Policy 5.1.D: Create and maintain buffer zones around areas of existing agricultural processing activities. Discourage sensitive uses that encroach upon these facilities.

Policy 5.*1.E*: Buffer zones surrounding agricultural processing plants may vary in width based upon existing and proposed uses, as well as whether vegetation screens are incorporated to improve buffer effectiveness.

Note that noise-related standards for locating sensitive development in the vicinity of processing plants are contained in the Noise Element.

Policy 5.1.F: Where existing agricultural operations or agricultural processing operations exist within the city limits, the City shall encourage the use of on-site density transfers, flexible zoning standards, and density averaging on potentially constrained sites.

Program 5.1.F.1: The City shall review the existing zoning pattern to determine where the use of these provisions may be applicable or desirable and shall provide a report to the City Council outlining options for the designation of the identified properties.

3.1.3 Environmental Impacts

Thresholds of Significance

The Initial Study completed for the Proposed Project identified that the following issue areas would result in a less than significant or no impact. Therefore, these issue areas are not discussed further in this EIR. For further discussion of these issue areas, refer to the Initial Study located in **Appendix A**

1. Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to nonagricultural use?

2. Would the Project involve other changes in the existing environment, which due to their location of nature, could result in conversion of farmland to nonagricultural use?

3.1.4 Methodology

Evaluation of potential agricultural land impacts of the Proposed Project was based on information gathered from the DOC Farmland Conversion Reports, the DOC Important Farmlands Map, and the USGS Web Soil Survey. The LESA Method was utilized to determine how detrimental of an impact is expected from a loss of land designated as farmland. This analysis involves rating the overall quality of farmland based on land capability classification (LCC), water availability, and soil type. In this analysis, the LESA score is utilized to determine the significance of loss of important agricultural land in conjunction with consideration of development of the Project site.

Project Impact Analysis

Impact 3.1.1: Conversion of Farmland to Non-Agricultural Use

Threshold:	*Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to nonagricultural use?*

As previously stated, the DOC Important Farmland Finder identifies six agriculture-related categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Farmland of Local Potential, and Grazing Land. The significance threshold is conversion of land identified as Prime Farmland, Unique Farmland, of Farmland of Statewide Importance to nonagricultural uses. The Proposed Project involves the development of 3.07 acres on a 4.98-acre parcel for use as a truck service center. Of the ±3.1 acres to be developed, 2.0 acres are designated as Prime Farmland and 1.1 acres is designated as Other Land. The 2.0 acres of Prime Farmland is a portion of a 9.7-acre swath of Prime Farmland that stretches across a total of four parcels as shown in **Figure 8** above.

The LESA is a tool developed by the DOC to evaluate the significance of converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use. The LESA model methodology involves the use of a numerical rating system to consider characteristics of the farmland including soil type, water availability, and percentage of surrounding parcels utilized for agricultural purposes. The LESA Model was developed for evaluating the significance of the loss of Important Farmland. This methodology was used to determine the potential impact that the Project would have on agricultural land in the area.

Only the 3.1 acres of land that is to be immediately constructed upon for the Project was included in the LESA analysis. The remaining 1.88 acres are currently occupied with single family homes and other uses and there are no plans for development of the area beyond what currently exists. **Table 3.1-2** summarizes the LCC and Storie Index Scores identified for the Project site. **Table 3.1-2** is the LESA scoresheet with the calculations performed for the Project site. **Table 3.1-3**. Summarizes the California LESA Model scoring

thresholds of significance. As shown, in **Table 3.1-2**, the based on LESA modeling, the Proposed Project's impact to agricultural land is not considered significant.

Table 3.1-2. Land Evaluation Worksheet Land Capability Classification (LCC) and Storie Index Scores[1]

A	B	C	D	E	F	G	H
Soil Map Unit Symbol	Project Acres[2]	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
Czt 105	0.1	0.9%	4w	40	0.4	31	0.28
Wg 165	3.0	99.1%	3s (non-irrigated)	60	59.5	100	99.1
Totals	**3.1**	**100%**		**LCC Total**	**59.9**	**Storie Index Total**	**99.4**

Source: NRCS 2019; ECORP Consulting, Inc 2019
Notes:
1) LESA calculations and Area of Influence Map are included in **Appendix C**
2) No construction is currently planned for parcels APN 045-170-021 and 045-170-024 and thus are not a part of the proposed Truck Service Center project; 3.1 acres are to be developed.

Table 3.1-3. LESA Scoresheet

A	B	C	D	E	F
Factor Name	Factor Rating (0-100 point)	X	Factor Weighting (Total=1.00)	=	Weighted Factor Rating
Land Evaluation (LE)					
1. Land Capability Classification	59.9	X	0.25	=	15.0
2. Storie Index Rating	99.4	X	0.25	=	25.9
Site Assessment (SA)					
1. Project Size	0	X	0.15	=	0
2. Water Resource Availability	90	X	0.15	=	13.5
3. Surrounding Agricultural Lands	0	X	0.15	=	0
4. Protected Resource Lands	0	X	0.05	=	0
			Final LESA Score		**54.4 Not significant**

Source: NOC 2019b; ECORP Consulting, Inc 2019

Table 3.1-4. California LESA Model Scoring Thresholds

Total LESA Score	Scoring Decision
0-39 points	Not considered significant
40-59 points	Considered significant only if both the LE and SA subscores are greater than or equal to 20 points
60-79 points	Considered significant unless either LE or SA subscores is less than 0 points
80-100 points	Considered significant

Source: NOC 2019b

Based on the characteristics of the Prime Farmland that makes up 65.6 percent of the Project site, the LESA model shows that the impact is not significant as the Site Assessment (SA) subscore is less than 20 points. Further, the Project site is currently identified as Low Density Residential and High Density Residential by the City of Orland General Plan. Glenn County has the Project site zoned as Service Commercial. The Orland General Plan EIR determined that the conversion of agricultural land to urban type uses, including the Project site, would result in a significant and unavoidable impact (Orland 2010b). While, the Proposed Project includes a General Plan Amendment to change the existing land used designation to HC and C-2. This is consistent with the General Plan planned urban uses for this property and would not result in a greater impact than the conversion of agricultural land impact identified in the General Plan EIR. The parcels would inevitably be transformed from agricultural to nonagricultural use irrespective of whether or not the Project is constructed. As such, the Project is consistent with the General Plan determination and would not increase the level of impact identified in the General Plan.

Due to the LESA determination that agricultural impacts are not significant as a result of Project development and the fact that the Proposed Project is consistent with future urban development for the site and would not result in a greater agricultural impact than what was identified in the General Plan, the Project would have **less than significant** impact regarding the conversion of Prime Farmland to nonagricultural use.

Impact 3.1.2: Loss of Farmland

Threshold:	*Would the project Involve other changes in the existing environment, which due to their location of nature, could result in conversion of farmland to nonagricultural use?*

The Proposed Project involves the prezoning of the five parcels that compose the Project site. Upon annexation by the City of Orland, the land use designations for the five parcels will change from four high-density residential parcels and one low-density residential parcel to five commercial parcels. Based on City of Orland and Glenn County General Plan land use designations, all of these parcels have been identified for future urban development by the City of Orland and Glenn County.

In instances where a residential project is to be constructed in the vicinity of agricultural use, there is potential for resident/agricultural conflicts because of pesticide/herbicide use and noise. These conflicts could result in the conversion of agricultural land to nonagricultural use. However, because the Project is a truck wash and truck service center, no future resident concerns about adjacent agricultural practices

would occur. Finally, the area is developed with a variety of uses from agricultural to commercial to residential to industrial. Urban type infrastructure, such as water, sewer, electricity, and roadways are all readily available in the immediate area. The Proposed Project would not result in the extension of infrastructure as it already exists. Therefore, development of the Project would not result in future un-planned growth which may impact agricultural uses in the area.

Based on the information provided above, the Project has a **less than significant** impact in regard to causing changes in the existing environment, which due to its location in nature, may result in the conversion of farmland to nonagricultural use.

3.1.5 Mitigation Measures

Less than significant impacts were identified, and no mitigation measures are required.

3.1.6 Residual Impacts After Mitigation

No mitigation measures are required; therefore, no residual impacts would occur.

3.1.7 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Agricultural and forestry resources are of statewide importance; as such, the cumulative setting consists of all agricultural and forestry resources in California. Throughout the state, development pressures are resulting in the conversion of thousands of acres of agricultural land. According to the latest statewide study by the FMMP, there were 31,486,642 acres classified as agricultural land in the state in 2010a. This was reduced to 31,444,202 acres by 2012, resulting in a conversion of ±44,440 acres of agricultural land to nonagricultural use between this time period (DOC 2015).

Of the 32 million acres of forest within California, 16.6 million acres are considered timberlands (CDFW 2017). Timberland is forest that is not reserved and can produce commercial wood products. By definition, reserved forests preclude timber harvest, such as National Park Service (NPS) forests and other publicly owned protected forests. Timber and timber products continue to play a role in California's economy. Currently, just over 50 percent of California's 32 million acres of forest land is classified as timberland (the productive component of forest land that is not withdrawn from management for the production of wood products by law or statute). The majority of unreserved timberland is in Northern California. As of 2014, the seven-county area, consisting of Del Norte, Humboldt, Mendocino, Plumas, Shasta, Siskiyou, and Trinity counties, accounted for 53 percent of the unreserved timberland in the entire state.

According to the United States Forest Service (USFS), 23.4 percent of Siskiyou County was forest land (197,049 acres) and of this acreage 52.2 percent was considered timberland (103,348 acres) in 2014 (USFS 2014).

Cumulative Impacts and Mitigation Measures

Impact 3.1.6: Cumulative Agricultural Impacts

Threshold	*Would the project, in combination with existing, approved, proposed, and reasonably foreseeable development in nearby areas of The City of Orland, result in the direct or indirect conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use?*

In 2014, there were 347,031 acres of important farmland in Glenn County. By 2016, the County had 347,652 acres or an increase of 621 acres (DOC 2016a). During the two-year period between 2014 and 2016, 35 acres of Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) in Glenn County were converted to urban uses. Thus, land conversion to Important Farmland had a net positive increase of 586 acres in the period between 2014 and 2016.

As previously discussed, implementation of the Project will result in the conversion of 2.0 acres of Prime Farmland to commercial use. However, the land has been identified for urban use by the City of Orland General Plan and as such will be converted to nonagricultural use irrespective of the Project. The City of Orland General Plan EIR states that the conversion of agricultural land to non-agricultural use is significant and unavoidable as the City moves to become more urbanized. The General Plan EIR sets forth a mitigation measure to protect Important Farmland parcels 40 acres or larger in size. For the conversion of large parcels of Important Farmland, the General Plan includes land use and open space policies and programs to mitigate impacts to farmland (City of Orland 2010a). The Project will change ±2.0 acres of Prime Farmland to nonagricultural use. Such conversion is expected and accounted for within the General Plan EIR.

Further, the LESA Model results show that the conversion of the 2.0 acres for the purpose of the Project is not significant. No additional known developments are currently planned for the adjacent Important Farmlands. As mentioned in **Section 3.1.2** above, the Project is commercial rather than residential and thus is unlikely to foster a community push for elimination of adjacent agricultural land. Thus, the Project will have a **less than cumulatively considerable** impact in this area.

Cumulative Mitigation Measures

None required.

Residual Impacts After Mitigation

No mitigation measures are required under cumulative conditions; therefore, no residual impacts would occur.

3.1.8 References

[CDFW] California Department of Fish and Wildlife

2017 Timberland Conservation Program. https://www.wildlife.ca.gov/Conservation/Timber.

[DOC] California Department of Conservation

2015 *California Farmland Conversion Report 2015*. http://www.conservation.ca.gov/dlrp/fmmp/Pages/FMMP_2010-2012_FCR.aspx.

2016a Important Farmland Data Availability – County Data. http://www.conservation.ca.gov/dlrp/fmmp/Pages/county_info.aspx.

2019a California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/.

2019b California Agricultural Land and Site Assessment Model Instruction Manual. https://www.conservation.ca.gov/dlrp/Documents/lesamodl.pdf

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2019 LESA Modeling Analyses. Available in Appendix C of this DEIR

[NRCS] Natural Resources Conservation Service

1992 *The Development of the Land Capability Classification.* NRCS History Articles. Accessed February 5, 2014. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/about/history/?cid=nrcs143_021436.

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2010a General Plan 2008-2028. http://cityoforland.com/_documents/DraftGeneralPlanOct2010.pdf.

2010b *City of Orland General Plan Update Draft Environmental Impact Report*. http://cityoforland.com/_documents/OrlandGeneralPlanDEIR27-0153_FINAL6-25.pdf.

[USFS] United States Forest Service

2014 Forests of California – Forest Area interactive map. https://usfs.maps.arcgis.com/apps/MapJournal/index.html?appid=5133c9e1d8c246a1807426a9ca6ee264#.

SECTION 3.2 AIR QUALITY

This section describes the environmental setting for air quality, including the regulatory setting and existing site conditions, and the impacts on air quality that would result from the Proposed Project.

3.2.1 Environmental Setting

Air Basin Characteristics

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Proposed Project is located in Glenn County, which is in the Northern Sacramento Valley Air Basin (NSVAB). The NSVAB consists of a total of seven counties: Sutter, Yuba, Colusa, Butte, Glenn, Tehama, and Shasta. The NSVAB is bounded on the north and west by the Coastal Mountain Range and on the east by the southern portion of the Cascade Mountain Range and the northern portion of the Sierra Nevada. These mountain ranges reach heights in excess of 6,000 feet AMSL, with individual peaks rising much higher. The mountains form a substantial physical barrier to locally created pollution as well as that transported northward on prevailing winds from the Sacramento metropolitan area (Sacramento Valley Basinwide Air Pollution Control Council [SVBAPCC] 2015).

The environmental conditions of Glenn County are conducive to potentially adverse air quality conditions. The region is characterized by moderately wet winters followed by hot and dry summers. The basin area traps pollutants between two mountain ranges to the east and the west. This problem is exacerbated by a temperature inversion layer that traps air at lower levels below an overlying layer of warmer air. Prevailing winds in the area are from the south and southwest. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Growth and urbanization in Glenn County have also contributed to an increase in emissions.

Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in **Table 3.2-1.**

Table 3.2-1 Criteria Air Pollutants Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (NOx) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Particulate Matter (PM_{10} & $PM_{2.5}$)	Produced by power plants, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Lead	Metallic element emitted from metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: California Air Pollution Control Officers Association (CAPCOA) 2013

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's $PM_{2.5}$ air quality problems. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Diesel Exhaust

Most recently, CARB identified DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. Diesel PM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of diesel PM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (EPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. Diesel PM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) was identified as a TAC in 1986 by CARB. NOA is located in many parts of California and is commonly associated with ultramafic rocks. Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Ultramafic rocks form in high-temperature environments well below the surface of the earth. When exposed at the surface by geologic uplift and erosion, ultramafic rocks may be partially to completely altered into a type of rock called serpentinite. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in the bodies of these rocks, along their boundaries, or in the soil. For individuals living in areas of NOA, there are many potential pathways for airborne exposure. Exposures to soil dust containing asbestos can occur under a variety of scenarios, including children playing in the dirt; dust raised from unpaved roads and driveways covered with crushed serpentine; grading and earth disturbance associated with construction activity; quarrying; gardening; and other soil-disturbing human activities. For homes built on asbestos outcroppings, asbestos can be tracked into the home and can also enter as fibers suspended in the air. People exposed to low levels of asbestos may be at elevated risk (e.g., above background rates) of lung cancer and mesothelioma. The risk is proportional to the cumulative inhaled quantity of fibers, and also increases with the time since first

exposure. Although there are a number of factors that influence the disease-causing potency of any given asbestos (such as fiber length and width, fiber type, and fiber chemistry), all forms are carcinogens.

Ambient Air Quality

Ambient air quality in the county can be inferred from ambient air quality measurements conducted at air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections in the region are documented by measurements made by the Glenn County Air Pollution Control District (GCAPCD), the air pollution regulatory agency in the air basin that maintains air quality monitoring stations. The nearest air quality monitoring site to the project site is located at 720 North Colusa Street in Willows, approximately 15 miles south of the Project site. This monitoring station monitors ambient concentrations of O_3 and airborne particulates (PM_{10} and $PM_{2.5}$). O_3, PM_{10}, and $PM_{2.5}$ are the primary pollutants affecting the air basin. **Table 3.2-2** shows historical occurrences of O_3, PM_{10}, and $PM_{2.5}$ pollutant levels exceeding state and federal ambient air quality standards for the three-year period including 2016, 2017, and 2018.

Table 3.2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2016	2017	2018
O_3			
Max 1-hour concentration (ppm)	0.079	0.079	0.079
Max 8-hour concentration (ppm) (state/federal)	0.063 / 0.063	0.067 / 0.067	0.064 / 0.063
Number of days above 1-hour standard (state/federal)	0 / 0	0 / 0	0 / 0
Number of days above 8-hour standard (state/federal)	0 / 0	0 / 0	0 / 0
PM_{10}			
Max 24-hour concentration (µg/m3) (state/federal)	79.6 / 80.1	181.7 / 180.1	230.2 / 215.7
Number of days above 24-hour standard (state/federal)	* / 0	* / 1	59.7 / 1.1
$PM_{2.5}$			
Max 24-hour concentration (µg/m3) (state/federal)	31.1 / *	55.2 / *	179.8 / *
Number of days above federal 24-hour standard	*	*	*

Source: CARB 2019
$\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million
* = Insufficient data available from CARB to determine the value

The EPA and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as

nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the NSVAB is included in **Table 3.2-3**.

Table 3.2-3. Federal and State Ambient Air Quality Attainment Status for Glenn County

Pollutant	Federal	State
Ozone (O_3)	Unclassified/Attainment	Attainment
Coarse Particulate Matter (PM_{10})	Unclassified	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Unclassified/Attainment	Attainment
Carbon Monoxide (CO)	Unclassified/Attainment	Unclassified
Nitrogen Dioxide (NO_2)	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO_2)	Unclassified/Attainment	Attainment

Source: CARB 2018

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the state standards for PM_{10} (CARB 2018).

In 1994, the air districts in the NSVAB, which includes Glenn County, prepared an air quality attainment plan for O_3. Updated every three years since adoption, the current 2015 Air Quality Attainment Plan includes forecast reactive organic gas (ROG) and NO_x emissions (ozone precursors) for the entire NSVAB through the year 2020. The 2015 Air Quality Attainment Plan provides local guidance for air basins to achieve attainment of the California ambient air quality O_3 standard.

3.2.2 Regulatory Framework

Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the EPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide is an air pollutant covered by the CAA; however, no NAAQS have been established for carbon dioxide.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. **Table 3.2-3** lists the federal attainment status of the Glenn County portion of the NSVAB for the criteria pollutants.

State

California Clean Air Act

The California Clean Air Act (CCAA) allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency (Cal-EPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the National Ambient Air Quality Standards (NAAQS) revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

Tanner Air Toxics Act & Air Toxics "Hot Spots" Information and Assessment Act

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for

sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Mobile Source Strategy

In 2016 CARB released the updated to the Mobile Source Strategy. This demonstrates how the State will meet air quality standards, decrease health risks from transportation emissions, and reduce petroleum consumption over the next 15 years. This includes engine technology that is effectively 90 percent cleaner than today's current standards, with clean, renewable fuels comprising half the fuels burned.

The strategy also relies on the increased use of renewable fuels to ensure that air pollutant reductions are achieved while meeting the ongoing demand for liquid and gaseous fuels in applications where combustion technologies remain, including in heavy-duty trucks and equipment and light-duty hybrid vehicles. The estimated benefits of the Mobile Source Strategy in reducing emissions from mobile sources includes a 50 percent reduction in the consumption of petroleum-based fuels statewide.

Governor's Sustainable Freight Action Plan

Under the Governor's Sustainable Freight Action Plan strategy, CARB is working with agency partners and stakeholders to implement a broad program that includes regulations, incentives, and policies designed to support the transformation to a more sustainable freight system and reduce community impacts from freight operations in California. The Governor's Sustainable Freight Action Plan identifies strategies and actions to achieve a sustainable freight transportation system that meets California's environmental, energy, mobility, safety and economic needs. The Plan also identifies and initiates corridor-level freight pilot projects within the State's primary trade corridors that integrate advanced technologies, alternative fuels, freight and fuel infrastructure and local economic development opportunities. The Plan seeks to improve the state freight system efficiency 25 percent by "increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030" as well as to deploy over 100,000 zero-emission freight vehicles and equipment and maximizing near-zero equipment and equipment powered by renewable energy by 2030.

Diesel Risk Reduction Plan

The identification of DPM as a TAC in 1998 led CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Risk Reduction Plan) in October 2000. The Risk Reduction Plan's goals include an 85 percent reduction in DPM by 2020 from the 2000

baseline (CARB 2000). The Risk Reduction Plan includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

In 2008, CARB approved the Truck and Bus Regulation to significantly reduce PM and NO_X emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks had to be retrofitted with PM filters beginning January 1, 2012, and older trucks had to be replaced by January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of CARB's ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to DPM and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles. The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system (APS) for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

Beginning in 2008, CARB's Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

Local

Glenn County Air Pollution Control District

In Glenn County, the air quality regulating authority is the GCAPCD, which adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. The district also regulates agricultural burning. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality. The GCAPCD develops regulations to improve air quality and protect the health and welfare of Glenn County residents and their environment. GCAPCD rules and regulations (CARB 2013) most applicable to the project area include, but are not limited to, the following:

Article IV, Section 76, Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

A. as dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

B. of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection "A" above.

Article IV, Section 78, Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public of which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

Article IV, Section 85, Particulate Matter Concentration. Except for emissions from agricultural operations, no person shall discharge into the atmosphere from any source particulate matter in excess of 0.3 grains per cubic foot of gas at standard conditions.

3.2.3 Environmental Impacts

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, air quality impacts are considered significant if implementation of the project would result in any of the following:

1. Would the project conflict with or obstruct implementation of an applicable air quality plan?

2. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

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

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

GCAPCD Thresholds

Implementations of the Proposed Project could result in air quality impacts during construction and operations. Neither the City of Orland or GCAPCD have established air pollution thresholds under CEQA for the assessment of air quality impacts. Therefore, the Project emissions will be compared with the thresholds established in Sacramento County. As with Glenn County and the Proposed Project site, Sacramento County is located within the Sacramento Valley Air Basin and thus possesses similar air circulation patterns and temperature inversion layers. Therefore, air quality thresholds of significance developed in that county are appropriate. While air quality standards established in Sacramento County

are not binding on Glenn County, they are instructive for comparison purposes. The air quality standards established in Sacramento County are promulgated by the Sacramento Metropolitan Air Quality Management District (SMAQMD) and are consistent with the CCAA. The thresholds of significance are summarized in **Table 3.2-4**.

Table 3.2-4. SMAQMD Thresholds of Significance (Pounds per Day)

Emission	Construction (lbs/day)	Operations (lbs/day)
NO_x	85	65
ROG	N/A	65
PM_{10}	80	80
$PM_{2.5}$	80	82

Source: SMAQMD 2016

Methodology

Air quality impacts were assessed in accordance with methodologies recommended by CARB. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were primarily calculated using CalEEMod model defaults for Glenn County. Operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates identified for the Project by KD Anderson & Associates, Inc (2019).

Project Impacts Analysis

Impact 3.2.1: Air Quality Compliance

Threshold:	*Would the project conflict with or obstruct implementation of the applicable air quality plan?*

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan (AQAP) to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The North Sacramento Valley Planning Area (NSVPA) 2015 Air Quality Attainment Plan is the most recent air quality planning document covering Glenn County. SIPs are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations,

and federal controls describing how the state will attain ambient air quality standards for ozone and particulate matter. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts prepare SIP elements and submit them to CARB for review and approval. The NSVPA 2015 AQAP includes forecast ROGs and NO_x emissions (ozone precursors) for the entire NSVPA region through the year 2020. These emissions are not appropriated by county or municipality.

Criteria for determining consistency with the 2015 AQAP are defined by the following indicators:

- *Consistency Criterion No. 1*: The Proposed Project would not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQAP.
- *Consistency Criterion No. 2*: The Proposed Project would not exceed the assumptions in the AQAP.

The violations to which Consistency Criterion No. 1 refers are the California ambient air quality standards and the national ambient air quality standards. As evaluated under **Impact 3.2.2** below, the Project would not exceed the short-term construction standards or long-term operational standards and in so doing would not violate any air quality standards. Thus, a **less than significant** impact is expected, and the Project would be consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQAP contains air pollutant reduction strategies and demonstrates that the applicable ambient air quality standards can be achieved within the time frames required under federal law. Growth projections from local general plans adopted by cities in the district are used to develop regional growth forecasts that are used to develop future air quality forecasts for the NSVPA 2015 Air Quality Attainment Plan. Development consistent with the growth projections in the City of Orland General Plan is considered to be consistent with the 2015 AQAP. The Project site is currently zoned in the Glenn County General Plan as Service Commercial. The proposed prezoning of the parcels in the City of Orland General Plan (2010) are Highway Commercial (C-H) and Community Commercial (C-2). Therefore, the Project site is currently anticipated for commercial land uses under the Glenn County General Plan as well as the City of Orland General Plan. Thus, the Project is consistent with the regional growth anticipated by the AQAP and thereby consistent with the second criterion.

The Project would not hinder implementation of any NSVPA Air Quality Attainment Plan control measures. **No impact** would occur.

Impact 3.2.2: Criteria Pollutant Analysis

Threshold:	*Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).*

Implementation of the Proposed Project could result in air quality impacts during construction and operations. As previously discussed, the GCAPCD has not established air pollution emission thresholds

under CEQA for the assessment of air quality impacts. As such, the Proposed Project will be compared to the significance threshold established by the SMAQMD presented in **Table 3.2-4** above.

Construction Impacts

Construction associated with the Proposed Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Project area include ozone-precursor pollutants (i.e., ROGs] and NO_X) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the threshold of significance.

Construction results in the temporary generation of emissions resulting from site excavation, building construction, and paving. Motor vehicle exhaust is associated with construction equipment and worker trips. Particulate matter is associated with the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in **Table 3.2-5**.

Table 3.2-5. Construction Related Emissions

Construction Year	Pollutants (maximum pounds per day)		
	NOx	PM_{10}	$PM_{2.5}$
Year 2020	42.47	20.41	11.99
Year 2021	31.38	2.14	1.67
Potentially Significant Impact Threshold	*85*	*80*	*82*
Exceed Threshold?	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to **Appendix D** for Model Data Outputs.
Notes: Building construction, paving, and architectural coating assumed to occur simultaneously.

As show in **Table 3.2-5**, all criteria pollutant emissions would remain below their respective thresholds during Project construction. Therefore, criteria pollutant emissions generated during Project construction would not result in a violation of air quality standards. Therefore, construction emissions would result in a less than significant impact.

Operational Impacts

Implementations of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, Co and SO_2 as well as ozone precursors such as ROG NO_x. Project-generated increases in emissions would be predominately associated with motor vehicle use. Long-term operational emissions attributable to the Proposed Project are summarized in **Table 3.2-6**.

Table 3.2-6. Operational Related Emissions

Source	Pollutants (maximum pounds per day)			
	NO_x	ROG	PM_{10}	$PM_{2.5}$
Summer Emissions	45.73	8.67	9.09	2.57
Winter Emissions	46.44	7.26	9.10	2.58
Potentially Significant Impact Threshold	65	65	80	82
Exceed Threshold?	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to **Appendix D** for Model Data Outputs.
Notes: Building construction, paving, and architectural coating assumed to occur simultaneously.

As shown in **Table 3.2-6**, the Project's emissions would not exceed SMAQMD thresholds for any criteria air pollutants. Therefore, operational emissions would result in a less than significant long-term air quality impact.

The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. This impact is **less than significant**.

Impact 3.2.3: Exposure of Sensitive Receptors

Threshold:	*Would the project expose sensitive receptors to substantial pollutant concentrations?*

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; application of architectural coatings; and other miscellaneous activities. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Accordingly, DPM is the focus of this discussion.

Based on the emission modeling conducted the maximum construction-related emissions of $PM_{2.5}$ exhaust, considered a surrogate for DPM, would be 2.02 pounds per day during 2020 construction

activities and 1.53 during 2021 construction activities (see **Appendix D;** $PM_{2.5}$ is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., $PM_{2.5}$), according to CARB. Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) Furthermore, even during the most intense month of construction, emissions of DPM would be generated from different locations on the Project site, rather than a single location, because different types of construction activities (e.g., demolition, site preparation, building construction) would not occur at the same place at the same time.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-, 30-, or 9-year exposure period; further, such assessments should be limited to the period/duration of activities associated with the Proposed Project. Consequently, an important consideration is the fact that construction of the Proposed Project is not anticipated to last 9 consecutive years, the minimum duration of exposure from which to calculate health risk (Project construction is anticipated to last approximately two years), and that on a day-to-day basis construction activity generally spans eight hours as opposed to throughout the entire day.

Therefore, considering the relatively low mass of DPM emissions that would be generated during even the most intense season of construction, the fact that construction would not last as long as the minimum duration of exposure from which to calculate health risk, and the relatively short duration that construction activities (less than two years) would occur, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics.

Furthermore, a construction-related TAC analysis was completed in March of 2015 for the *City of Orland Pilot Flying J Travel Center and Westside Annexation Area Draft Environmental Impact Report*. The 7.5-acre Pilot Flying J Travel Center is located approximately 130 feet northeast of the Project site. Due to the close proximity, identical climate conditions, and similar construction equipment, the findings are included in this analysis. Per the Pilot Flying J Travel Center and Westside Annexation Area Draft EIR, the EPA's air pollutant dispersion modeling software, AERMOD, was used to calculate concentrations of fugitive dust PM_{10} and exhaust PM_{10} that would be generated at the 7.5-acre Pilot Flying J construction site. The AERMOD dispersion model calculated concentrations for the nearest sensitive receptors in the vicinity of that site. It was concluded that construction-generated TAC emissions at the sensitive receptors in the vicinity would not reach a level beyond the health risk threshold of 50 micrometers per cubic meter over ($\mu g/m^3$). Instead, the maximum 24-hour period concentrations were projected to reach 17.9 $\mu g/m^3$ during construction (City of Orland 2015). The Flying J Travel Center construction site spanned 7.5 acres while the Proposed Project is 4.98 acres. Thus, it can be assumed that since less land would be disturbed during construction of the Sunny Truck Service Center, less air toxics would be generated.

For the reasons discussed above, construction-related TAC impacts would be **less than significant**.

Operational Air Contaminants

Operations of the Proposed Project would involve sources of air toxics. The Project includes a truck wash and oil/tire center which would be utilized by heavy-duty trucks, sources of the air toxic, DPM. CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic.

The Project site is directly adjacent diagonally to the recently constructed Pilot/Flying J commercial center which includes a truck fueling station, an auto fueling station, restaurants and a convenience mini market. The Project applicant anticipates providing truck drivers already traveling to the Pilot/Flying J facility a convenient truck wash and tire service. A Health Risk Assessment, assessing the potential health risk associated with trucks traveling to the Pilot/Flying J, was prepared in 2015. Due to the close proximity of the Project site and recently construction Pilot/Flying J, coupled with the expectation that the Proposed Project would predominately serve truck drivers already traveling to the Pilot/Flying J, the 2015 Pilot/Flying J Health Risk Assessment findings are included in this analysis. Specifically, the Pilot/Flying J was estimated to accommodate 1,662 heavy-duty truck trips daily (City of Orland 2015). According to the Pilot Flying J Travel Center and Westside Annexation Area Draft EIR, the maximum toxic concentrations in the Project site vicinity as a result of 1,662 heavy-duty trucks trips daily would not reach a level beyond the health risk significance threshold (City of Orland 2015). The Proposed Project is anticipating approximately 150 heavy-duty trucks daily. Additionally, it is anticipated that the Project would predominately serve truck drivers already traveling to the Pilot/Flying J facility. Therefore, it can be assumed that DPM concentrations would be less than what was predicted by the Flying J Travel Center and further, would not exacerbate an existing health risk-related impact.

Carbon Monoxide Hot Spot

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the South Coast Air

Quality Management District 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan, SMAQMD 1992) in Los Angeles County can be used to demonstrate the potential for CO exceedances. The South Coast Air Quality Management District (SCAQMD) CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be level of service (LOS) E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

According to the Traffic Impact Analysis prepared for the Project (KD Anderson & Associates 2019), the Project is anticipated to generate 2,736 daily trips on average. Because the Proposed Project would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values.

Therefore, for the reasons discussed above, operational impacts would be **less than significant**.

Impact 3.2.4: Odors

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

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant

concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified as being associated with odors. Therefore, **no impact** would occur.

3.2.4 Mitigation Measures

Less than significant impacts were identified, and no mitigation measures are required.

3.2.5 Residual Impacts After Mitigation

No mitigation was required as a result of the Proposed Project.

3.2.6 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The cumulative setting for air quality includes Glenn County and the NSVAB. The NSVAB is designated as a nonattainment area for state standards of PM_{10} (CARB 2018). Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards. Thus, the setting for this cumulative analysis consists of the NSVAB and associated growth and development anticipated in the air basin.

Cumulative Impacts and Mitigation Measures

Impact 3.2.5: Cumulative Impacts to Air Quality

Threshold:	*Would implementation of the proposed project, along with any foreseeable development in the project vicinity, result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).could result in cumulative impacts to cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features)?*

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project exceeds its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

The standard approach to assessing cumulative impacts is based on the Air Quality Management Plan (AQMP) forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and California Clean Air Acts. As discussed earlier, the Proposed Project would be consistent with the NSVPA 2015 Air Quality Attainment Plan, which is intended to bring the NSVAB into attainment for criteria pollutants. Therefore, individual projects that do not generate operational or construction emissions that exceed the identified daily significance thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual Project-related construction and operational emissions that exceed thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project will not exceed the applicable SMAQMD regional thresholds for construction or operational-source emissions.

Cumulative Mitigation Measures

None required.

3.2.7 References

[CAPCOA] California Air Pollution Control Officers Association.

2013 Health Effects. http://www.capcoa.org/health-effects/.

[CARB] Califronia Air Resources Board.

2000 Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.

2013 Glenn County APCD List of Current Rules. https://ww3.arb.ca.gov/drdb/gle/cur.htm.

2018 State and Federal Area Designation Maps. http://www.arb.ca.gov/desig/adm/adm.htm.

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City of Orland.

2010 General Plan 2008-2028. http://cityoforland.com/_documents/DraftGeneralPlanOct2010.pdf.

2015 *Pilot Flying J Travel Center and Westside Annexation Area Project*. Draft Environemntal Impact Report.

[EPA] United States Environmental Protection Agency.

2002 Health Assessment Document for Diesel Engine Exhaust. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=300055PV.TXT.

KD Anderson & Associates, Inc.

2019 Traffic Impact Analysis for Orland Truck Wash / Commercial

[SCAQMD] South Coast Air Quality Management District

1992 *1992 Federal Attainment Plan for Carbon Monoxide*.

[SMAQMD] Sacramento Metropolitan Air Quality Management District

2016 Thresholds of Significance Table. http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools

1992 Federal Attainment Plan for Carbon Monoxide.

[SVBAPCC] Sacramento Valley Basinwide Air Pollution Control Council

2015 *Northern Sacramento Valley Planning Area: 2015, Triennial Air Quality Attainment Plan.*

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3.3 BIOLOGICAL RESOURCES

This section describes the existing biological resources, including special-status species and sensitive habitat, known to occur and/or have the potential to occur in the Project area. In addition, the section includes a summary of the regulations and programs that provide protective measures to special-status species, an analysis of impacts to biological resources that could result from Project implementation, and a discussion of mitigation measures necessary to reduce impacts to a less than significant level.

The Initial Study completed for the Proposed Project determined that the Project would have a less than significant impact or no impact in the following two impact analysis areas:

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

2. Would the Project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

No comments were received discussing the impact analysis areas shown above by the public and agencies during the Initial Study public review period. As such, these analysis areas are not evaluated in this EIR.

The information contained in this section is based on the Biological Resources Assessment prepared by ECORP Consulting, Inc. in July 2019. This report can be found in **Appendix E.**

3.3.1 Environmental Setting

Site Characteristics and Land Use

The Project site is in a rural area, west of the City of Orland. The ±4.84-acre Project site is bordered by County Road 13 on the north, County Road 14 on the south, County Road H on the east, and is 0.16 mile west of I-5.

The northern section of the Project site is a pasture. The southwest section of the site once contained several buildings and potentially a residential dwelling. However, these structures were removed in 2012-2013 and this area is now ruderal field with remnant foundations. The southeast corner currently contains a rural residential dwelling and several other outbuildings and storage structures.

Biological Setting

Soils

According to the NRCS soil survey for Glenn County, California, two soil units, or types, occur in the Project site (NRCS 2019). The northern section of the site is composed of (CzT) - Cortina very gravelly sandy loam, moderately deep. This soil type is considered hydric and contains 5% unnamed hydric components in fan landforms. The southern section of the site is composed of (Wg) - Wyo loam, deep over gravel. This soil type is not a hydric soil and does not contain hydric soil components.

Vegetation Communities

The Project site is partially developed in a rural setting containing pastures on the north that are now composed primarily of weedy, nonnative grasses and herbaceous species. There are scattered mature trees associated with the developed portion of the site including ornamental pines, Eucalyptus trees (*Eucalyptus* species) and English walnut (*Juglans regia*). There are also a few California walnut trees (*Juglans californica*) at the Project site.

Most of the Project site contains weedy vegetation and species associated with highly disturbed sites. It is dominated by wild oats (*Avena fatua*), prostrate spurge (*Euphorbia maculata*), field mustard (*Brassica rapa*), yellow star thistle (*Centaurea solstitialis*), soft brome (*Bromus hordeaceus*), red brome (*Bromus madritensis* ssp. *rubens*), Bermuda grass (*Cynodon dactylon*), clustered dock (*Rumex conglomeratus*), ripgut brome (*Bromus diandrus*), purple wild radish (*Raphanus sativus*), and Italian Ryegrass (*Festuca perennis*). The hay/pasture contains remnant patches of cultivated barley (*Hordeum* spp). Along the eastern fence there is also California wild grape (*Vitis californica*) and chicory (*Cichorium intybus*). Remnants of historic irrigation practices are present in the northern section of the Project in the form of a constructed drainage ditch. This feature is now idle and no longer holds or transports irrigation water. It is dominated by upland weedy plants such as Italian thistle (*Carduus pycnocephalus*) and prickly lettuce (*Lactuca serriola*).

Wildlife

During the assessment, the following common wildlife species were observed in the Project site: California ground squirrel (*Spermophilus beecheyi*), western fence lizard (*Sceloporus occidentalis*), California scrub jay (*Aphelocoma californica*), western kingbird (*Tyrannus verticalis*), mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), and turkey vulture (*Cathartes aura*).

Potential Waters of the U.S.

Jurisdictional Waters of the state and of the United States provide a variety of functions for plants and wildlife. Wetlands and other water features provide habitat, foraging, cover, and migration and movement corridors for both special-status and common species. In addition to habitat functions, these features provide physical conveyance of surface water flows capable of handling large stormwater events. Large storms can produce extreme flows that cause bank cutting and sedimentation of open waters and streams. Jurisdictional waters can slow these flows and lessen the effects of these large storm events, protecting habitat and other resources.

According to the California Aquatic Resources Inventory database, there are no previously mapped wetland or aquatic features at the Project site (San Francisco Estuary Institute [SFEI] 2017). See **Figure 9. Assessment of Aquatic Resources**.

During the site assessment, one constructed irrigation ditch was found oriented north-south in the Project site. The irrigation ditch is connected via a gate valve to a concrete-lined irrigation ditch located perpendicular and just offsite of the Project site on the north, along County Road 13. The ditch on County Road 13 delivers irrigation water to the surrounding fields. According to aerial photo interpretation, the Project site received water delivery from this irrigation ditch as recently as 2013; however, it appears water delivery has since ceased. The ditch was dry and the gate valve closed at the time of this assessment.

Map Features

- Project Area - 4.84 acres
- Culvert
- Ditch
- Photo Point Locations

CARI dataset does not contain aquatic features in the Project Area.

Note: Project boundary is based on APN boundary and is considered approximate
Sources: Esri World Imagery
Esri Online Transportation Layer

ECORP: N:\2019\2019-045 Orland_Truck Wash and Annexation Area\MAPS\Biological_Resources\OTW_AquaticResourcesAssessment_20190709.mxd (KIT)-kturnquist 7/10/2019

Map Date: 7/10/2019

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 100

Figure 9. Assessment of Aquatic Resources

Sunny Truck Service Center Project

The onsite irrigation ditch currently does not exhibit aquatic or wetland characteristics such as an ordinary high-water mark (OHWM) or signs of inundation or prolonged soil saturation. It lacks hydrophytic vegetation and is dominated by weedy upland vegetation including Italian thistle and prickly lettuce. For these reasons, the onsite irrigation ditch is not likely to be jurisdictional Waters of the U.S. or State. There are no other potential aquatic resources present onsite (ECORP 2019).

Evaluation of Special-Status Species Identified in the Literature Search

The information search and database query did not identify special-status species occurrences within the Project site. However, several special-status species occurrences have been documented within an approximate five-mile radius of the Project site (CDFW 2019). The information search and database query identified records for 28 special-status species in a five-mile radius of the Project site including 13 plants, four invertebrates, two fish, two amphibians, one reptile, five birds, and one mammal. Of these species, only two have potential habitat in the Project site. A list of special-status species potentially affected by the Proposed Project, their general habitat requirements, and an assessment of their potential to occur within the Project site is provided in **Table 3.3-1**. A complete list of special-status species known to exist in the region and the results of the database queries are included in the biological resources assessment included in **Appendix E**.

Table 3.3-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	ESA	CESA/ NPPA	Other			
Swainson's hawk (*Buteo swainsoni*)	-	CT	BCC	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during discing/harvesting, irrigated pastures.	March-August	Potential – Seven documented nest sites within five miles. Potential nesting and foraging habitat present onsite.
Burrowing owl *(Athene cunicularia)*	-	-	BCC, SSC	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g., prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.	February-August	Low potential – One documented nesting occurrence within five miles. However, no sign of this species or potential habitat (e.g. suitable burrows) Observed onsite.

Status Codes:
FESA Federal Endangered Species Act
CESA California Endangered Species Act
BCC U.S. Fish & Wildlife Service (USFWS) Bird of Conservation Concern (USFWS 2008).
CT CESA- or NPPA-listed, Threatened.
SSC CDFW Species of Special Concern.
Source: ECORP 2019

Potentially Occurring Special-status Species

Based on the database query, information search, and site reconnaissance, there is potential for two special-status species to occur in the Project site.

Swainson's hawk (*Buteo swainsoni*) – This raptor species is listed as threatened pursuant to the California Endangered Species Act (ESA). The Swainson's hawk nests in North America (Canada, western United States, and Mexico) and typically winters from South America north to Mexico. A small population has been observed wintering in the Sacramento-San Joaquin River Delta. In California, the nesting season for Swainson's hawk ranges from mid-March to late August. Swainson's hawks nest within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole (*Microtus californicus*), California ground squirrel, ring-necked pheasant (*Phasianus colchicus*), many passerine birds, and grasshoppers (*Melanopulus species*). Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, discing, and irrigating (Estep 1989). The removal of vegetative cover by such farming activities results in more readily available prey items for this species.

Swainson's hawk nests have been documented within five miles of the Project (CDFW 2019a). No active Swainson's hawk nests were found onsite during the site assessment, but the larger trees at the Project site provide potential nesting habitat, and the agricultural fields provide foraging habitat for this species.

Burrowing owl *(Athene cunicularia)* – This species is not listed pursuant to either the California or federal ESAs; however, it is designated as a Bird of Conservation Concern (BCC) by the USFWS and a Species of Special Concern (SSC) by the CDFW. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds (Poulin et al. 2011). This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use manmade structures such as cement culverts or pipes; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement (CDFG 2012). The breeding season typically occurs between February 1 and August 31 (California Burrowing Owl Consortium [CBOC] 1993; CDFG 2012).

There is one documented occurrence of a burrowing owl nest within five miles of the Project (CDFW 2019a) and ground squirrel burrows (potential owl nest sites) are present at the Project site. The assessment did not document any signs of this species during the site assessment and the potential for burrowing owls to occur at the Project site is low; however, the assessment was not determinant-level.

Other Species

While not considered to be special-status species, the vegetation communities onsite support potential nesting habitat for birds protected under the MBTA. These include a wide variety of native, non-game birds and common species found nesting in and near developed areas and human habitations. Common

migratory birds observed at the Project site include western kingbird, mourning dove, house finch, house sparrow, and turkey vulture.

Sensitive Natural Communities

A search of the California Natural Diversity Database (CNDDB) revealed the following sensitive natural communities in the vicinity of the Project site: Valley Needlegrass Grassland, Great Valley Cottonwood Riparian Forest, Great Valley Mixed Riparian Forest, Great Valley Oak Riparian Forest, Great Valley Willow Scrub. However, based on the field reconnaissance, none of these communities are present and sensitive natural communities are not further discussed in this document.

Wildlife Corridors and Movement and Nursery Sites

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to (a) sustain species with specific foraging requirements, (b) preserve a species' distribution potential, and (c) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

The Project site does not appear to support a significant wildlife movement corridor. It is surrounded by active agricultural fields, rural residences, developed areas, and roadways. There are no nearby areas that can support large concentrations of wildlife or provide continuous vegetated cover for wildlife movements. The CDFW identifies Region 2 as Mule Deer Range but does not identify the Project site as a migration corridor, critical range, or critical fawning area for mule deer (CDFW 2019b).

The Project site contains several buildings and structures that may provide potential breeding and nesting habitat for bats. However, the Project does not contain a previously documented nursery site (CDFW 2019a) and none were identified during the field reconnaissance.

Critical Habitat

There is no Critical Habitat for species listed under the federal ESA designated within the Project or within a five-mile radius of the Project (CDFW 2019a, USFWS 2019).

3.3.2 Regulatory Framework

This section identifies environmental review and consultation requirements, as well as permits and approvals that must be obtained from local, state, and federal agencies before implementation of the project.

Federal

Endangered Species Act

The ESA protects plants and animals that are listed as endangered or threatened by USFWS and the National Marine Fisheries Service (NMFS). Section 9 of ESA prohibits, without authorization, the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture,

collect, or attempt to engage in such conduct" [50 CFR 17.3]. For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant under federal jurisdiction and removing, cutting, digging up, damaging, or destroying any listed plant in any other area in knowing violation of state law [16 U.S. Code (USC) 1538].

Under Section 7 of ESA, federal agencies are required to consult with USFWS and/or NMFS if their actions, including permit approvals and funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion (BO), USFWS and NMFS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for the issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

Section 7 Consultation

Section 7 of ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. If direct and/or indirect effects will occur to critical habitat that appreciably diminish the value of critical habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the federal lead agency must prepare a biological assessment (BA) for the purpose of analyzing the potential effects of the Proposed Project on listed species and critical habitat to establish and justify an "effect determination." Often a third-party, non-federal applicant drafts the BA for the lead federal agencies. The USFWS/NMFS reviews the BA; if it concludes that the project may adversely affect a listed species or its habitat, it prepares a BO. The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat.

Critical Habitat

Critical Habitat is defined in Section 3 of ESA as the following:

1. The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and

2. Specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features essential to the conservation of the species (16 USC 1533). Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

1. Space for individual and population growth and for normal behavior
2. Food, water, air, light, minerals, or other nutritional or physiological requirements
3. Cover or shelter
4. Sites for breeding, reproduction, or rearing (or development) of offspring
5. Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species

Migratory Bird Treaty Act

The MBTA implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized under the MBTA, USFWS issues permits to qualified applicants for the following types of activities: Falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of non-game birds in §3800, migratory birds in §3513, and birds of prey in §3503.5 of the California Fish and Game Code.

Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the U.S. Army Corp of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 CFR 328.3 7b]. The United Stated Environmental Protection Agency (USEPA) also has authority over wetlands, including the authority to veto permits issued by USACE under CWA Section 404(c).

Projects involving activities that have no more than minimal individual and cumulative adverse environmental effects may meet the conditions of one of the Nationwide Permits already issued by USACE (Federal Register [FR] 82:1860, January 6, 2017). If impacts on wetlands could be substantial, an individual permit is required. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

State

California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) protects species of fish, wildlife, and plants listed by the State as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the California ESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful projects under permits issued by the CDFW.

Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and the California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. Fully protected species are identified in the California Fish and Game Code §4700 for mammals, §3511 for birds, §5050 for reptiles and amphibians, and §5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing incidental take permits for fully protected species under the California ESA. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare". The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains a number of exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the California ESA, but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, reserving all listings to the California ESA.

California Fish and Game Code Special Protections for Birds

In addition to protections contained within the California ESA and California Fish and Game Code §3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain birds.

Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.

Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.

Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests

Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic nonnative species, or any part of these birds.

Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires individuals or agencies to provide a Notification of Lake or Streambed Alteration to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and wildlife resources. The final proposal mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alternation Agreement.

Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)]. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities.

California Environmental Quality Act

In accordance with CEQA Guidelines § 15380, a species or subspecies not specifically protected under the federal or California ESAs or NPPA may be considered endangered, rare, or threatened for CEQA review purposes if the species meets certain criteria specified in the Guidelines. These criteria include definitions similar to definitions used in ESA, the California ESA, and NPPA. Section 15380 was included in the CEQA Guidelines primarily to address situations in which a project under review may have a significant effect on

a species that has not been listed under ESA, the California ESA, or NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as SSCs by CDFW and plants identified by the California Native Plant Society (CNPS) as rare, threatened, or endangered may meet the CEQA definition of rare or endangered.

Species of Special Concern

SSC are defined by the CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under ESA, the California ESA, or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role;
- The species is listed as federally (but not state) threatened or endangered, or meets the state definition of threatened or endangered but has not formally been listed;
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status;
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status, and
- SSC are typically associated with habitats that are threatened.

Depending on the policy of the lead agency, projects that result in substantial impacts to SSC may be considered significant under CEQA.

U.S. Fish and Wildlife Service Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates USFWS "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA." To meet this requirement, USFWS published a list of BCC (USFWS 2008) for the United States. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS's highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2019), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/or low populations. Plant species meeting one of these criteria are assigned to one of six California Rare Plant Ranks (CRPRs). The rank system was developed in collaboration with government,

academia, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the CNDDB. The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere
- Rare Plant Rank 3 – a review list of plants about which more information is needed
- Rare Plant Rank 4 – a watch list of plants of limited distribution

Additionally, CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 1 through 3, with 1 being the most threatened and 3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (<20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or different protection (CNPS 2019).

Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2, and 3 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 4 and at the discretion of the CEQA lead agency.

California Sensitive Natural Communities

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. The CDFW maintains the *California Natural Community List* (CDFW 2018), which provides a list of vegetation alliances, associations, and special stands as defined in the *Manual of California Vegetation* (Sawyer et al. 2009), along with their respective state and global rarity ranks. Natural communities with a state rarity rank of 1, 2, or 3 are

considered sensitive natural communities. Depending on the policy of the lead agency, impacts to sensitive natural communities may be considered significant under CEQA.

Wildlife Movement/Corridors and Nursery Sites

Depending on the policy of the lead agency, impacts to wildlife movement/corridors or nursery sites may be considered significant under CEQA. For the purposes of this analysis, three resources were considered in the assessment of wildlife movement/corridors: The California Essential Habitat Connectivity Project, CDFW's Biogeographic Information and Observation System (BIOS) database on mule deer migration corridors, and site reconnaissance.

As part of the California Essential Habitat Connectivity Project, the CDFW and Caltrans maintain data on Essential Habitat Connectivity areas. This data is available in the CNDDB. The goal of this project is to map large intact habitat or natural landscapes and potential linkages that could provide corridors for wildlife.

CDFW's BIOS database includes information on CDFW Mule Deer Range, which identifies winter range, migration corridors, critical range, or critical fawning areas for mule deer.

For urban settings such as the Project, riparian vegetated stream corridors can serve as wildlife movement corridors and their occurrence is documented during the field reconnaissance.

For the purposes of this analysis, nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries, bat maternity roosts, and mule deer critical fawning areas. This data is available through CDFW's BIOS database or as or as occurrence records in the CNDDB and is supplemented with the results of the field reconnaissance.

California Environmental Quality Act Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (rare, threatened, or endangered) species are considered significant. Assessment of "impact significance" to populations of non-listed species (e.g., SSC) usually considers the proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Specifically, §15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant under CEQA because although the impacts

would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

Local

City of Orland General Plan 2008-2028

The City's General Pan addresses Orland's unique biological resources and sets forth a number of policies to preserve these resources. The following goal and corresponding policies apply to the Proposed Project:

Goal 4.3: *Minimize impacts to wildlife and wildlife habitat as new development occurs within the Orland planning area.*

Policy 4.3.A: Where appropriate, apply mitigation measures to development projects to minimize impacts to biological resources during all stages of development including grading, construction and occupancy.

Policy 4.3.B: Consider opportunities for habitat preservation, enhancement, and creation in conjunction with public facility projects, particularly storm drainage facilities.

Policy 4.3.C: Applicants for new development proposals shall be responsible for costs related to determining the potential for occurrence of protected plant and wildlife species within the proposed project area. City staff shall make determination of the degree of field investigation required.

Policy 4.3.D: If the presence of protected species is determined to be likely, the project applicant shall be responsible for all costs associated with investigating species presence and preparation of any required mitigation plans.

3.3.3 Environmental Impacts

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, a biological resources impact is considered significant if project implementation would result in any of the following:

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

2. Would the project 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 US Fish and Wildlife Service?

3. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

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

Methodology

The impact assessment below discusses impacts from implementation of Project activities. The impact assessment was based on the Project description (**Section 2.0**), and the Biological Resources Assessment produced by ECORP Consulting (2019) included in **Appendix E**. ECORP used the following method to assess the potential for biological impact as a result of Project implementation.

Special-Status Species

For the purposes of this assessment, special-status species are defined as plants or animals that meet the following criteria:

- Are listed, proposed for listing, or candidates for listing as threatened or endangered under the federal ESA;
- Are listed or candidates for listing as threatened or endangered under the California ESA;
- Meet the definitions of endangered or rare under Section 15380 of the CEQA Guidelines;
- Are identified as a species of special concern by the CDFW;
- Are birds identified as birds of conservation concern by the (USFWS 2008);
- Are plants considered by the CNPS to be "rare, threatened, or endangered in California" (CRPR 1 and 2);
- Are plants listed by CNPS as species about which more information is needed to determine their status (CRPR 3), and plants of limited distribution (CRPR 4);
- Are plants listed as rare under the California NPPA (California Fish and Game Code, § 1900 et seq.); or
- Are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

Literature Review and Information Search

The following resources were reviewed to determine the special-status species that had been previously documented within or in the vicinity of the Project Study Area:

- CNDDB occurrences for the nine USGS topographic quadrangles centered on the "Orland, California" 7.5-minute USGS topographic quadrangle (CDFW 2019a).
- Federal Endangered and Threatened Species list for the Project site from the USFWS via the Information for Planning and Consultation (IPaC) (USFWS 2019).
- Inventory of Rare and Endangered Plants of California for the nine USGS topographic quadrangles centered on the "Orland, California" 7.5-minute USGS topographic quadrangle maintained by the CNPS (CNPS 2019).
- BIOS. Mule Deer Range (CDFW 2019b).

Field Surveys Conducted

Based on species occurrence information, the expert opinions of ECORP biologists, and existing conditions observed onsite during a site reconnaissance on June 20, 2019, a list was generated of special-status species with potential to occur at the Project site. The potential of species to occur onsite was assessed based on the following:

Present - Species is known to occur within the Project site based on documented occurrences within the CNDDB or other literature.

Potential to Occur - Habitat (including soils and elevation requirements) for the species occurs within the Project site.

Low Potential to Occur - Marginal or limited amounts of habitat occurs, and/or the species is not known to occur within the vicinity of the Project site based on CNDDB records and other available literature.

Absent - No suitable habitat (including soils and elevation requirements) and/or the species is not known to occur within the vicinity of the Project site based on CNDDB records and other literature.

Project Impact Analysis

Impact 3.3.1: Potential for Impacts to Candidate, Sensitive, or Special-Status Species

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

Special-Status Plants

Five special-status plant species were identified as having the potential to occur within five miles of the Project based on the literature review. However, upon further analysis, none were determined to have potential to occur within the Project site due to the absence of suitable habitat.

Invertebrates

Two special-status invertebrate species, vernal pool tadpole (*Lepidurus packardi*) and vernal pool fairy shrimp (*Branchinecta lynchi),* were documented within five miles of the Project; however, the Project site lacks the vernal pools or seasonal wetlands required by these species. The crotch bumble bee (*Bombus crotchii*) is fully protected under the California ESA as a candidate endangered species. The species has been documented in the Orland area, but due to the scarcity of nonnative vegetation and lack of flowering plants, there is no potential for the species to occur on the Project site. Thus, no avoidance or mitigation measures are required.

Fish

There were no potentially occurring special-status fish within the Project site. No avoidance or mitigation measures are required.

Amphibians

There were no potentially occurring special-status amphibians within the Project site. No avoidance or mitigation measures are required.

Reptiles

There were no potentially occurring special-status reptiles within the Project site and no suitable habitat exists within five miles of the Project site. No avoidance or mitigation measures are required.

Birds

Two special-status bird species were identified as potentially occurring in the Project. The Swainson's Hawk, a species listed as Threatened under the California ESA and a USFWS BCC, has potential to occur within the Project site. There are several documented nest sites within five miles of the Project site and there is potential foraging and nesting habitat within the Project Area.

The burrowing owl *(Athene cunicularia*), a bird listed as a BCC and a CDFW SSC, has low potential to occur within the Project site. There is one documented nest within five miles of the Project site, but the biological survey did not reveal signs of the species on site. The potential for burrowing owls to occur on the Project site is low, but the assessment performed was not determinant-level. Thus, the potential for the species to be impacted by the Project remains and requires mitigation to prevent potential significant effects.

Mitigation measures **BIO-1** and **BIO-2** has been included to reduce the potential impacts to special-status bird species to a less than significant level.

MBTA Protected Birds

While the vegetation communities themselves are not considered special-status, the vegetation communities onsite support potential nesting habitat for birds protected under the MBTA. These include a wide variety of native, non-game birds and common species found nesting in and near developed areas and human habitations. Common migratory birds observed at the Project site include western kingbird,

mourning dove, house finch, house sparrow, and turkey vulture. The Swainson's Hawk is a MBTA species that is also a California ESA-Threatened species with potential to occur on the Project site.

Therefore, mitigation measure **BIO-1** has been included to reduce the potential impact to MBTA-protected birds to a less than significant level.

Special-Status Mammals

The American badger *(Taxidea taxus)* was documented within five miles of the Project. However, no signs of activity for this species (individuals, burrows, scat or droppings, prey remains) was observed during the site assessment. Due to the lack of special-status mammal species observed on site, no avoidance or mitigation measures are required.

Impact 3.3.2: Potential for Impacts to Sensitive Biological Communities, Including Riparian Habitat and Jurisdictional Wetlands

Threshold:	*Would the project 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 US Fish and Wildlife Service?*
Threshold:	*Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under the MSHCP, CEQA, California Fish and Game Code Section 1600, and CWA Section 404.

As stated previously, a search of the CNDDB revealed the following sensitive natural communities in the vicinity of the Project site: Valley Needlegrass Grassland, Great Valley Cottonwood Riparian Forest, Great Valley Mixed Riparian Forest, Great Valley Valley Oak Riparian Forest, Great Valley Willow Scrub. However, based on the field reconnaissance survey (ECORP 2019), none of these communities are present within the Project Area. No sensitive communities in the vicinity would be impacted by the Project.

Further, the biological resources assessment revealed that there are no natural wetlands or Waters of the U.S. located in the Project site. The existing irrigation ditch in the pasture appears to have been abandoned for some years and does not display wetland indicators or an OHWM. The biological resources assessment identified no federally protected wetlands at or directly adjacent to the Project site (ECORP 2019). Thus, the Project would not impact wetland habitat.

As such, the Proposed Project would have **no impact** to sensitive biological communities, including riparian habitat and jurisdictional wetlands.

Impact 3.3.3: Potential for Impacts to the Movement of Native Resident or Migratory Fish or Wildlife Species or Within Established Migratory Corridor

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

The lands to the north, east, south, and west are mostly developed. A literature review and field reconnaissance survey revealed that there are no suitable nearby areas to support wildlife movement (ECORP 2019). Wildlife use and wildlife movements through the Project are expected to be minimal due to the developed nature of the lands surrounding the Project and the lack of available continuous vegetated cover. Furthermore, CDFW's BIOS database (the CDFW Mule Deer Range, Region 2) does not identify the Project site as a migration corridor, critical range, or critical fawning area (CDFW 2019b). No creeks streams or river exist on the Project site. Thus, interference with migratory fish or wildlife movement will not occur, and there would be no impact to wildlife migration.

However, the buildings currently on the Project site that are to be demolished prior to commencement of Project construction may serve as bat maternity sites as well. Consequently, mitigation measure **BIO-3** is required to reduce potential impacts to special-status mammals to a less than significant level.

3.3.4 Mitigation Measures

BIO-1 **Burrowing Owl Habitat Assessment.** There is potential for burrowing owls to occur at the Project site and the burrows, culverts, and other structures provide potential habitat. Prior to commencement of construction activities, a habitat assessment pursuant to CDFW protocol is shall be performed by a qualified biologist to determine suitability of the Project site to provide burrowing owl habitat. If the habitat assessment affirms the presence of burrowing owl habitat, a formal burrowing owl survey shall be performed in accordance with CDFW guidance (CDFG 2012). If the formal burrowing owl survey affirms the presence of burrowing owls, the following mitigation shall be incorporated into Project construction activities:

- The survey should identify all burrowing owl nests within 150 meters of the Project site (where accessible).
- If active nests are found, a no-disturbance buffer around the nest should be established. The buffer distance will be established by a biologist in consultation with CDFW or the CEQA lead agency.
- The buffer should be maintained until the fledglings are capable of flight and become independent of the nest. This is to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary.

Timing/Implementation: *Prior to the initiation of construction activities*

Enforcement/Monitoring: *City of Orland Planning Department and the Project construction lead.*

BIO-2 **Preconstruction Nesting Bird Survey.** There is potential for Swainson's hawks and birds protected under the MBTA to nest in the Project site. To ensure that protected nesting birds and any active nests are not harmed or disturbed, a preconstruction survey shall be conducted by a qualified biologist prior to construction as follows:

- If construction will occur during the avian breeding season (March - September) a qualified biologist shall conduct a focused survey for nesting birds, including Swainson's hawk and burrowing owl, within 30 days prior to the beginning of construction.
- The survey shall identify all bird nests including active raptor nests within the Project site, as well as Swainson's hawks/nests within accessible areas within 1,000 feet of the Project site, and burrowing owl nests (if warranted) within 500 feet of the Project site, where accessible.
- If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a biologist in consultation with CDFW or the CEQA lead agency.
- The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist.
- Once the young are independent of the nest, no further measures are necessary. Preconstruction nesting surveys are not required for construction activity outside the nesting season.

Timing/Implementation: *Prior to the initiation of construction activities*

Enforcement/Monitoring: *City of Orland Planning Department and Project construction lead.*

BIO-3 **Bat Survey.** Prior to demolition of manmade structures within the Project site, a qualified biologist shall conduct a survey to determine if bats are present. If evidence of bat occurrence is found, the qualified biologist shall determine if the location where bats have been found is being utilized as a bat maternity site and provide mitigation measures acceptable to the City and CDFW. If bats are not found during the building survey, no further measures are necessary.

Timing/Implementation: *Prior to the initiation of demolition activities*

Enforcement/Monitoring: *City of Orland Planning Department and Project construction lead.*

3.3.5 Residual Impacts After Mitigation

No known sensitive species or habitats were found on the Project site. However, there is a potential for impacts to MBTA-protected birds as a result of Project development. Implementation of mitigation

measure **BIO-1** would ensure that any active nests for the MBTA protected birds are protected. The Swainson's hawk and burrowing owl are special-status species that may utilize the Project site as nesting habitat. **BIO-1** and **BIO-2** shall be implemented to reduce this impact to a less than significant level with no residual impacts. **BIO-3** shall be implemented to reduce potential impacts to nesting bats that may inhabit the buildings on site to a less than significant level. Therefore, with implementation of mitigation measures **BIO-1**, **BIO-2**, and **BIO-3** residual impacts would be less than significant.

3.3.6 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The cumulative setting includes the Project site as well as the remaining undeveloped areas surrounding the Project site where the impacts of urbanization and threats to biological diversity and sensitive biological resources are considered most serious. Cumulative impacts on biological resources are primarily the result of the area's urbanization, habitat fragmentation, water pollution, and conversion of natural land to residential, commercial, and recreational use.

Cumulative Impacts and Mitigation Measures

Impact 3.3.7: Cumulative Impacts to Biological Resources

Threshold:	*Would implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the immediate area of the Proposed Project, will result in the conversion of habitat and impact biological resources.*

Implementation of mitigation measure **BIO-1** will ensure that impacts to MBTA-protected birds are avoided. Mitigation measures **BIO-1** and **BIO-2,** in conjunction will mitigate potential impacts to special-status nesting birds. **BIO-3** will reduce potential impacts to potential bat nesting sites to be less than significant. Though the development of the Proposed Project will act as a continuation of the existing commercialization and urbanization of the area. As discussed previously, the Project itself would cause few to no impacts to special-status species, riparian habitat or other sensitive natural communities, wetlands, or migratory wildlife as the site has been previously denuded of these biological resources. Implementation of mitigation measure **BIO-1, BIO-2,** and **BIO-3** would reduce the only potential impacts to biological resources to a less than significant level. These factors have effectively reduced the Project's contribution to cumulative impacts. As a result, the Proposed Project would have a **less than cumulatively considerable** impact.

Cumulative Mitigation Measures

No significant cumulative impacts were identified. No cumulative mitigation measures are required.

3.3.7 References

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SECTION 3.4 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section considers and evaluates the potential impacts of the Proposed Project on historical, cultural, and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, or religious reasons. This section is based on the Cultural Resources Inventory Report prepared by ECORP Consulting, Inc. (2019). The information provided below is an abridged version of this report and is provided here to afford a brief context of the potential cultural resources in the Project area.

Due to the sensitive nature of cultural resources, the cultural resources report is not included in the EIR appendices; however, all pertinent information necessary to provide substantial evidence for impact determinations is included in this section. A redacted version of the cultural resources report that does not include site records may be obtained by contacting the City.

While much of this section includes Native American prehistoric and historic information, **Section 3.9 Tribal Cultural Resources** of this Draft EIR includes further analysis of the ethnography of the Project area. Please refer to this section for Tribal Cultural Resources.

3.4.1 Environmental Setting

Regional Prehistory

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still alive today. Bones of extinct species have been found but cannot definitely be associated with human artifacts. Although small animal bones and plant grinding tools are rarely found within archaeological sites of this period, small game and floral foods were probably exploited on a limited basis. A lack of deep cultural deposits from this period suggests that groups included only small numbers of individuals who did not often stay in one place for extended periods.

Around 8,000 BP, there was a shift in focus from hunting towards a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period, which extended until around 5,000 years BP, is sometimes referred to as the Millingstone Horizon. Projectile points are found in archaeological sites from this period, but they are far fewer in number than from sites dating to before 8,000 BP. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period.

In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized, and bone tools were more

common. During this period, new peoples from the Great Basin began entering southern California. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. During this period, known as the Late Horizon, population densities were higher than before and settlement became concentrated in villages and communities along the coast and interior valleys. Regional subcultures also started to develop, each with its own geographical territory and language or dialect. These were most likely the basis for the groups encountered by the first Europeans during the eighteenth century. Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction. The introduction of the bow and arrow into the region sometime around 2,000 BP is indicated by the presence of small projectile points (ECORP 2019).

Local Prehistory

This section provides a regional overview with contextual elements drawn from California's Central Valley Region and the northern Sierra Nevada foothill zone. There has been more extensive research and study of Central Valley prehistory than the prehistory of the northern Sierra Nevada foothill transition zone, but a fair amount of cultural overlap exists within these regions.

California's Great Central Valley has long held the attention of archaeologists and was a focus of early research in California. Archaeological work during the 1920s and 1930s led to the cultural chronology for central California. This chronology was based on the results of excavations conducted in the lower Sacramento River Valley. This chronology identified three archaeological cultures, named Early, Transitional, and Late. The chronology was redefined in 2007 and divided into three broad periods: The Paleo-Indian Period (11,550 to 8550 cal BC); the three-staged Archaic period, consisting of the Lower Archaic (8550 to 5550 cal BC), Middle Archaic (5550 to 550 cal BC), and Upper Archaic (550 cal BC to cal AD 1100); and the Emergent Period (cal. AD 1100 to Historic). The three divisions of the Archaic Period correspond to climate changes. This is the most recently developed sequence and is now commonly used to interpret Central California prehistory (ECORP 2019).

Paleo-Indian Period

This period began when the first people began to inhabit what is now known as the California culture area. It was commonly believed these first people subsided on big game and minimally processed foods, (i.e., hunters and gatherers), presumably with no trade networks. More recent research indicates these people may have been more sedentary, relied on some processed foods, and traded (ECORP 2019). Populations likely consisted of small groups traveling frequently to exploit plant and animal resources.

Archaic Period

This period was characterized by an increase in plant exploitation for subsistence, more elaborate burial accoutrements, and increase in trade network complexity (ECORP 2019). The three divisions, Lower, Middle and Upper Archaic, correspond to pre-contact climate change are and characterized by the following aspects:

Lower Archaic Period—this period is characterized by cycles of widespread floodplain and alluvial fan deposition. Artifact assemblages from this period include chipped-stone crescents and early wide-stemmed points, marine shell beads, eastern Nevada obsidian, and obsidian from the north Coast Ranges. These types of artifacts found on sites dating to this period indicate trade was occurring in multiple directions. A variety of plant and animal species were also utilized, including acorns, wild cucumber, and manzanita berries.

Middle Archaic Period—this period is characterized by a drier climate period. Rosenthal et al. (2007:153) identified two distinct settlement/subsistence patterns in this period: the Foothill Tradition and the Valley Tradition. Functional artifact assemblages consisting primarily of locally sourced flaked-stone and groundstone cobbles characterize the foothills tradition, while the Valley Tradition was generally characterized by diverse subsistence practices and extended periods of sedentism.

Upper Archaic Period—this period is characterized by abrupt change to wetter and cooler environmental climate conditions. Much greater cultural diversity is evident from this period. More specialized artifacts, such as bone tools, ceremonial blades, polished and groundstone plummets, saucer, and saddle *Olivella* shell beads, *Haliotis* shell ornaments, and a variety of groundstone implements are characteristic of this period.

Emergent Period

This period is most notably marked by the introduction of the bow and arrow, the emergence of social stratification linked to wealth, and more expansive trade networks signified by the presence of clam disk beads that were used as currency. The Augustine pattern (the distinct cultural pattern of the Emergent Period) is characterized by the appearance of small projectile points (largely obsidian), rimmed display mortars, flanged steatite pipes, flanged pestles, and chevron-designed bird-bone tubes. Large mammals and small seeded resources appear to have made up a larger part of the diet during this period (ECORP 2019).

Ethnography

Prior to the arrival of Euro-Americans in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. California was further subdivided into four subculture areas: Northwestern, Northeastern, Southern, and Central.

Ethnographically, the Project area is the tribal territory of the Wintu and Nomlaki, one of seven linguistic divisions of the Penutian stock. Nomlaki territory encompassed portions of present-day Tehama and Glenn counties. The territory is bounded in the north by Cottonwood Creek and occupied the foothill land extending from the Coast Range in western Glenn and Tehama counties. There are two distinct Nomlaki Indian groups: Hill Nomlaki and River Nomlaki. The Wintuan language is in the Penutian Language family and is part of the Wintuan language group that includes the Wintu, the Nomlaki, and the Patwin Indians. The Nomlaki hunted deer, grizzly bears, fish, quails, rabbits, rats, squirrels and birds. family units would collect acorns, roots, wild seeds, and fruit (ECORP 2019).

While much of this section includes Native American prehistoric and historic information, **Section 3.9 Tribal Cultural Resources** of this Draft EIR includes further analysis of the ethnography of the Project area. Please refer to **Section 3.9** for Tribal Cultural Resources.

Regional History

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port.

Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, presidios (forts), and pueblos (towns) were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego de Alcalá in 1769 and ending with the Mission San Francisco Solano in Sonoma established in 1823. The Spanish took little interest in the area and did not establish any missions or settlements in the Central Valley.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California with its capital at Monterey. In 1827, American trapper Jedediah Smith traveled along the Sacramento River and into the San Joaquin Valley to meet other trappers of his company who were camped there, but no permanent settlements were established by the fur trappers.

The Mexican government closed the missions in the 1830s and former mission lands, as well as previously unoccupied areas, were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or "ranchos". During the Mexican period there were small towns at San Francisco (then known as Yerba Buena) and Monterey. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

John Sutter, a European immigrant, built a fort at the confluence of the Sacramento and American Rivers in 1839 and petitioned the Mexican governor of Alta California for a land grant, which he received in 1841. Sutter built a flour mill and grew wheat near the fort. Gold was discovered in the flume of Sutter's lumber mill at Coloma on the South Fork of the American River in January 1848. The discovery of gold initiated the 1849 California Gold Rush, which brought thousands of miners and settlers to the Sierra foothills east and southeast of Sacramento.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but

usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General's office. Land outside the land grants became federal public land which was surveyed into sections, quarter-sections, and quarter-quarter sections. The federal public land could be purchased at a low fixed price per acre or could be obtained through homesteading (after 1862) (ECORP 2019) .

Project Area History

The Project area is located in the northeastern portion of Glenn County. The County was organized in 1891 and is named after Dr. Hugh James Glenn. Dr. Hugh James Glenn was a businessman, politician, and farmer who was born in Virginia in 1824. Glenn began raising stock on Stony Creek beginning in 1851 and permanently settled with his family in what became Glenn County in 1853. One mile north of Orland on Hambright Creek was the Granville Perry Swift adobe house. Swift was a pioneer settler who crossed the plains in 1843. Swift's adobe, built in 1847, was located at the confluence of Hambright and Stony creeks and was the headquarters for cattle operations as far south as Woodland. The site of the Swift Adobe is recognized as California Historical Landmark (CHL) #345 and is the first known structure built in Glenn County. Swift made a fortune during the Gold Rush by placer mining along the Feather River and then relocated to Sonoma County in 1854.

The City of Orland was founded in in 1878 as a supply and shipping center for grain. The Northern Railway Company, a subsidiary of the Central Pacific Railroad, completed its route from Oakland to Tehama via Willows and Orland in 1882. The city was named after one of the first settler's home town in England. The town site for Orland was surveyed in 1878, followed by the sale of town lots. Orland College was opened in the 1880s but was closed in 1890 when the Northern Branch State Normal School opened in Chico (now California State University, Chico).

After the passage of the Wright Act in 1887, which authorized the formation of local irrigation districts, the Stony Creek Irrigation Company was formed, and a few miles of canals were dug to bring water from Stony Creek to provide irrigation for 150 acres of land south of the creek near Orland. The Lemon Home Water Company provided water to land north of the creek. These two companies built 15 miles of ditches and irrigated almost 500 acres of land around Orland. However, the water provided by these companies was insufficient and in the late nineteenth century the Orland area was mostly used for wheat farming and ranching on large tracts owned by a few individuals.

After the formation of the U.S. Reclamation Service in 1902, Orland farmers began to ask the Reclamation Service to initiate an irrigation project for the Orland area. In February 1906, local farmers formed the Orland Water Users' Association and petitioned the Secretary of the Interior to complete surveys to find a suitable location for a reservoir. The Orland Project was authorized by the Reclamation Service in 1907 and the East Park Dam was completed in 1910. The East Park Dam and Reservoir were located 33 miles southwest of Orland on upper Stony Creek in Colusa County. The reservoir provided a stable supply of water for irrigation of farmland around Orland. Two canal systems provided water to Orland area farms. The North Side Canal provided water for land on the north side of Stony Creek while the South Side Canal provided water for land on the south side of Stony Creek. Small diversion dams near Black Butte diverted water from Stony Creek into the canals. The South Side Canal, completed in 1916, travels 9.6 miles along Stony Creek southeast to Orland. The system delivered water directly to every 40-acre parcel of farmland

(totaling over 8,000 acres) through 139 miles of canals and laterals and approximately 2,000 concrete control structures of various kinds.

After 1910, when irrigation water for farming became available, greatly increasing the number of farms in the area, wooden buildings in Orland were replaced with reinforced concrete structures and over 100 new homes were built (ECORP 2019). In 1910, the population of Orland was 600 and by 1912 the population had reached 2,000.

The irrigation system greatly increased the value of the land it supplied. Prior to the completion of the Orland Project, the value of the land around Orland totaled $605,000. In 1921 the land value had risen to $6.1 million. This led to a significant economic growth for the town of Orland which served as a supply center for the surrounding agricultural area. During the 1920s Orland farmers suffered from a series of drought years which led to the depletion of the East Park Reservoir in 1924. As a result, Stony Gorge Dam and Reservoir were constructed on Stony Creek below East Park Reservoir by the U.S. Bureau of Reclamation (USBR) at the request of the Orland Water Users' Association. In the decades that followed the Orland Project fell into disrepair due to the lack of funding for maintenance during the Great Depression and World War II. However, in 1951 a three-year rehabilitation project was completed by USBR which restored the lining of the canal system.

An additional storage facility closer to Orland, the Black Butte Dam and Reservoir, was completed in 1963 by the Corps of Engineers. The Corps operates and maintains the reservoir and the diversion dam that delivers water into the South Side Canal.

Prior to the completion of the irrigation project, alfalfa was the primary crop in the area around Orland. The consistent supply of water from the Orland Project also allowed for cultivation of tree crops. In 1923 the region was home to 1,100 acres of almond trees. The 1930s saw the peak production for citrus in the region with 900 acres dedicated to the cultivation of oranges. The construction of an olive-oil processing plant in 1939 was a response to the increasing acreage dedicated to olive production. In 1991 over 1,000 acres were dedicated to olives, with nearly all of them being grown for table consumption. The Orland Project canal system still supplies the region with irrigation water (ECORP 2019).

Known Cultural Resources in the Project Area

Two previous cultural resource investigations have been conducted within 0.5 mile of the Project Area, covering approximately one percent of the total area surrounding the property within the record search radius. These studies failed to reveal the presence of historic-period or pre-contact resources. The previous studies were conducted between 2000 and 2002 and vary in size from 2.72 acres to several linear blocks.

The results of the records search indicate that none of the Project area has been previously surveyed for cultural resources and, therefore, a pedestrian survey of the area of potential effects (APE) was warranted under current standards. The records search also determined that one previously recorded historic-period cultural resource is located within 0.5 mile of the Project area.

The Office of Historic Preservation's (OHP) Directory of Properties, Historic Property Data File for Glenn County (dated April 5, 2012) did not include any resources within 0.5 mile of the Project area (OHP 2012).

The National Register Information System (NPS 2019) failed to reveal any significant properties within the Project Area. There are only two significant properties listed for Glenn County and the closest significant property listed is the Gianella Bridge (ID #8224614), located 11 miles east of the Project area near Hamilton City, California.

There are only two CHLs listed in Glenn County (OHP 2019). The nearest CHL is #345 – the Granville P. Swift Adobe, located approximately three miles northwest of the Project Area. Granville P. Swift built the first house in Glenn County, an adobe constructed of clay that served as the center of a large cattle ranch with Native American ranch hands (OHP 2019).

Historic Spots in California (Kyle 2002) mentions that Orland developed as a railroad shipping point for grain. Kyle also notes the Granville P. Swift adobe and mentions that a regional irrigation system was developed around Orland and that it was the pilot project for the extensive Central Valley Irrigation Project.

Historic General Land Office (GLO) land patent records from the BLM's patent information database (BLM 2019) revealed that the Central Pacific Railroad received a patent for the Project Area land on March 17, 1875. The federal government granted public land to the railroads, which the railroad could then sell to finance railroad construction. The Project Area land was part of almost 331,000 acres in California granted to the Central Pacific Railroad, which later became part of the Southern Pacific Railroad.

A RealQuest online property search for APNs 045-170-018-000, 045-170-019-000, 045-170-020-000, 045-170-021-000, and 045-170-024-000 revealed the property consists of 1.19 acres of vacant residential land, 0.95 acres of vacant residential land, 0.93 acres of commercial land with a 1990 structure, 0.99 acres of residential land with a 1920s structure, and 0.89 acres of vacant residential land, respectively. No other property history information was on record with RealQuest.

The Caltrans Bridge Local and State Inventories (Caltrans 2018a, 2018b) did not list any historic bridges within the Project Area; however, two historic bridges are located within 0.5 mile of the Project Area: Bridge #11 0077 was constructed in 1966 and carries traffic over I-5 at State Route (SR)-32/Newville Road approximately 0.19 mile northeast of the Project Area. Bridge #11C0205 was constructed in 1940 and widened in 1960 and carries traffic over the Stony Creek Irrigation Canal at SR-32/Newville Road approximately 0.46 mile northwest of the Project Area.

The Project area falls within the ethnographic territory of the Nomlaki (ECORP 2019). The *Handbook of North American Indians, Volume 8*, lists the closest Native American Village as *Sômpôn*. The village is located approximately nine miles northwest of the Project area, near Grindstone Creek and present-day Black Butte Lake.

3.4.2 Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) requires that the federal government list significant historic resources on the National Register of Historic Places (NRHP), which is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service (NPS) and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a historic district can also be included in the NRHP.[1] The criteria for listing in the NRHP include resources that:

a) are associated with events that have made a significant contribution to the broad patterns of history;
b) are associated with the lives of persons significant in our past;
c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) have yielded or may likely yield information important in prehistory or history.

State

California Register of Historical Resources

The State Historical Resources Commission designed the California Register of Historic Resources (CRHR) for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The CRHR is the authoritative guide to the state's significant historical and archaeological resources. This program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and affords certain protections under CEQA.

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both historical resources and unique archaeological resources. Pursuant to PRC § 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect

[1] A [historic] district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development (NPS 1983).

on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

"Historical resource" is a term with a defined statutory meaning (PRC § 21084.1; determining significant impacts to historical and archaeological resources is described in CEQA Guidelines Section 15064.5[a], [b]). Under CEQA Guidelines Section 15064.5(a), historical resources include the following:

A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC § 5024.1).

A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (PRC Section 5024.1), including the following:

a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

b) Is associated with the lives of persons important in our past;

c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d) Has yielded, or may be likely to yield, information important in prehistory or history.

The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC § 5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC § 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC §§ 5020.1(j) or 5024.1.

Historic resources are usually 45 years old or older and must meet at least one of the criteria for listing in the CRHR, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC § 5024.1 and California Code of Regulations

(CCR), Title 14, § 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

For historic structures, CEQA Guidelines § 15064.5(b)(3) indicates that a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995) is considered as mitigating impacts to a less than significant level.

As noted above, CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. PRC § 21083.2(g) states:

> "Unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> - Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> - Has a special and particular quality such as being the oldest of its type or the best available example of its type.
> - Is directly associated with a scientifically recognized important prehistoric or historic event or person."

Treatment options under PRC § 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource).

Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered, as follows:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

CEQA Guidelines Section 15064.5(e) requires that excavation activities stop whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to § 15064.5(f), these provisions should include "an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

Paleontological resources are classified as nonrenewable scientific resources. PRC § 5097.5 et seq. makes it a misdemeanor for anyone to knowingly disturb any archaeological, paleontological, or historical features situated on public lands. No state or local agencies have specific jurisdiction over paleontological resources. No state or local agency requires a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earth-moving on state or private land on a project site.

Local

City of Orland General Plan 2008-2028

The City of Orland General Plan emphasizes the importance of historic and cultural resource preservation to the City of Orland. The following policy relates to historic preservation:

Policy 1.1.B: Encourage the preservation and restoration of significant historic structures.

3.4.3 Environmental Impacts

Thresholds of Significance

Following PRC §§ 21083.2 and 21084.1, and § 15064.5 and Appendix G of the CEQA Guidelines, cultural resource and paleontological impacts are considered to be significant if the project would result in a positive response to any of the following questions:

1. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

2. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

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

4. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

State CEQA Guidelines Section 15064.5 defines *substantial adverse change* as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

CEQA Guidelines Section 15064.5(b)(2) defines *materially impaired* for purposes of the definition of substantial adverse change as follows:

> The significance of an historical resource is materially impaired when a project:
>
> (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
>
> (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
>
> (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

Identify potential historical resources and unique archaeological resources;

Evaluate the eligibility of historical resources; and

Evaluate the effects of the project on eligible historical resources.

Methodology

Records Search

A records search for the Project area was completed at the Northeastern Information Center (NEIC) of the California Historical Resources Information System (CHRIS) at California State University, Chico, on March

14, 2019 (NEIC Search #W19-44). The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the proposed Project Area, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

In addition to the official records and maps for archaeological sites and surveys in Glenn County, the following historic references were also reviewed: Historic Property Data File for Glenn County (OHP 2012); *The National Register Information System websit*e (NPS 2019); *Office of Historic Preservation, California Historical Landmarks* website (OHP 2019); *California Historical Landmarks* (OHP 1996 and updates); *California Points of Historical Interest* (OHP 1992 and updates); *Directory of Properties in the Historical Resources Inventory* (1999); *Caltrans Local Bridge Survey* (Caltrans 2018a); *Caltrans State Bridge Survey* (Caltrans 2018b); and *Historic Spots in California* (Kyle 2002).

Other references examined include a RealQuest Property Search and historic GLO land patent records (BLM 2019). Historic maps reviewed include:

1855 BLM GLO Plat map for Township 22 North Range 3 West

1914 USGS Orland, California topographic quadrangle (1:31,680)

1951 USGS Orland, California topographic quadrangle (7.5-minute scale)

1951 photo-revised 1969 USGS Orland, California topographic quadrangle (7.5-minute scale)

1951 photo-revised 1978 USGS Orland, California topographic quadrangle (7.5-minute scale)

Historic aerial photos taken in 1947, 1969 and 1998 to present were also reviewed for any indications of property usage and built environment.

ECORP mailed letters to the Orland Historical and Cultural Society on March 7, 2019 to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area

There are only two CHLs listed in Glenn County (OHP 2019). The nearest CHL is #345 – the Granville P. Swift Adobe, located approximately three miles northwest of the Project Area. *Historic Spots in California* (Kyle 2002) mentions that Orland developed as a railroad shipping point for grain. Kyle (2002) also notes the Granville P. Swift adobe and mentions that a regional irrigation system was developed around Orland as the pilot project for the extensive Central Valley Irrigation Project.

Ultimately, no definitive historic resources were identified within 0.5 mile of the Project area through the records search.

Pedestrian Survey

On March 14, 2019, ECORP subjected the Project site to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (NPS 1983) using transects spaced 15 meters apart. ECORP expended 0.5 person-day in the field. At that time, the

ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

All cultural resources encountered during the survey were recorded using Department of Parks and Recreation (DPR) 523-series forms approved by the California OHP. The resources were photographed, mapped using a handheld Global Positioning System (GPS) receiver, and sketched as necessary to document their presence. Resources were recorded on DPR 523 Primary Records and their location marked on DPR 523 Location Maps.

Native American Consultation

In addition to the record search, ECORP contacted the California NAHC on March 7, 2019 to request a search of the Sacred Lands File for the APE. This search will determine whether or not Sacred Lands have been recorded by California Native American tribes within the Project area, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. A search of the Sacred Lands File by the NAHC did not indicate the presence of Native American cultural resources in the Project Area.

Assembly Bill 52 (AB 52) requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City of Orland has not received any formal notification requests by any California Native American tribes. As such, the consultation responsibilities required by AB 52 have been met by the City for the Proposed Project.

Project Impact Analysis

Impact 3.4.1: Potential for Impacts to Historical Resources

Threshold:	*Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?*

The Cultural Resources Inventory Report identified resources from the historical period to be evaluated for potential historical importance: OTW-001, OTW-002, OTW-003, OTW-004, and OTW-005. The five potential historical resources include an irrigation canal, two historic period road segments, a barn, and a historic period building.

The historic period irrigation canal (OTW-001) is known as the Stony Creek Irrigation Canal and is visible in aerial photographs from 1914. The east/west portion of the canal is lined with concrete and measures 4 feet wide at the top, 1 foot wide at the base, and 2 feet deep. 230 feet of the canal runs along country road 13 and is earthen. The Proposed Project would convert the canal to be an underground drainage. The canal is the only potential historical resource of the five potential resources that may be directly impacted by the Proposed Project.

The road segment (OTW-002) is named County Road 13 and is classified as a light-duty road. This road runs east to west at the northern end of the Project area. Historically, this segment traveled through downtown Orland but was terminated at the west side of I-5 upon the construction of I-5. The road segment is depicted in 1914 topographic maps. Road segment OTW-003, known as County Road Hh, runs along the route of a historic period road from north to south at the eastern end of the Project area. The earliest topographic map the road is visible in is from 1951 (revised in 1969). The road is classified for light-duty use.

OTW-004 is a historic-period gabled barn constructed of wood with a metal tin roof and tin siding on its northern-facing wall. The barn appears on 1947 aerial photographs, and parcel number research suggests it was built in the 1920s. It appears to have been maintained to some degree and there are small improvements related to electrical utilities (lights, wiring) that have been added after its original building date. There is a low tin roof reaching from the western side of the building that provided shelter to livestock or other farm animals, and a modern dog kennel set on a concrete pad to the north.

OTW-005 is an historic-period building that was likely a single-family residence adjacent to OTW-004. It is a single-story building with a tin roof and a concrete porch with metal support beams leading up to a roof overhang also covered in tin. The building appears to be covered in a rough plaster/stucco and has been maintained and improved over the years, as there are modern windows, doors, and an air conditioning unit. The structure appears on 1947 aerial photographs, but could have been built around the time the barn was constructed.

The construction and operation of the Project will result in the removal or alteration of the canal OTW-001. Therefore, mitigation measure **CUL-1** has been included to mitigate for direct impacts on the potential historical canal by the Project.

Three of the five resources identified as potentially historic are not located on the parcels where construction is to occur for the Sunny Truck Service Center Project. Therefore, these potential historical artifacts have not been evaluated using NRHP and CRHR eligibility criteria and as such, it is not currently known whether or not any of these resources are considered Historical Resources. Because the construction and operation of the Project will not result in the removal or alteration of these resources, no impact is expected to these resources at this time. However, any future construction on parcels, APN 045-170-021 and APN 045-170-024 has the potential to impact OTW-003, OTW-004 and OTW-005 and as such, mitigation is required. Therefore, mitigation measure **CUL-2** has been included in this DEIR to mitigate for impacts on the potential historical resources that may be impacted by future construction activities on these two parcels.

Further, excavations could occur in association with development of the Project which could affect unknown historical resources buried on the Project site. As such, mitigation is required. Therefore, mitigation measure **CUL-3** has been included to reduce the potential impact to historical resources to be **less than significant**.

Impact 3.4.2: Potential for Impacts to Archaeological Resources

Threshold:	*Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?*

The Project site was investigated by a professional archaeologist, who concluded that there were no identifiable cultural resources within the Project area. However, the Project site is near the Sacramento River where prehistoric villages once existed. Ethnographically, the Project area is the tribal territory of the Wintu and Nomlaki (ECORP 2019). Nomlaki territory encompassed portions of present-day Tehama and Glenn counties. Thus, there is a potential for buried prehistoric resources on the Project site. For this reason, the Proposed Project may result in a potentially significant impact to unknown archaeological resources. Archaeological discoveries during Project implementation have the potential to affect archaeological resources, resulting in a potentially significant impact. Therefore, mitigation measure **CUL-3** has been included to reduce the potential impact to archaeological resources to a **less than significant** level.

Impact 3.4.3: Potential for Impacts to Human Remains

Threshold:	*Would the Project disturb any human remains, including those interred outside of formal cemeteries?*

No human remains have been identified on the Project site. However, implementation of the Proposed Project would include ground-disturbing construction activities that could result in the inadvertent disturbance of currently undiscovered human remains. Procedures of conduct following the discovery of human remains on non-federal lands are mandated by Health and Safety Code § 7050.5, by PRC § 5097.98, and by CEQA in California Code of Regulations (CCR) § 15064.5(e).

According to these provisions, should human remains be encountered, all work in the immediate vicinity of the burial must cease, and any necessary steps to ensure the integrity of the immediate area must be taken. The remains are required to be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. The Glenn County Coroner would be immediately notified, and the coroner would then determine whether the remains are Native American. If the coroner determines the remains are Native American, the coroner has 24 hours to notify the NAHC, which will in turn notify the person identified as the most likely descendant (MLD) of any human remains. Further actions would be determined, in part, by the desires of the MLD, who has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.

Implementation of mitigation measure **CUL-3** would assure that any discovery of human remains within the Project site would be subject to these procedural requirements. Implementation of this mitigation measure would reduce impacts associated with the discovery/disturbance of human remains to be **less than significant.**

Impact 3.4.4: Potential for Impact to Paleontological Resources

Threshold:	*Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

A record search of past surveys and a pedestrian survey revealed no paleontological resources of importance in or near the Project site. A paleontological records search using the University of California Museum of Paleontology (UCMP) database determined that there are 239 records of identified paleontological specimens in the County (UCMP 2018). Based on this information, no paleontological specimens were identified in Orland specifically.

While the records search results did not identify any paleontological resources on the Project site, and shallow excavations in the younger Quaternary Period alluvial fan and basin deposits of the site are unlikely to encounter significant vertebrate fossil remains, deeper excavations that extend down into older sedimentary deposits may uncover significant vertebrate fossils. Therefore, this is considered a potentially significant impact and mitigation measure **CUL-4** is required. However, implementation of mitigation measure **CUL-4** would assure that any discovery of paleontological resources within the Project site would be reduced to a **less than significant** level.

3.4.4 Mitigation Measures

CUL-1 Prior to the commencement of Project construction, the Applicant must obtain a permit from the Orland Unit Water Users Association (OUWUA) for the conversion of the potential historic canal segment to an underground pipeline. Obtaining a permit from OUWUA would ensure that OUWUA does not consider the canal an identified historic resource.

Timing/Implementation: *Prior to ground-disturbing construction activities*

Enforcement/Monitoring: *City of Orland Planning Department and Orland Unit Water Users Association*

CUL-2 If future construction activities are planned for the parcels APN 045-170-021 and APN 045-170-024, the three historic period resources (OTW-003, OTW-004, and OTW-005) must be evaluated to determine if they are historic resources using NRHP or CRHR eligibility criteria. No construction activities may commence until evaluation of the three resources is complete. If it is determined that the resources are *not* NRHP- or CRHR-eligible resources, future construction activities may commence with no further mitigation for the potential historic resources. If the records search or evaluation by a qualified historical architect determines

any of the resources are historic resources, the potential future project must incorporate mitigation to minimize the impacts to the historic resources.

Timing/Implementation: *Prior to potential future construction on parcels APN 045-170-021 and APN 045-170-024*

Enforcement/Monitoring: *City of Orland Planning Department*

CUL-3 If subsurface deposits believed to be *cultural or human* in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the lead federal agency, the lead CEQA agency, and applicable landowner. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be eligible for inclusion in the NRHP or CRHR. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to their satisfaction.

If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance AB 2641). The archaeologist shall notify the Glenn County Coroner (as per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American MLD for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius

until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *During ground-disturbing construction activities*

Enforcement/Monitoring: *City of Orland Planning Department*

CUL-4 If subsurface deposits believed to be paleontological in origin are discovered during construction, then all work must halt within a 50-foot radius of the discovery and the City shall be notified immediately. A Qualified Professional Paleontologist shall be retained and empowered to halt or divert ground-disturbing activities. A plan for monitoring and fossil recovery must be completed and implemented before ground-disturbing activities can recommence in the area of the fossil find to allow for the recovery of the find. Recovered fossils shall be analyzed to a point of identification and curated at an established accredited museum repository with permanent retrievable paleontological storage. A technical report of findings shall be prepared with an appended itemized inventory of identified specimens and submitted with the recovered specimens to the curation facility.

Timing/Implementation: *During ground-disturbing construction activities*

Enforcement/Monitoring: *City of Orland Planning Department*

3.4.5 Residual Impacts After Mitigation

Potential historical resources exist on the parcels adjacent to the Sunny Truck Service Center construction site. Implementation of **CUL-1** will mitigate for impacts to a potential historic irrigation canal that will occur due to implementation of the Project. **CUL-2** would mitigate for future potential impacts to the historic-period resources that may result from future construction. No known cultural or paleontological resources were found on the Project site. Implementation of mitigation measures **CUL-3** and **CUL-4** would ensure that any unknown cultural or paleontological resources that are discovered with construction of the Project are managed properly. Therefore, with implementation of mitigation measures **CUL-1**, **CUL-2**, **CUL-3**, and **CUL-4**, residual impacts would be less than significant.

3.4.6 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The cumulative setting associated with the Proposed Project includes approved, proposed, planned, and other reasonably foreseeable projects and development in the City of Orland as shown in **Table 3.0-1**. Developments and planned land uses, including the Proposed Project, would cumulatively contribute to impacts to known and unknown cultural resources and paleontological resources in the area. The Existing Setting subsection provides an overview of cultural resources and the history of the region.

Cumulative Impacts and Mitigation Measures

Impact 3.4.5: Cumulative Impacts to Cultural Resources

Threshold:	*Would Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features)?*

As mitigated, the direct impacts associated with the Project will be reduced to a less than significant level. While it is possible that grading and development will result in the discovery of cultural resources, mitigation measures and state and federal laws already in place will set in motion actions designed to mitigate these potential impacts. The Project is adjacent to existing residential and commercial developments that have disturbed the soil and may have already affected any cultural resources. As a result of surrounding development, mitigation proposed in this section, and existing federal and state laws, this impact is considered less than cumulatively considerable.

Cumulative Mitigation Measures

None required.

3.4.7 References

[BLM] Bureau of Land Management

2019 General Land Office Records. Electronic document, http://www.glorecords.blm.gov/. accessed March 6, 2019.

[Caltrans] California department of Transportation

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2018b Structure and Maintenance & Investigations, Historical Significance–Local Agency Bridges Database October 2018. http://www.dot.ca.gov/hq/structur/strmaint/hs_local.pdf. accessed March 6, 2019.

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2015 County of Glenn Municipal Code. https://www.countyofglenn.net/govt/county-code/search?search_api_views_fulltext=paleontological.

[ECORP] ECORP Consulting, Inc.

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[NPS] National Park Service

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2019 *National Register Information System Website*. Electronic document, http://www.nr.nps.gov/nrloc1.htm.

[OHP] Office of Historic Preservation

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1996 California Historical Landmarks. California Department of Parks and Recreation, Sacramento, California.

1999 Directory of Properties in the Historical Resources Inventory

2012 Directory of Properties in the Historic Property Data File for Glenn County. On file at NEIC, California State University, Chico, California.

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[UCMP] University of California Museum of Paleontology

2018 UCMP Specimen Search. *https://ucmpdb.berkeley.edu/*.

SECTION 3.5 ENERGY

This section describes the environmental and regulatory setting for energy, including applicable plans, policies, regulations, and/or laws.. This section also describes the potential for energy impacts that would result from the Proposed Project.

3.5.1 Environmental Setting

Introduction

Energy consumption is analyzed due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal) during both construction and long-term operational phases.

3.5.2 Existing Energy Setting

Electricity/Natural Gas Services

The Pacific Gas and Electric Company (PG&E) provides electricity and natural gas to the Project area. PG&E provides natural gas and electricity to most of the northern 2/3 of California, from Bakersfield and Barstow to near the Oregon, Nevada and Arizona State Lines. It provides 5.2 million people with electricity and natural gas across 70,000 square miles.

Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all non-residential uses in Glenn County from 2014 to 2018 is shown in **Table 3.5-1**. As indicated, the demand has increased since 2014.

Table 3.5-1. Non-Residential Electricity Consumption in Glenn County 2014-2018

Year	Non-Residential Electricity Consumption (kilowatt hours)
2018	310,292,800
2017	296,677,120
2016	276,414,306
2015	294,464,463
2014	291,473,564

Source: ECDMS 2019

The natural gas consumption associated with non-residential uses in Glenn County from 2014 to 2018 is shown in **Table 3.5-2**. As indicated, the demand has remained constant since 2014.

Table 3.5-2. Non-Residential Natural Gas Consumption in Glenn County 2014-2018

Year	Non-Residential Natural Gas Consumption (therms)
2018	5,790,626
2017	6,059,326
2016	5,838,224
2015	6,159,485
2014	5,767,873

Source: ECDMS 2019

Automotive fuel consumption in Glenn County from 2016 to 2020 (expected year for construction to begin) is shown in **Table 3.5-3**. As shown, on-road fuel consumption has decreased since 2016 and off-road fuel consumption has increased since 2016.

Table 3.5-3. Automotive Fuel Consumption in Glenn County 2016-2020

Year	Fuel Consumption (gallons)	
	On-Road	Off-Road
2020	30,143,162	1,295,086
2019	30,793,430	1,245,318
2018	31,422,301	1,193,503
2017	32,050,919	1,147,250
2016	32,344,134	1,102,925

Source: CARB 2014

3.5.3 Environmental Impacts

Thresholds of Significance

CEQA Guidelines Appendix G states that a project may have a significant effect on the environment if implementation would result in any of the following:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Project Impact Analysis

Impact 3.5.1: Wasteful or Inefficient Energy Use

Threshold:	*Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

The impact analysis focuses on the four sources of energy that are relevant to the Proposed Project: electricity, natural gas, the equipment fuel necessary for Project construction, and the automotive fuel consumed during operations. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of electricity estimated to be consumed by the Project is quantified and compared to that consumed by non-residential land uses (commercial and industrial) in Glenn County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Glenn County.

The analysis of electricity and natural gas usage is based on CalEEMod modeling conducted by ECORP Consulting (see **Appendix F**), which quantifies energy use for Project operations. The amount of operational automotive fuel use was estimated using the CARB's EMFAC2014 computer program, which provides projections for typical daily fuel usage in Glenn County. The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Energy consumption associated with the Proposed Project is summarized in **Table 3.5-4**.

Table 3.5-4. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percent Increase Countywide
Electricity Consumption[1]	662,916 kWh	0.21%
Natural Gas[1]	9,767 therms	0.16 %
Automotive Fuel Consumption		
Project Construction[2]	58,030 gallons	4.3%
Project Operations[3]	100,115 gallons	0.33 %

Source:
[1]Electricity and natural gas consumption calculated by ECORP Consulting using CalEEMod 2016.3.2;
[2]Climate Registry 2016;
[3]EMFAC2014 (CARB 2014)
Notes:
The Project increases in electricity consumption are compared with all of the non-residential buildings in Glenn County in 2018, the latest data available. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2020.

As shown in **Table 3.5-4**, the increase in electricity usage as a result of the Project would constitute a negligible increase of 0.21 percent in the typical annual electricity consumption and 0.16 percent in the

typical annual natural gas consumption attributable to non-residential uses in Glenn County. Further, the buildings proposed by the Project would adhere to all federal, state, and local requirements for energy efficiency, including the Title 24 standards. Title 24 standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage. Due to the relatively low increase in electricity from the Project and the implementation of energy reducing strategies, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

The Project's gasoline fuel consumption during the construction period is estimated to be 58,030 gallons of fuel, which would increase the annual construction-related gasoline fuel use in the county by 4.3 percent during Project construction. As such, Project construction would have a nominal effect on local and regional energy supplies, especially over the long-term since construction is temporary. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and require recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

As indicated in **Table 3.5-4**, Project operation is estimated to consume approximately 100,115 gallons of automotive fuel per year predominately associated with automotive traffic visiting the site, which would increase the annual countywide automotive fuel consumption by 0.33 percent. The amount of operational fuel use was estimated using the CARB's EMFAC2014 computer program, which provides projections for typical daily fuel usage in Glenn County. This analysis conservatively assumes that all of the automobile trips projected to arrive at the Project during operations would be new to Glenn County. The Project would not result in any unusual characteristics that would result in excessive long-term operational automotive fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

For these reasons, this impact would be **less than significant**.

Impact 3.5.2: Potential Conflicts with Energy Use Plans

Threshold:	*Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

The City of Orland and Glenn County do not currently have any plans that pertain to non-residential development. As shown above in **Table 3.5-4**, the Project would have a negligible effect on electricity, natural gas, on-road fuel and off-road fuel as a result of the Project. The area with the largest impact would be off-road fuel used during construction activities. However, construction is expected to last less than two years and off-road fuel usage associated with the Project would cease upon completion. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and require

recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. Additionally, the buildings proposed by the Project would adhere to all federal, state, and local requirements for energy efficiency, including the Title 24 standards. Title 24 standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. The Project would not conflict or obstruct any local or state plans for renewable energy or energy efficiency.

For these reasons, this impact would be **less than significant**.

3.5.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

3.5.5 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The setting for this cumulative analysis generally includes the City of Orland, Glenn County, and all existing, proposed, approved, and planned projects in these areas. Development in the cumulative setting would change the intensity of land uses in the region and would provide additional housing, employment, shopping, and recreational opportunities.

Cumulative Impacts and Mitigation Measures

Impact 3.5.4: Cumulative Energy Consumption Impacts

Threshold:	*Would the proposed project, when considered together with other development in the city and region, result in a wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

As previously described. the impact analysis contained herein focuses on the four sources of energy that are relevant to the Proposed Project: electricity, natural gas, the equipment fuel necessary for Project construction, and the automotive fuel consumed during operations. As shown, Project energy consumption would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Thus, the Proposed Project impacts are considered **less than cumulatively considerable**.

Cumulative Mitigation Measures

No significant cumulative impacts were identified. No cumulative mitigation measures are required.

3.5.6 References

[CARB] California Air Resources Board

2014 EMFAC Web Database. https://www.arb.ca.gov/emfac/2014/.

[ECDMS] California Energy Consumption Data Management System

2019 Website: Electricity and Natural Gas Consumption by County. http://www.ecdms.energy.ca.gov/.

SECTION 3.6 GREENHOUSE GAS AND CLIMATE CHANGE

This section of the EIR assesses the potential impacts associated with greenhouse gas (GHG) emissions resulting from construction and operation of the Proposed Project. This section also describes the existing and regulatory settings in relationship to GHG emissions.

3.6.1 Environmental Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 3.6-1. describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2 (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential (GWP). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to

be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013).

Table 3.6-1. Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.
Methane (CH_4)	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about 12 years.
Nitrous Oxide (N_2O)	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. Nitrous oxide is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.

Source: EPA 2016a, b, c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

Sources of Greenhouse Gas Emissions

In July 2018, CARB released the 2018 edition of the California GHG inventory covering calendar year 2016 emissions. In 2016, California emitted 429.4 million gross metric tons of CO2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for approximately 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (23 percent) and the electric power sector including both in-state and out-of-state sources (16 percent) (CARB 2018).

Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure

conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing carbon dioxide from the atmosphere.

3.6.2 Regulatory Setting

Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the EPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide is an air pollutant covered by the CAA; however, no NAAQS have been established for carbon dioxide.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation.

State

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this EO remains relevant because a more recent California Appellate Court decision, *Cleveland National Forest Foundation v. San Diego Association of Governments* (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. While the California Supreme Court ruled that the San Diego Association of Governments did not abuse its discretion by declining "to adopt the 2050 goal as a measure of significance in light of the fact that the Executive Order does not specify any plan or

implementation measures to achieve its goal, the decision also recognized that the goal of a 40 percent reduction in 1990 GHG levels by 2030 is "widely acknowledged" as a "necessary interim target to ensure that California meets its longer-range goal of reducing greenhouse gas emissions 80 percent below 1990 levels by the year 2050.

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed AB 32 (Health and Safety Code §38500 et seq.), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible State implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO_2e (approximately 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the State implement all of the measures in the Scoping Plan.

The Scoping Plan is required by AB 32 to be updated at least every five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB. The 2017 Scoping Plan Update was adopted on December 14, 2017 (CARB 2017). The Scoping Plan Update addresses the 2030 target established by SB 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include: increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Executive Order B-30-15

On April 20, 2015 Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2˚ Celsius (˚C), the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly-owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 RPS.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

Mobile Source Strategy

In 2016 CARB released the updated to the Mobile Source Strategy. This demonstrates how the State will meet air quality standards, achieve GHG emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next fifteen years. This includes engine technology that is effectively 90 percent cleaner than today's current standards, with clean, renewable fuels comprising half the fuels burned.

The strategy also relies on the increased use of renewable fuels to ensure that air pollutant reductions are achieved while meeting the ongoing demand for liquid and gaseous fuels in applications where combustion technologies remain, including in heavy-duty trucks and equipment and light-duty hybrid vehicles. The estimated benefits of the Mobile Source Strategy in reducing emissions from mobile sources

includes an 80 percent reduction of O_3-forming emissions (ROG and NOx), and a 45 percent reduction in DPM emissions in the SoCAB from current levels. Statewide, the Strategy would also result in a 45 percent reduction of GHG emissions and a 50 percent reduction in the consumption of petroleum-based fuels.

Governor's Sustainable Freight Action Plan

Under the Governor's Sustainable Freight Action Plan strategy, CARB is working with agency partners and stakeholders to implement a broad program that includes regulations, incentives, and policies designed to support the transformation to a more sustainable freight system and reduce community impacts from freight operations in California. The Governor's Sustainable Freight Action Plan identifies strategies and actions to achieve a sustainable freight transportation system that meets California's environmental, energy, mobility, safety and economic needs. The Plan also identifies and initiates corridor-level freight pilot projects within the State's primary trade corridors that integrate advanced technologies, alternative fuels, freight and fuel infrastructure and local economic development opportunities. The plan seeks to improve the state freight system efficiency 25 percent by "increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030" as well as to deploy over 100,000 zero-emission freight vehicles and equipment and maximizing near-zero equipment and equipment powered by renewable energy by 2030.

3.6.3 Environmental Impacts

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, climate change impacts are considered significant are considered to be significant if the project would result in any of the following:

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

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

Glenn County Air Pollution Control District (GCAPCD) Thresholds

Implementations of the Proposed Project could result in GHG impacts during construction and operations. Neither the City of Orland or GCAPCD have established air pollution thresholds under CEQA for the assessment of GHG emissions. Therefore, the Project emissions will be compared with the thresholds established in Sacramento County. As with Glenn County and the Proposed Project site, Sacramento County is located within the Sacramento Valley Air Basin which is under jurisdiction of the SMAQMD and therefore, the GHG thresholds of significance developed in that county are appropriate (SMAQMD 2016). While GHG standards established in Sacramento County are not binding on Glenn County, they are instructive for comparison purposes. Thus, in this analysis the Project construction and operations will be compared to the SMAQMD interim screening level numeric bright-line threshold of 1,100 metric tons of CO_{2e} per year.

Methodology

GHG-related impacts were assessed in accordance with methodologies recommended by CARB and the SMAQMD. Where GHG emission quantification was required, emissions were modeled using the CalEEMod, version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated GHG emissions were primarily calculated using CalEEMod model defaults for Glenn County. Operational GHG emissions were based on the Project site plans and the estimated traffic trip generation rates from KD Anderson & Associates, Inc (2019).

Project Impacts Analysis

Impact 3.6.1: Generation of GHG Emissions

Threshold:	*Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment and conflict with an applicable, plan or policy adopted for the purpose of reducing greenhouse gas emissions?*

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). **Table 3.6-2** illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Table 3.6-2. Construction Related GHG Emissions

Emission Source	CO_{2e} (Metric Tons/ Year)
Year 2020	476
Year 2021	114
Total	**590**
Potentially Significant Impact Threshold	1,100
Exceed Threshold?	**No**

Source: CalEEMod version 2016.3.2. Refer to **Appendix F** for Model Data Outputs.
Notes: Building construction, paving, and architectural coating assumed to occur simultaneously.

As shown in **Table 3.6-2**, Project construction would result in the generation of approximately 590 tons of CO_{2e} over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. Additionally, construction-related GHG emissions would not surpass the GHG significance threshold, which was prepared to comply with AB 32 and the State of California GHG reduction goals. Therefore, the impact related to construction would be **less than significant**.

Operations

Operations of the Project would result in GHG emissions predominantly associated with motor vehicle use. Long-term operational GHG emissions attributable to the Project are identified in **Table 3.6-3** and compared to SMAQMD's interim screening level numeric bright-line threshold of 1,100 metric tons of CO_2e annually.

Table 3.6-3. Operational Related GHG Emissions

Emission Source	CO_{2e} (Metric Tons/ Year)
Area Source Emissions	0
Energy Source Emissions	246
Mobile Source Emissions	2,688
Solid Waste Emissions	59
Water Emissions	18
Total Emissions	**3,011**
Potentially Significant Impact Threshold	**1,100**
Exceed Threshold?	**Yes**

Source: CalEEMod version 2016.3.2. Refer to **Appendix F** for Model Data Outputs.

As shown in **Table 3.6-3**, operational-generated emissions would exceed the significance threshold of 1,100 metric tons of CO_2e annually; thus, not complying with AB 32 and the State of California GHG reduction goals, which the significance threshold was established to comply. A large majority of these emissions would be generated by mobile sources, which is an emission source that cannot be regulated by the City. Additionally, GHG are global pollutants. They can be carried miles away from the original source and have long atmospheric lifetimes compared to that of local pollutants. GHG Emissions do not directly pose a threat to human health but can have numerous indirect effects. As previously stated, GHG emissions have been directly correlate to climate change. This can lead to events such as droughts, heat waves, increased intensity in storm events and rising sea levels. These can result in decrease precipitation, increased wildfires, saltwater infiltration of groundwater tables and decreased crop yields. A reduction of vehicle trips to and from the Proposed Project site would reduce the amount of mobile emissions. Methods of reducing vehicle trips include carpooling, transit, cycling, and pedestrian connections. However, this Project is proposing a truck wash, oil and tie center, and other commercial uses. The reduction of vehicle trips is only feasible for the employees working in the facilities, though the majority of traffic trips instigated by the Project would be related to haul truck trips transporting freight. Additionally, it is assumed that a large majority of the trucks visiting the site would be the same trucks visiting the Flying J Travel center located adjacent to the Project site. The number of new trips to visit the Proposed Project site exclusively would be limited.

As stated above, the State of California has implemented numerous strategies pertaining to trucks and the reduction of emissions that directly apply to the Project. Urban goods delivery is an essential component of the greater freight system and vital to the urban economy. While urban goods delivery represents a small share of urban traffic, it generates a disproportionate amount of GHG emissions. The State of California promulgates policies designed and implemented to improve the efficiency and environmental footprint of the urban freight system, including the introduction of zero and near-zero emission vehicles - a strategy embedded in the Governor's Sustainable Freight Action Plan as well as CARB's AB 32 Scoping Plan, SIP, and Mobile Source Strategy.

Additionally, the Project site is located approximately 0.16 mile from I-5, a major regional freeway corridor. Further, I-5 has been identified as a "Major International Trade Highway Route" in the California State Goods Movement Action Plan (2007) and therefore serves to accommodate existing truck trips along the interstate. The Goods Movement Action Plan is a statewide initiative to improve and expand California's goods movement industry and infrastructure in a manner which will increase mobility and relieve traffic congestion as well as reduce GHG emissions.

Despite these efforts set forth above, Project-instigated heavy-duty truck travel would result in the significance threshold to be exceeded. The operational related GHG impact would be **significant and unavoidable**.

3.6.4 Mitigation Measures

No feasible mitigation measures were found for the significant and unavoidable impacts.

3.6.5 Residual Impacts After Mitigation

No feasible mitigation measures were found for the significant and unavoidable impacts.

3.6.6 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe.

Cumulative Impacts to Climate Change

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of Project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the Proposed Project as well as other cumulative related projects would also be subject to all applicable

regulatory requirements, which would further reduce GHG emissions. Due to the operational-related emissions the Project would be conflicting with AB 32 but would be complying with other programs, such as the Governor's Sustainable Freight Action Plan and Mobile Source Strategy, in efforts to reduce GHG emissions. While measures such as encouraging ridesharing, carpooling, and alternative modes of transportation could reduce vehicle miles traveled, such measures have not been found to reduce vehicle trips to the extent needed to reduce GHG emissions below the established threshold. Therefore, no feasible mitigation measures exist to reduce the identified impact and a **cumulative considerable** and **significant and unavoidable** impact would occur.

3.6.7 Cumulative Mitigation Measures

None feasible, this is a cumulatively considerable and significant and unavoidable impact.

3.6.8 References

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SECTION 3.7 NOISE

This section discusses the existing noise setting, identifies potential noise impacts associated with implementation of the Proposed Project.

3.7.1 Technical Background

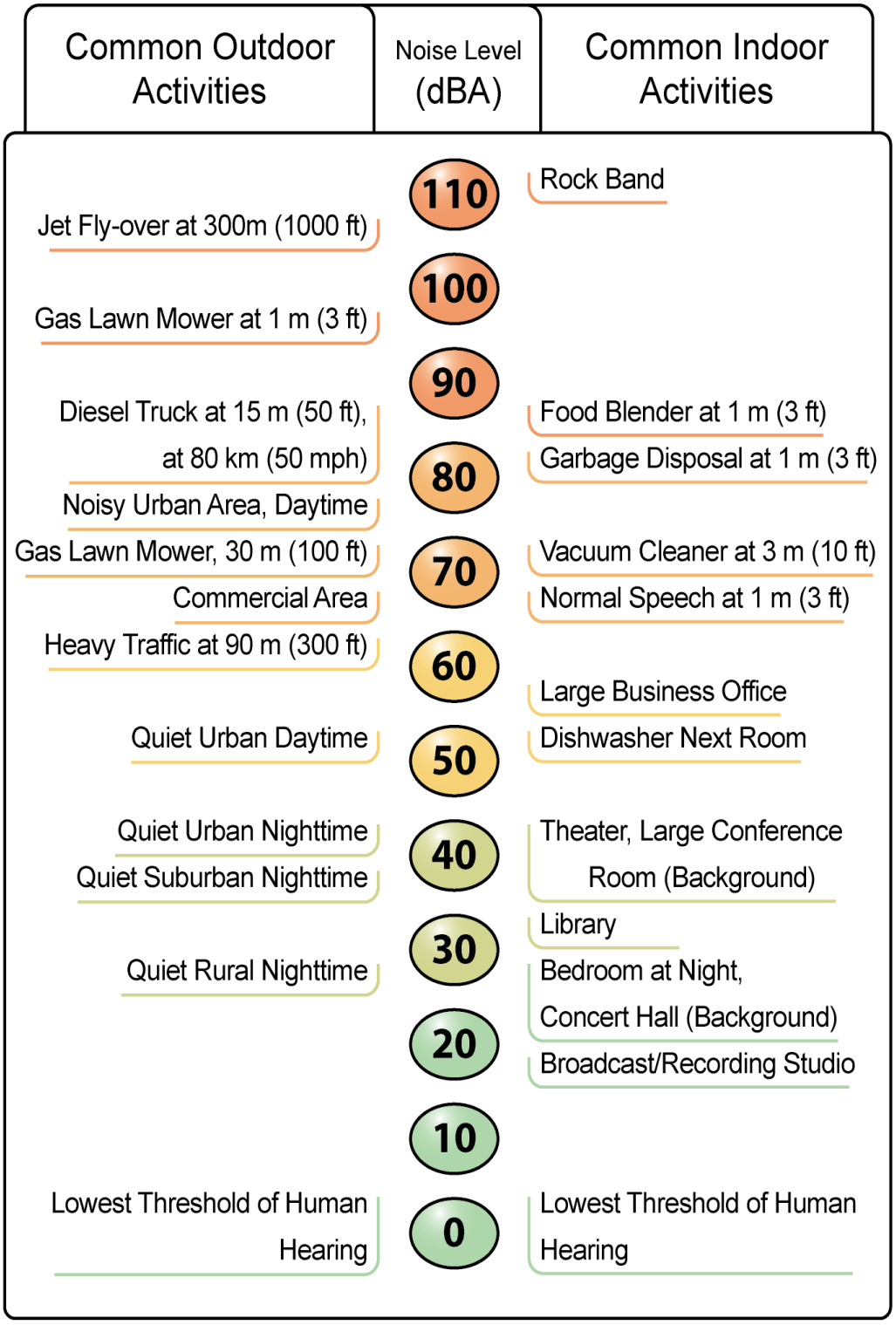
Acoustic Fundamentals

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (FTA 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower, and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as dBA. On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA (EPA 1971). The most common sounds vary between 40 dBA (very quiet) and 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA, which can cause serious discomfort.

Typical noise levels associated with common noise sources are depicted in **Figure 10. Common Noise Levels.**



Source: Caltrans 2012

Figure 10. Common Noise Levels

Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (FHWA 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed (FHWA 2011).

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. [WEAL] 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the “line of sight” between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend length-wise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver.

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL (Community Noise Equivalent Level) are measures of community noise. Each is applicable to this analysis and defined in **Table 3.7-1**.

The A weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the

variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about ±1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about ±1 to 2 dBA.

Table 3.7-1. Common Acoustical Descriptors

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average Leq with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.4 dBA Ldn.
Community Noise Equivalent Level, CNEL	A 24-hour average Leq with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.

Descriptor	Definition
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5-dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic

exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. For ground vehicles, a noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.

Fundamentals of Environmental Groundborne Vibration

Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or manmade causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Vibration Sources and Characteristics

Table 3.7-2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in **Table 3.7-2** is considered very unlikely to cause damage to buildings of any type. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment.

For the purposes of this analysis, a PPV descriptor with units of inches per section (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

Table 3.7-2. Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/ second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Caltrans 2004

3.7.2 Environmental Setting

Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential and are also considered noise-sensitive land uses. Noise-sensitive land uses adjacent to the Project area consist of single-family residences located to the north, south and west of the Project site.

Existing Noise Conditions

The City of Orland is impacted by various noise sources. It is subject to typical urban noise such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities. Mobile sources of noise, especially cars and trucks on I-5 and SR-32, are the most common source of noise in the community. Other sources of noise are the various land users (i.e., residential, commercial, institutional, and agriculture) through the City.

The Project site is generally bound by County Road 13 to the north with a single-family residence and vacant land beyond, County Road HH (Commerce Lane) to the east with undeveloped land and an industrial use (Hardwood Creations) beyond, single-family residence the south, and a single-family residence and undeveloped land to the west.

In order to quantify existing ambient noise levels in the Project area, ECORP Consulting conducted four short-term daytime noise measurements on March 14, 2019 and two short-term nighttime noise measurements on March 18, 2019. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the Project site (see **Appendix F** for Noise Measurement Locations). The 10-minute daytime measurements were taken between 3:16 p.m. and 4:09 p.m. while the 10-minute nighttime measurements were taken between 8:03 p.m. and 8:25 p.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in in **Table 3.7-3**.

Table 3.7-3. Existing (Baseline) Noise Measurements

Site Number	Location	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
Daytime Noise Measurements					
1	At the intersection of County Road HH and County Road 13. Adjacent to the Pilot/Flying J Travel Center.	**68.4**	56.9	83.0	3:16 p.m. – 3:26 p.m.
2	On the Project site.	**52.8**	46.7	68.4	3:29 p.m. – 3:39 p.m.
3	On the north side of County Road 14 adjacent to residence and 100 feet west of the County Road HH intersection.	**56.6**	43.3	78.6	3:44 p.m. – 3:54 p.m.
4	On the south side of County Road 14 adjacent to residence and 540 feet west of the County Road HH intersection.	**59.5**	43.1	80.2	3:59 p.m. – 4:09 p.m.
Nighttime Noise Measurements					
1	On the Project site.	**50.9**	45.6	59.2	8:03 p.m. – 8:13 p.m.
2	On County Road 14 adjacent to the industrial use and 165 feet east of County Road HH intersection.	**53.4**	45.4	71.1	8:15 p.m. – 8:25 p.m.

Source: Measurements were taken by ECORP Consulting with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. See **Appendix F** for noise measurement outputs.

As shown in **Table 3.7-3**, the existing ambient daytime noise level on the Project site is 52.9 dBA L_{eq} and the ambient nighttime noise level on the Project site is 50.9 dBA L_{eq}. The noise most common in the Project vicinity is produced by automotive vehicles (cars, trucks, buses, motorcycles), including truck traffic associated with the Pilot/Flying J Travel Center and general traffic traversing the I-5 freeway. Traffic moving along the streets produces a sound level that remains relatively constant and is part of the Project area's minimum ambient noise levels. Vehicular noise varies with volume, speed and type of traffic. Slower traffic produces less noise than fast moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, trains, garbage and construction vehicle activity and honking of horns. The Project vicinity is also influenced by the intermittent noise projected from the Pilot/Flying J Travel Center PA system.

3.7.3 Regulatory Setting

Local

City of Orland General Plan

The Noise Section of the 2008-2023 City of Orland General Plan addresses noise-related issues within the community. Programs include protection of noise sensitive uses from excessive noise levels, as well as measures to protect noise generators from encroachment by noise sensitive uses. The following policies are applicable to the Proposed Project:

Goal 6.1: *Protect the citizens of Orland from the harmful effects of exposure to excessive noise. Additionally, protect the existing noise-sensitive land uses from new uses that would generate noise levels that are incompatible with those uses and discourage new noise-sensitive land uses from being developed near sources of high noise levels.*

Policy 6.1.A: The interior and exterior noise level standards for noise-sensitive areas of new uses affected by traffic or railroad noise sources in the City of Orland are shown in Table 6-3, below.

Table 6-3. Noise Standards for New Uses Affected by Traffic and Railroad Noise

New Land Use	Outdoor Activity Areas L_{dn}	Interior L_{dn}/ Peak Hour L_{eq} (Note 1)	Notes
Residential	60 - 65	45	2, 3, 4
Transient Lodging	65	45	5
Hospitals, Nursing Homes	60	45	6
Theatres, Auditoriums, Music Halls	--	35	
Churches, Meeting Halls, Schools, Libraries, etc.	60	40	
Office Buildings	65	45	7
Commercial Buildings	65	50	7

New Land Use	Outdoor Activity Areas L_{dn}	Interior L_{dn}/ Peak Hour L_{eq} (Note 1)	Notes
Playgrounds, Parks	70	--	
Industry	65	50	7

Notes:
1. For traffic noise within the City, L_{dn} and peak-hour L_{eq} values are estimated to be approximately similar. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in closed positions.
2. Outdoor activity areas for single-family residential uses are defined as back yards. For large parcels or residences with no clearly identified outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.
3. For multi-family residential uses, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas, or tennis courts.
4. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn} or less using a practical application of the best available noise-reduction measures, an exterior noise level of up to 65 dB L_{dn} may be allowed provided that available exterior noise reduction measures have been implemented and interior noise levels are in compliance with this table.
5. Outdoor activity areas of transient lodging facilities include swimming pools and picnic areas.
6. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
7. Only the exterior spaces of the uses designated for employee or customer relaxation have any degree of sensitivity to noise.

Policy 6.1.B: Where the noise level standards for [**Table 3.7-4**] are predicted to be exceeded at new uses proposed within the City of Orland which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with [**Table 3.7-4**] standards.

Policy 6.1.C: Assessment of traffic noise impacts within the City of Orland shall be based on projections of traffic volumes commensurate with cumulative buildout of the City of Orland.

Policy 6.1.E: If an acoustical analysis is required by the City of Orland to assess compliance with the City's Noise Element standards, it shall be prepared in accordance with **Table 6-4**, Requirements for Acoustical Analyses Prepared in Orland.

Table 6-4. Requirements for Acoustical Analyses Prepared in Orland

An acoustical analysis prepared pursuant to the Noise Element shall:	
1.	Be the responsibility of the applicant.
2.	Be prepared by qualified persons experienced in the fields of environmental noise assessment and architectural acoustics.
3.	Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
4.	Estimate existing and projected (cumulative City buildout) noise levels in terms of the Standards of Tables 5-1 and 5-2, and compare those levels to the adopted policies of the Noise Element.
5.	Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms evaluating possible sleep disturbance.
6.	Estimate interior and exterior noise exposure after the prescribed mitigation measures have been implemented.
7.	Describe the post-project assessment program which could be used to evaluate the success of mitigation measures.

Policy 6.1.F: The interior and exterior noise level standards for noise-sensitive areas of new uses affected by non-transportation noise sources in the City of Orland are shown by **Table 6-5**, below.

Table 6-5. Noise Standards for New Uses Affected by Non-Transportation Noise

New Land Use	Outdoor Activity Areas L_{eq}		Interior L_{eq}/ Peak Hour L_{eq}	
	Daytime	Nighttime	Day and Night	Notes
Residential	50	45	35	1, 2, 7
Transient Lodging	55	--	40	3
Hospitals, Nursing Homes	50	45	35	4
Theatres, Auditoriums, Music Halls	--	--	35	
Churches, Meeting Halls, Schools, Libraries, etc.	55	--	40	
Office Buildings	55	--	45	5, 6
Commercial Buildings	55	--	45	5, 6
Playgrounds, Parks	65	--	--	6
Industry	65	65	50	5

Notes:
1. Outdoor activity areas for single-family residential uses are defined as back yards. For large parcels or residences with no clearly identified outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.
2. For multi-family residential uses, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas, or tennis courts. Where such areas are not provided, the standards shall be applied at individual patios and balconies of the development.
3. Outdoor activity areas of transient lodging facilities include swimming pool and picnic areas, which are not commonly used during nighttime hours.
4. Hospitals are often noise-generating uses. The exterior noise levels standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. Only the exterior spaces of those uses designated for employee or customer relaxation have any degree of sensitivity to noise.
6. The outdoor activity areas of office, commercial, and park uses are not typically utilized during nighttime hours.
7. It may not be possible to achieve compliance with this standard at residential uses located immediately adjacent to loading dock areas of commercial uses while trucks are unloading. The daytime and nighttime noise level standards applicable to loading docks shall be 55 and 50 dB Leq, respectively.

Program 6.1.F.1: The **Table 6-5** standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds.

Program 6.1.F.2: If the existing ambient noise level exceeds the standards of **Table 6-5**, then the noise level standards shall be increased at 5 dB increments to encompass the ambient noise.

Policy 6.1.G: The **Table 6-5** standards are applied to both new noise-sensitive land uses and new noise-generating uses, with the responsibility for noise mitigation placed on the new use.

Policy 6.1.H: Where the noise level standards of **Table 6-5** are predicted to be exceeded at new uses proposed within the City of Orland which are affected by or include non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with **Table 6-5** standards.

Policy 6.1.I: Noise associated with construction activities shall be exempt from the noise standards cited in **Table 6-5**.

Policy 6.1.J: Construction activities shall be limited to the hours of 7 a.m. to 5 p.m. unless an exemption is received from the City to cover special circumstances.

Policy 6.1.K: All internal combustion engines used in conjunction with construction activities shall be muffled according to the equipment manufacturer's requirement.

Glenn County General Plan and County Code

The Project site is located adjacent to unincorporated lands administered by the County of Glenn. The Glenn County General Plan Public Safety Element contains policy provisions intended to protect County residents from the harmful and annoying effects of exposure to excessive noise. For instance, new sources of transportation noise are limited to propagating noise levels of 60 dBA L_{dn}/CNEL at County residences and all new stationary sources of noise are limited to producing daytime noise levels of 50 dBA L_{eq} at any noise sensitive receptor. The County regulates construction noise in its County Code. Chapter 15.560.100 of the County Code exempts construction noise from all noise standards provided that construction is limited between the hours of 7:00 a.m. and 7:00 p.m.

3.7.4 Environmental Impacts

Thresholds of Significance

CEQA Guidelines Appendix G states that a project may have a significant noise-related effect if it would result in any of the following:

1. 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.

2. Generation of excessive groundborne vibration or groundborne noise levels.

3. 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 excess noise levels.

Methodology

This analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. Predicted construction noise levels were calculated utilizing the Federal Highway Administration's Roadway Construction Model (2008). Transportation-source noise levels in the Project vicinity were calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108). For Project operations the model was updated to reflect the anticipated trip generation and fleet mix supplied by the Traffic Impact Analysis prepared for the Project (KD Anderson 2019). Onsite stationary source noise levels associated with the Project have been calculated with the SoundPLAN 3D noise model, which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers.

Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby structures and typically applied criteria for structural damage and human annoyance.

Project Impact Analysis

Impact 3.7.1: Noise Levels in Excess of Standards

Threshold:	*Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.*

Construction Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for on-site construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect residences in the vicinity of the construction site. As previously stated, there are single-family residences located to the north, south and west of the Project site. The closest residences are located to the south and west, located approximately 40 feet from the Project site.

Noise levels associated with individual construction equipment are summarized in **Table 3.7-4**.

Table 3.7-4. Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Noise (L_{max}) at 50 Feet (dBA)	Maximum 8-Hour Noise (L_{eq}) at 50 Feet (dBA)
Crane	80.6	72.6
Dozer	81.7	77.7
Excavator	80.7	76.7
Generator	80.6	77.6
Grader	85.0	81.0
Other Equipment (greater than 5 horsepower)	85.0	82.0
Paver	77.2	74.2
Roller	80.0	73.0
Tractor	84.0	80.0
Dump Truck	76.5	72.5
Concert Pump Truck	81.4	74.4
Welder	74.0	70.0

Source: Federal Highway Administration, Roadway Construction Noise Model (FHWA-HEP-05-054), dated January 2008.

Note: L_{eq} is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or night, L_{max} is the maximum and minimum A-weighted noise level during the measurement period.

As previously stated, the nearest noise-sensitive land uses are a single-family residence to the south and a single-family residence to the west, each approximately 40 feet distant. Both of these residences are currently located on unincorporated lands under the jurisdiction of the County of Glenn yet would be annexed into the City of Orland after approval of the Proposed Project. Due to their close proximity, these residences would experience construction noise levels in excess of what is presented in **Table 3.7-4** because those measurements in **Table 3.7-4** are from a 50-foot distance and the residences are approximately 40 feet from the construction site.

The City and County both limit the time that construction can take place but do not promulgate numeric thresholds pertaining to the noise associated with construction. Specifically, Policy 6.1.I of Orland General Plan states that noise associated with construction activities shall be exempt from the City's noise standards. Further, Policy 6.1.J states that construction activities shall be limited to the hours of 7 a.m. to 5 p.m. unless an exemption is received from the City to cover special circumstances. Similarly, Chapter 15.560.100 of Glenn County's Municipal Code exempts construction noise as long as it takes place between 7:00 a.m. and 7:00 p.m. Due to the fact that construction of the Proposed Project will be occurring in the City of Orland, the City's construction noise standard is the most applicable to this analysis. It is typical to regulate construction noise with time limits as opposed to numeric noise thresholds since construction noise is temporary, short term, intermittent in nature, and would cease on

completion of the Project. Furthermore, the City of Orland is a developing urban community and construction noise is generally accepted as a reality within the urban environment. Additionally, construction would occur through the Project site and would not be concentrated at one point. Therefore, as long construction activities are conducted within the permitted hours as required by the City of Orland General Plan Policy 6.1.J, noise generated during construction activities would not exceed City noise standards. A **less than significant** impact would occur.

Operational Traffic Noise

Future traffic noise levels through the Project vicinity were modeled based on traffic volumes identified by KD Anderson & Associates, Inc (2019) to determine the noise levels along Project vicinity roadways. **Table 3.7-5** shows the calculated offsite roadway noise levels under existing traffic levels compared to future traffic levels resulting from buildout of the Project. The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the maximum allowable noise exposure for transportation noise sources as identified in the Glenn County General Plan (60 dBA L_{dn} at residences) or the City of Orland Noise Standards(60 – 65 dBA L_{dn} at residences), as applicable.

Table 3.7-5. Existing Plus Project Conditions Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from Centerline of Roadway		Standard	Exceed Standard?
		Existing Conditions	Existing + Project Conditions		
Newville Road					
West of Road HH	Residential & Commercial (City of Orland)	53.0	53.1	60 – 65 L_{dn}	**No**
Between Road HH & South Bound I-5 Ramp	Commercial (City of Orland)	54.8	55.5	60 – 65 L_{dn}	**No**
County Road HH (Commerce Lane)					
North of Newville Road	Residential & Commercial (Glenn County & City of Orland)	47.5	47.6	60 L_{dn}	**No**
Between Newville Road & County Road 13	Residential & Commercial (City of Orland)	48.6	51.2	60 – 65 Ldn	**No**
Between County Road 13 & County Road 14	Residential & Industrial (Glenn County & City of Orland)	43.9	50.4	60 – 65 Ldn	**No**

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from Centerline of Roadway		Standard	Exceed Standard?
		Existing Conditions	Existing + Project Conditions		
County Road 13					
East of County Road HH	Commercial and Residential (Glenn County & City of Orland)	43.6	45.3	60 Ldn	**No**
SB I-5 Ramp					
South of Newville Road, Merging onto the SB I-5 Ramp	Commercial (Orland)	51.0	51.0	60 – 65 Ldn	**No**
NB I-5 Ramp					
North of Newville Road, Merging onto the NB I-5 Ramp	Commercial (In City of Orland)	51.3	51.4	60 – 65 L_{dn}	**No**

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA roadway noise prediction model in conjunction with the trip generation rate and fleet mix identified by KD Anderson & Associates, Inc. 2019. Refer to **Appendix F** for traffic noise modeling assumptions and results.

Note: The percentage of medium-duty and heavy-duty trucks was updated to reflect the Project trip generation analysis supplied by KD Anderson & Associates, medium-duty and heavy-duty trucks produce more noise than the average vehicle.

As show in **Table 3.7-5**, predicted increases in traffic noise levels associated with the Project would be less than the thresholds for the City of Orland and Glenn County. Additionally, all roadways with the exception of the segment of Road HH (Commerce Lane) between County Roads 13 and 14, would experience noise level increases of less than a 3 dBA as a result of Project traffic. As previously stated, a 3-dBA increase is considered just-perceivable to the human ear. Thus, the increase in traffic noise as a result of Project traffic would be largely unnoticed on a majority of the roadways. A **less than significant** impact would occur in regard to Project traffic noise.

Operational Stationary Noise

The main stationary operational noise associated with the Project would be onsite activity at the truck wash and the oil and tire center. Such activity would include trucks idling and maneuvering the site. Truck maneuvering includes truck approach, back up alarms, idling, air break discharge, engine ignition, and truck pull away. Additionally, the lots with land uses not yet identified would be sources of operational noise such as delivery trucks, typical parking lot activity, such as slow-moving automobile movements and the slamming of car doors, and people speaking.

On-site Project operations have been calculated using the SoundPLAN 3D noise model. The results of this model can be found in **Appendix F**. **Table 3.7-6** shows the predicted Project noise levels at seven locations in the Project vicinity, as predicted by SoundPLAN. Four of these locations (Site Locations 1 - 4)

correspond with the locations where existing baseline noise measurements were taken (see **Table 3.7-3**), while the additional three locations (Site Location 5 - 7) are residences in close proximity to the Project site, which will be affected by Project operations. Additionally, a noise contour graphic (see **Figure 11**) has been prepared to provide a visual depiction of the predicted noise levels in the Project vicinity from Project operations.

As previously described, Program 6.1.F.2 of the Orland General Plan states that if the existing ambient noise level already exceeds noise standards, the noise level standards shall be increased at 5-dB increments to encompass the ambient noise. The noise standards identified in **Table 3.7-6** have been adjusted to reflect Program 6.1.F.2.

Table 3.7-6. Modeled Operational Noise Levels

Site Location	Location (Jurisdiction Noise Standard)	Baseline Daytime Noise Measurements (L_{eq} dBA)[1]	Modeled Operational Noise Attributed to Project (L_{eq} dBA)[2]	County/ City Standards (dBA)[3]	Exceed Standards?
1	At the intersection of County Road HH and County Road 13. Adjacent to the Pilot/Flying J Travel Center. (City of Orland)	68.4	**60.5**	70	**No**
2	On the Project site. (City of Orland)	52.8	**80.0**	55	**N/A**
3	On the north side of County Road 14 adjacent to residence and 100 feet from the County Road HH intersection. (City of Orland)	56.6	**62.9**	60	**Yes**
4	On the south side of County Road 14 adjacent to residence. (Glenn County)	59.5	**58.0**	60	**No**
5	Residence located southwest of the Project site. (Glenn County)	n/a	**59.9**	50	**Yes**
6	Residence located west of the Project site. (Glenn County)	n/a	**68.0**	50	**Yes**
7	Residence located north of the Project site across County Road 13. (City of Orland)	n/a	**65.8**	50	**Yes**

Source: Stationary source noise levels were modeled by ECORP Consulting using SoundPLAN 3D noise model. Refer to **Appendix F** for noise modeling assumptions and results.

Note: [1] Baseline noise measurements from **Table 3.7-3**.

[2] Reference noise measurements used to calculate Project on-site noise propagation identify 79 dBA for heavy-duty truck maneuvering at the noise source, per the San Jose Loading Dock Noise Study (2014), as well as 60 dBA for normal parking lot noise and presence of pedestrians, per the SoundPLAN modeling software. This reference measurement informed the SoundPLAN model to predict Project noise propagation.

[3] Program 6.1.F.2 of the Orland General Plan states that if the existing ambient noise level already exceeds noise standards, then the noise level standards shall be increased at 5 dB increments to encompass the ambient noise.

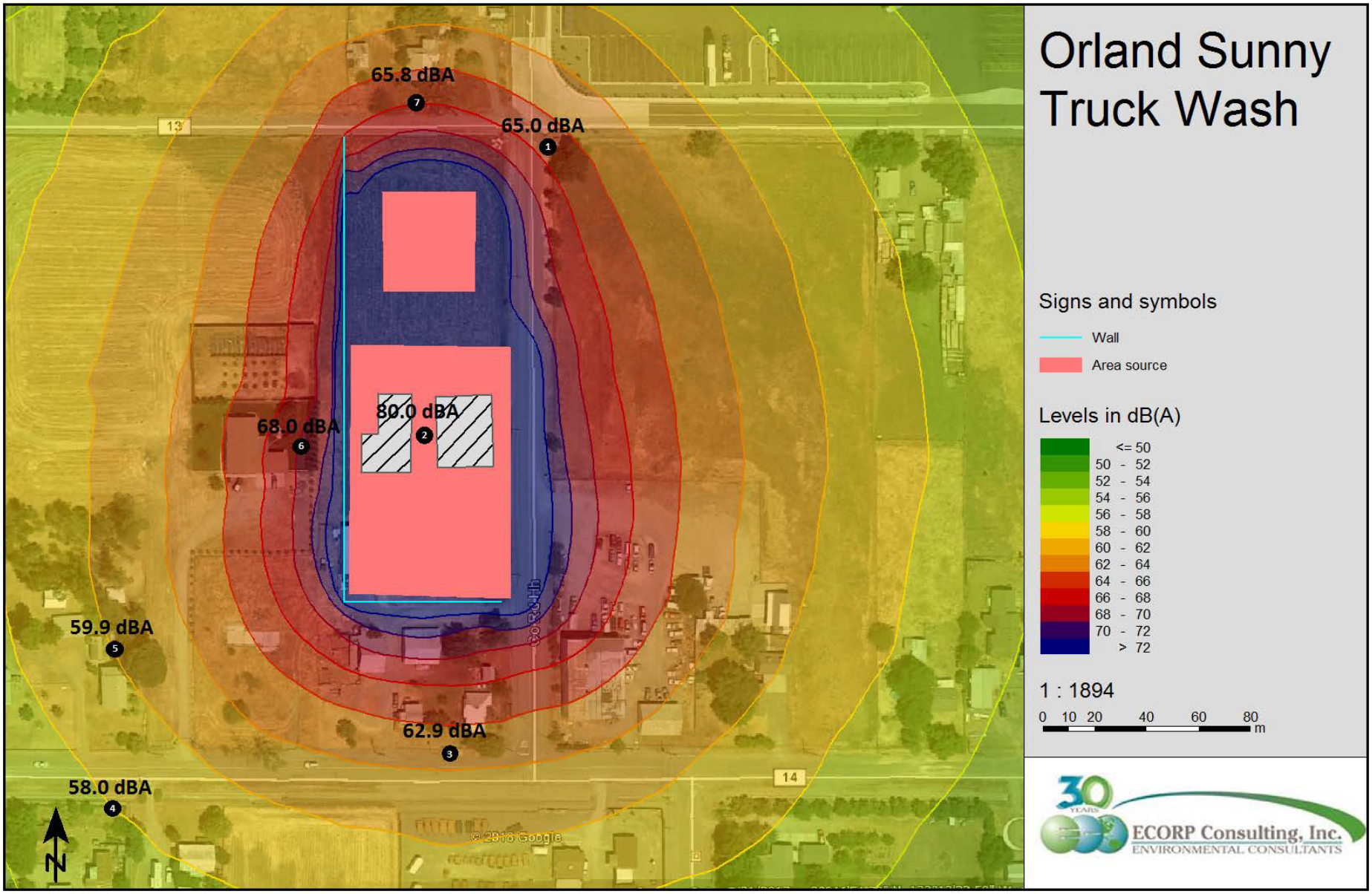


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Figure 11. SoundPLAN Noise Contour Graphic

Sunny Truck Service Center Project

As shown in **Table 3.7-6**, predicted Project noise levels will range from 60.5 to 80.0 dBA during Project operations (the 80.0-dBA noise levels would occur on the Project site). The loudest noise levels at a sensitive noise receptor, Site Location 6, has the potential to be as high as 68.0 dBA during some Project activities. It is noted that the modeled noise levels identified are a worst-case scenario. Not all events taking place on the Project site would generate as much noise as predicted. The City of Orland and Glenn County's Noise Level Standards for non-transportation related uses are 50 dBA L_{eq} during the daytime activities (7:00 a.m. to 10:00 p.m.) and 45 dBA L_{eq} during the nighttime activities (10:00 p.m. to 7:00 a.m.). If the existing ambient noise level already exceeds noise standards, the noise level standards is increased at 5-dB increments to encompass the ambient noise. The truck wash operations, along with the oil and tire center, would take place between 6:00 a.m. and 9:00 p.m., Monday through Friday, and between 7:00 a.m. and 7:00 p.m. Saturday and Sunday, thus would only occur during daytime hours. The other uses on the Proposed Project site are unknown at this time. The predominate Project stationary source would be the movement of trucks on the Project site.

It is noted that the Project site is located in an urbanizing area. There are industrial uses, recently constructed commercial uses, and densifying residential uses within close proximity to the Project site. For example, the site is directly adjacent to the recently constructed Pilot/Flying J commercial center which includes a truck fueling station, an auto fueling station, restaurants and a convenience mini market. Additionally, the area directly north of the Project site is zoned for commercial use and has been recently approved for the development of a hotel and restaurant by the City of Orland. Finally, the City of Orland General Plan pre-zones the Project site as Highway Service Commercial (C-H) and Community Commercial (C-2). Therefore, the planned urbanization of the Project area has been anticipated and it is recognized that existing ambient noise levels will increase.

As shown in **Table 3.7-6**, Project operations have the potential to exceed the City and County noise standards at Site Locations 3, 5, 6, and 7. In efforts to reduce Project operational noise on the surrounding residences the Project is proposing a six-foot-tall masonry wall located on the south and west perimeters of the Project site. To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. The proposed wall conforms with these recommendations and was accounted when modeling Project onsite operations noise propagation (see **Table 3.7-6**).

Additionally, as a part of the SoundPLAN modeling process, the wall height was increased to eight feet and then to 10 feet. Additionally, a wall (both an eight foot wall and then a 10 foot wall) was added to the north property line along County Road 13 in order to determine at what height noise was reduced significantly to comply with City and County thresholds. The modeling analysis determined that while the proposed six-foot wall or the eight- or 10-foot wall would reduce noise levels from the Project, these levels would not be below applicable thresholds.

The lead agencies have limited remedies at their disposal when it comes to effectively reducing operational noise. Extending the proposed wall vertically and horizontally, as well as in a manner that surrounds the Project site on three sides could potential reduce operational noise at the adjacent

residences to levels that fall below applicable standards. However, constructing a wall to nearly surround the Project site would not be desirable as it would conflict with the community's aesthetics, design, and character and is therefore is considered undesirable. Additionally, such a wall could potentially interfere with motorist visibility at the intersection of Road HH (Commerce Lane) and County Road 13 and lead to a safety concern. Therefore, a wall surrounding the site is deemed infeasible.

No feasible mitigation measures exist to reduce operational generated noise levels instigated by the Project. The impact is **significant and unavoidable**.

Impact 3.7.2: Exposure Excessive Groundborne Vibration or Noise

Threshold:	*Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

Construction Impacts

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Proposed Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in **Table 3.7-7**.

Table 3.7-7. Representative Vibration Source Levels for Construction Equipment

Equipment Type	PPV at 20 feet (in/sec)
Large Bulldozer	0.123
Caisson Drill	0.123
Loader Trucks	0.105
Rock Breaker	0.082
Jackhammer	0.048
Small Bulldozer/Tractor	0.004

Source: FTA 2018; Caltrans 2004

The City does not regulate vibrations associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans's (2004) recommended standard of 0.2-inch-per-second peak particle velocity with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

It is acknowledged that construction activities would occur through the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structures of concern to the construction site are residences located approximately 40 feet to the south and west. Based on vibration levels presented in **Table 3.7-7**, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.123 inch per second PPV at 20 feet. Thus, the structures located at 40 feet would not be negatively affected. Predicted vibration levels at the nearest structures would not exceed recommended criteria. A **less than significant** impact would occur.

Operational Impacts

Project operations would not include the use of any stationary equipment that would result in excessive vibration levels. While the Project would accommodate heavy-duty trucks, these vehicles can only generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances. Therefore, the Project would result in negligible groundborne vibration impacts during operations. A **less than significant** impact would occur.

Impact 3.7.3: Exposure to Airport Noise

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

The Project site is located approximately 3.62 miles southeast of the Haigh Field Airport. The Project site is not located within an airport land use plan and is not located within the airport's safety areas as shown on Map 2 of the Comprehensive Airport Land Use Plan for the Orland Haigh Field Airport (Glenn County Airport Land Use Commission [GCALUC] 1991, p. 10) Thus, **no impact** would occur in this regard.

3.7.5 Mitigation Measures

Less than significant impacts were identified, and no mitigation measures are required.

3.7.6 Residual Impacts After Mitigation

No mitigation measures are required; therefore, no residual impacts would occur.

3.7.7 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Noise is by definition a localized phenomenon and significantly reduces in magnitude as a function of increasing distance from the noise source. Consequently, only projects and within the immediate vicinity of the Project would be likely to contribute to cumulative noise impacts. Thus, the cumulative noise setting for the Proposed Project includes noise produced by the Project itself along with noise produced by all existing and proposed development within the Project vicinity.

Existing uses within the Project vicinity include rural residential uses, agricultural uses, industrial uses, the Pilot/Flying J commercial center, and vacant land. Further, the City of Orland considered and approved an application for a development on three-acre portion of the property across County Road HH from the Flying J. That project which involved an 80-room hotel and a 6,000-square-foot-high turnover sit down restaurant (KD Anderson 2019).

Cumulative noise levels are influenced by both construction activities and in the long-term, traffic and stationary noise sources. The Proposed Project in conjunction with the adjacent Pilot/Flying J commercial center will attract a significant number of large trucks to the general location. Truck maneuvering, which includes truck approach, back up alarms, idling, air break discharge, engine ignition, and truck pull away, is a significant source of noise.

Cumulative Impacts and Mitigation Measures

Impact 3.7.4: Cumulative Noise Impacts

Threshold	*Would the project, in combination with existing, approved, proposed, and reasonably foreseeable development in nearby areas of the City of Orland, result in an increase in noise levels resulting in an exceedance of acceptable noise levels in the area?*

Cumulative Construction Noise

Construction activities associated with the Proposed Project and other construction projects in the area may overlap, resulting in cumulative construction noise. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise from the Proposed Project was determined to be less than significant following compliance with the City's General Plan. Cumulative development in the vicinity of the Project site could result in elevated construction noise levels at the sensitive receptors in the Project area. However, each project would be required to comply with the applicable limitations on construction times and noise. Therefore, the Project would not contribute to cumulative impacts during construction. A **less than cumulatively considerable** impact would occur.

Cumulative Stationary Source Impacts

Long-term stationary noise sources associated with the development at the Project, combined with other cumulative projects, could cause local noise level increases. Noise levels associated with the Proposed

Project and related cumulative projects together could result in higher noise levels than considered separately. As previously stated, the Project would cause a significant and unavoidable impact due to operational noise. No feasible mitigation measures exist to reduce operational generated noise levels to conditions within the City and County standards instigated by the Project. A **cumulatively considerable** and **significant and unavoidable** impact would occur.

Cumulative Traffic Source Noise Impacts

According to the EPA, cumulative noise impacts represent the combined and incremental effects of human activities that accumulate over time. While the incremental impacts may be insignificant by themselves, the combined effect may result in a significant impact. Conversely, although there may be a significant noise increase due to the Proposed Project in combination with other related projects (combined effects), it must also be demonstrated that the Project has an incremental effect. In other words, a significant portion of the noise increase must be due to the Proposed Project.

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to operations of the Project and other projects in the vicinity. A project's contribution to a cumulative traffic noise increase could be considered significant when the combined effect exceeds the perception level (i.e., auditory level increase) threshold. The combined effect compares the "Cumulative Plus Project" condition to "Existing" conditions. This comparison accounts for the traffic noise increase generated by a project combined with the traffic noise increase generated by projects in the area. The incremental effect compares the "Cumulative Plus Project" condition to the "Cumulative No Project" condition.

The following combined effect and incremental effect criteria have been utilized to evaluate the overall effect of the cumulative noise increase.

- *Combined Effect* - The cumulative with Project noise level ("Cumulative Plus Project") would cause a significant cumulative impact if a 3.0 dB increase over Existing Conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to the Proposed Project in combination with other related projects (combined effects), it must also be demonstrated that the Project has an incremental effect. In other words, a significant portion of the noise increase must be due to the Proposed Project.
- *Incremental Effects* - The "Cumulative Plus Project" causes a 1.0 dBA increase in noise over the "Cumulative No Project" noise level.

A significant impact would result only if *both* the combined and incremental effects criteria have been exceeded at a single roadway segment, since such would indicate that there is a significant noise increase due to the Proposed Project in combination with other related projects *and* a significant portion of the noise increase is due to the Proposed Project. Noise by definition is a localized phenomenon and reduces as distance from the source increases. Consequently, only the Proposed Project and growth due to occur in the Project site's general vicinity would contribute to cumulative noise impacts. **Table 3.7-8** lists the

traffic noise effects along roadway segments in the Project vicinity for "Existing," "Cumulative No Project," and "Cumulative Plus Project," conditions, including incremental and net cumulative impacts.

Table 3.7-8. Cumulative Traffic Noise Scenario

Roadway Segment	Existing	Cumulative No Project	Cumulative Plus Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	L_{dn} @ 100 Feet from Roadway Centerline	L_{dn} @ 100 Feet from Roadway Centerline	L_{dn}@ 100 Feet from Roadway Centerline	Difference in L_{dn} Between Existing and Cumulative + Project	Difference in L_{dn} Between Cumulative No Project and Cumulative + Project	
Newville Road						
West of Road HH	53.0	53.1	53.3	0.3	0.2	No
Between Road HH & South Bound I-5 Ramp	54.8	55.9	56.6	1.8	0.7	No
County Road HH (Commerce Lane)						
North of Newville Road	47.5	49.7	49.7	2.2	0.0	No
Between Newville Road & County Road 13	48.6	50.7	53.2	4.6	2.5	**Yes**
Between County Road 13 & County Road 14	43.9	47.7	51.6	7.7	3.9	**Yes**
County Road 13						
East of County Road HH	43.6	44.4	45.3	1.7	0.9	No
SB 1-5 Ramp/ Newville Road						
South of Newville Road, Merging onto the SB I-5 Ramp	51.0	51.3	52.9	1.9	1.6	No
NB I-5/ Newville Road						
North of Newville Road, Merging onto the NB I-5 Ramp	51.3	57.2	57.2	5.9	0.0	No

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by KD Anderson & Associates, Inc. (2019). Refer to **Appendix F** for traffic noise modeling assumptions and results.
Note: The percentage of medium-duty and heavy-duty trucks was updated to reflect the Project trip generation analysis supplied by KD Anderson & Associates, medium-duty and heavy-duty trucks produce more noise than the average vehicle.

As shown in **Table 3.7-8**, there would be a cumulative traffic noise impact on two roadway segments. Both segments are associated with Road HH (Commerce Lane); one between Newville Road and County Road 13 and the other between County Road 13 and County Road 14. Each of these roadway segments

on Road HH would surpass the incremental effect threshold of 1.0 dBA increase and the combined effect threshold of 3.0 dBA increase.

The lead agencies have limited remedies at their disposal to effectively reduce traffic-related noise. Addressing traffic noise at the receiver rather than the source usually takes the form of noise barriers (i.e., sound walls). While constructing noise barriers along streets would reduce noise, the placement of sound walls between existing residences/businesses and local roadways would not be desirable as it would conflict with the community's aesthetic, design and character and is therefore deemed infeasible. Furthermore, such barriers would likely require property owner approval, which cannot be ensured. While measures such as encouraging ridesharing, carpooling, and alternative modes of transportation could reduce vehicle volumes, such measures can neither be mandated of residents nor have been shown to reduce vehicle trips to the extent needed to reduce vehicle noise levels below established thresholds. Therefore, no feasible mitigation measures exist to reduce the identified impact and a **cumulative considerable** and **significant and unavoidable** impact would occur.

3.7.8 References

[Caltrans] California Department of Transportation

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SECTION 3.8 TRANSPORTATION

This section presents a summary of the Traffic Impact Analysis (TIA) prepared by KD Anderson & Associates, Inc. (2019) for the Project. **Appendix G** includes this TIA. The traffic impact analysis evaluated the potential impacts to traffic and circulation associated with development of the Project and recommended improvements to mitigate impacts considered significant in comparison to established regulatory thresholds. **Table 3.8-1** Below summarizes daily I-5 ramp volumes in the vicinity.

3.8.1 Environmental Setting

Introduction

The following analysis is an evaluation of the potential traffic impacts associated with development of the Sunny Truck Service Center Project involved in rezoning 4.98 acres in the area of the County Road 13/Commerce Lane (County Road HH) intersection in western Orland. The Project site is located south of Newville Road and west of I-5 near the Pilot/Flying J Travel Center as noted in **Figure 3.**

The Proposed Project would create an area zoned for highway commercial, as well as a specific use catering to the trucking industry. Roughly 2.25 acres will be occupied by a Truck Wash. An adjoining 2.8 acres is designated for future highway commercial uses. As noted in **Figure 6**, access to the site is proposed via driveways on Commerce Lane (County Road HH), County Road 13, and County Road 14.

Existing Transportation System

Existing Street and Highway System

The Proposed Project will be served by several major roadways. Regional access is provided by I-5 and SR-32, which link the site with the other Northern California communities to the north and south and with the City of Orland to the east. Local access to the Project site is provided via Newville Road and County Road HH. The following is a description of these facilities, as well as other roadways in the area of the Project site.

Interstate 5: I-5 is a north-south four-lane freeway that adjoins western Orland. I-5 is the primary route through California and begins at the US-Mexico border in southern California and extends north to the California-Oregon border. Access to I-5 is controlled and in the area of the Project interchanges at South Street (County Road 16) and at SR-32-Newville Road. The most recent traffic volume counts published by Caltrans indicate that I-5 carried an Annual Average Daily Traffic (AADT) volume of 28,000 - 27,000 vehicles per day through the City of Orland. Trucks comprise 29 percent of the daily volume south of SR-32 and 25 percent north of SR-32 according to Caltrans data.

State Route 32: SR-32 is an east-west route that connects with I-5 in Orland and SR-99 in Chico. The portion of SR-32 in the City of Orland located in the vicinity of I-5 is also known as Newville Road. In the area immediately east of the I-5 interchange, Newville Road (SR-32) is a two-lane/four-lane arterial with left-turn lanes at intersections. The speed limit on SR-32 is 35 miles per hour (mph) east of I-5. According to the Caltrans website, the segment of Newville Road (SR-32) east of the interchange carried 8,500 AADT

in 2016, with the volume rising to 10,800 AADT in the area east of the 6th Avenue intersection. The SR-32 Transportation Concept Report identifies the current daily traffic volume east of I-5 at 9,752 vehicles, which is more in line with recent peak hour counts. Trucks comprise 12 percent of the daily traffic on SR-32 through Orland according to Caltrans data.

The I-5/SR-32 (Newville Road) interchange is a partial cloverleaf layout. Northbound and southbound off-ramps terminate at stop sign-controlled intersections on Newville Road. Separate on-ramps to I-5 are provided in both directions, which eliminates left turning traffic across mainline Newville Road. Caltrans recently approved an all-way stop for the northbound ramp intersection. SR-32 has a two-lane crossing over I-5. Caltrans publishes daily traffic volume information for freeway ramps. The most recent data from 2014 is summarized in **Table 3.8-1**. (Note: these counts were made before the Pilot/Flying J Travel Center opened).

Table 3.8-1. Daily I-5 Ramp Volumes

Direction	Location	Daily Volume (2014)
Southbound	Off-ramp to Newville Road (SR-32)	1,150
	On-ramp from westbound Newville Road	1,200
	On-ramp from eastbound Newville Road	580
Northbound	Off-ramp to Newville Road (SR-32)	1,600
	On-ramp from eastbound Newville Road (SR-32)	330
	On-ramp from westbound Newville Road (SR-32)	460

Source: KD Anderson 2019

Newville Road: Newville Road west of I-5 is a Glenn County road that extends for roughly seven miles to the Tehama County line near Black Butte Lake. This portion of Newville Road is designated a Minor Arterial in the Glenn County General Plan Circulation Element and an Arterial in the City of Orland General Plan Circulation Element. Newville Road is a two-lane rural road west of I-5 with a posted speed limit of 35 mph. The most recent traffic volume counts made of the Orland General Plan EIR in 2009 indicated that Newville Road carried 5,108 vehicles per day west of County Road HH, however this count was made before the Pilot/Flying J Travel Center opened.

County Road HH: County Road HH (Commerce Road in the City) is a north-south street that runs southerly from an intersection on County Road 12 across Newville Road to its southern terminus on County Road 15 (Newport Road). County Road HH provides access to existing highway commercial, light industrial and residential uses west of I-5. County Road HH is designated a Minor Collector in the Orland Circulation Element. The Orland General Plan Circulation Element indicates that County Road HH will be extended south to County Road 16 in the future. Today the portion of County Road HH near the Project is called Commerce Road and was widened with the Pilot/Flying J Travel Center project. The rural prima facie speed limit of 55 mph is in effect on County Road HH south of Newville Road. The Orland General Plan

EIR identifies the daily traffic volume on County Road HH was 945 vehicles per day in the area south of Newville Road before the Pilot Flying J opened.

The Newville Road/Commerce Lane (County Road HH) intersection is controlled by an all-way stop. Improvements were made with the Pilot/Flying J Travel Center, and there are separate left turn lanes on the Newville Road approaches and a separate right turn lane on the northbound County Road HH approach.

County Road 13: County Road 13 is a-two lane local street that connects County Road HH with rural residential areas west of I-5. County Road 13 extends east from the County Road HH intersection along the Pilot Flying J Site to a turn-around near the I-5 right of way. No daily traffic volume counts are available for County Road 13.

The County Road HH/County Road 13 intersection is controlled by an all-way stop. There is a separate southbound left turn lane on County Road HH at this intersection.

County Road 14: County Road 14 is a-two lane local street that connects County Road HH with rural residential areas west of I-5 and with County Road HH. No daily traffic volume counts are available for County Road 14.

Existing Traffic Conditions

To quantify existing traffic conditions, peak hour intersection turning movement count data were collected for this analysis at the four existing study intersections. The count data was collected during the 7:00 a.m. - 9:00 a.m. morning peak period and the 4:00 p.m. - 6:00 p.m. evening peak period when the Pilot Flying J Travel Center was in normal operation. New traffic counts were conducted at the I-5 ramps on November 29, 2016 for the City of Orland, and this data was used to adjust counts made at the Newville Road/County Road HH intersection in June 2016 to November levels. Existing peak hour traffic volume data, as well as current intersection traffic controls and intersection lane geometry, are presented in **Figure 12. Existing Traffic Volumes and Lane Configurations**.

Intersections

Current a.m. and p.m. peak hour Level of Service (LOS) were calculated at existing study intersections under existing conditions. The results of this analysis are presented in **Table 3.8-2**. The LOS calculation worksheets for Existing conditions are presented in **Appendix G**.

As shown in **Table 3.8-2**, all of the study intersections currently operate with peak hour LOS that meets the City's minimum LOS D standard but also meet the Caltrans LOS C goal. No improvements at these intersections are needed. Current traffic volumes at un-signalized study intersections were compared to peak hour traffic signal warrant thresholds, and no location carries volumes that satisfy peak hour warrants.

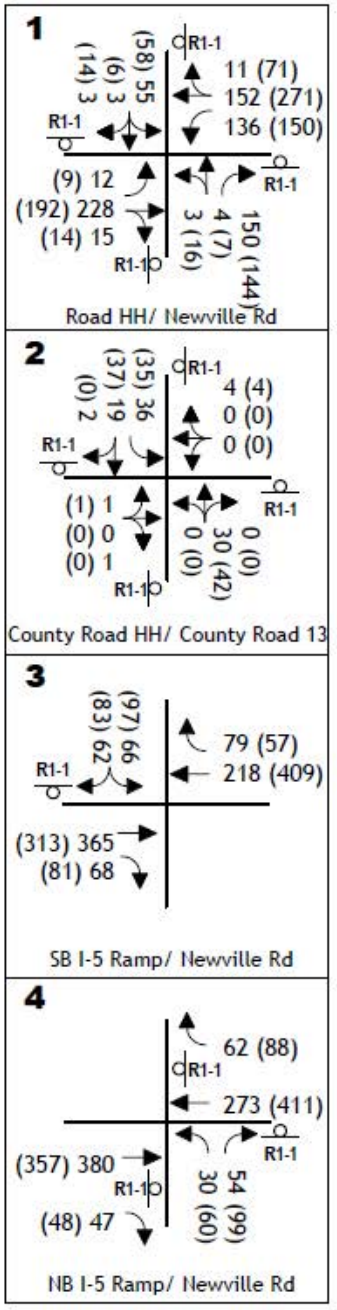

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Figure 12. Existing Traffic Volumes and Lane Configurations

Sunny Truck Service Center Project

Table 3.8-2. Existing Intersection Peak Hour Levels of Service

Intersection	Control	Avg. Delay (Sec/Veh)	LOS	Avg. Delay (Sec/Veh)	LOS	Peak Hr. Warrants Met?
Newville Road/County Road HH	All-Way Stop	12	B	13	B	No
Newville Road (SR-32)/SB I-5 ramps SB approach	SB Stop	15	B	21	C	No
Newville Road (SR-32)/NB I-5 ramps	All-Way Stop	12	B	15	B	No
County Road HH /Road 13	All-Way Stop	8	A	8	A	No

Source: KD Anderson, 2019
Note: LOS = Level of Service

Alternative Transportation Modes

Sidewalks: Concrete and asphalt sidewalks exist at various locations along most City of Orland streets but become less prevalent on Glenn County roads adjoining the community. There are few sidewalks in the area west of I-5, although there is an existing sidewalk on the north side of Newville Road (SR-32) across I-5. The City standards require sidewalks along all improved streets aside those located in industrial areas.

Bicycle Facilities: Presently there are no formally designated bicycle lanes or bicycle facilities in the City. However, the City understands the need to move people through the community. The City is planning multi-use pathways along Stony Creek, as well as multi-use pathways within the rights-of-way of underground canals. Additionally, street widths can accommodate bicycle traffic in most areas, and bicycle racks are available at schools and parks.

Public Transit: Public transportation bus service is provided to the City of Orland through Glenn Ride, which is a transit service provided by Glenn County. It is a fixed-route bus system with seven round trips every weekday and three round trips on Saturday from Willows to Chico. There are currently 14 bus stops in Orland. The stop closest to the Proposed Project is at the 9th Street/Newville Road intersection (i.e., CVS Pharmacy & Burger King).

3.8.2 Regulatory Framework

State

Department of Transportation

Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as that portion of the Interstate Highway System within the state's boundaries. Alone and in partnership with Amtrak, Caltrans is also involved in the support of intercity passenger rail service in California and is a leader in promoting the use of alternative modes of transportation.

Transportation facilities under the jurisdiction of Caltrans within the vicinity of the Project site include I-15 (including on- and off-ramps) and Temecula Parkway (SR-79) extending 100 feet east of Bedford Court.

Minimum LOS standards are adopted by local agencies and Caltrans for their respective facilities and presented in various documents.

Caltrans is responsible for maintaining and operating I-5 and SR-32. In accordance with guidance from Caltrans District 3, methods described in the *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002) were used in this analysis. This document notes that:

> "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' (see Appendix 'C-3') on State highway facilities . . ."

Therefore, for this analysis, LOS C and better are considered acceptable, and LOS D and worse is considered unacceptable at intersections along the SR-32. The *Guide for the Preparation of Traffic Impact Studies* specifies application of these criteria to signalized intersections. The document does not specify a minimum acceptable LOS for un-signalized intersections. However, for this analysis, these criteria are also applied to un-signalized intersections. The City of Orland General Plan Circulation Element identified the minimum standard adopted by the City.

> "Policy 3.3.A: Construct street and highway improvements to maintain an overall daily roadway Level of Service of "C" with an a.m. and p.m. peak hour roadway and intersection Level of Service of "D" or better, unless other public health, safety, or welfare factors determine otherwise."

Regional

Glenn County General Plan

The Glenn County General Plan provides guidelines, primarily directed at the County's management, pertaining to the maintenance of an effective and safe transportation system. The following goal and policy apply to the Proposed Project:

Goal CDG-5: Development and maintenance of an efficient and effective road system.

Policy CDP-58: Require new development to pay its fair share for the improvement of roadways

Local

City of Orland General Plan

The 2008-2028 Circulation Element of the General Plan includes goals, policies, and implementation programs that have been established to promote a street network that moves people and goods safely and efficiently throughout the City while ensuring that traffic delays are kept to a minimum. The goals, policies, and implementation programs pertaining to the Proposed Project are listed below.

Circulation Element

Goal 3.1: Plan for, provide and maintain a circulation system that permits the safe and efficient movement of people and goods throughout the City and Orland Planning Area.

Policy 3.1.D: The City shall discourage through-traffic on local streets in residential areas.

Program 3.1.D.1: Should it be determined that a Local street is carrying an unacceptable level of through traffic, the City may implement appropriate means to reduce traffic through creation of one-way traffic flow, installation of traffic diversion devices, and/or any other means deemed to be acceptable.

Policy 3.2.B: The City shall coordinate planning and development of the circulation system with development approvals throughout the City and Planning Area. All proposed land divisions shall be legally accessible by an improved public street.

Policy 3.2.E: New development shall be required to mitigate traffic impacts associated with the project on the Freeways, Arterial streets, Major and Minor Collector streets, and Local streets.

Program 3.2.E.1: Traffic studies of affected streets may be required as part of the environmental assessment of proposed projects to assure citywide traffic service levels are maintained.

Program 3.2.E.2: Traffic studies shall include level-of-service forecasts to account for individual and cumulative major land use changes in the City. Level-of-service forecasts shall be used to identify deficient roadways and update street improvement plans and priorities.

Policy 3.2.I: To ensure emergency access and response, new developments in the City and Planning area will require circulation improvements that provide a second means of access for police, fire and medical vehicles.

Policy 3.2.L: Each parcel that is developed within the Planning Area shall provide for street connections to adjacent parcels within Policy the Planning Area.

Goal 3.3: Formulate and adopt circulation design and improvement standards that require a level of service consistent with the demands generated by proposed development, public safety, and the efficient use of public and private resources which are uniformly applied in the Orland Planning Area.

Policy 3.3.A: The City shall construct street and highway improvements to maintain an overall daily roadway level of service of "C" with an a.m. and p.m. peak-hour roadway and intersection level of service of "D" or better, unless other public health, safety, or welfare factors determine otherwise.

Policy 3.3.C: The City shall install traffic control devices at intersections, as needed, for public health and safety and to reduce traffic congestion at key intersections throughout the City.

Program 3.3.C.1: Improve intersections operating at less than p.m. peak-hour level of service "D" conditions by adding appropriate turning lanes to congested approaches, widening intersection approaches, or installing traffic signals:

- Signalization shall be predicated upon a warrant analysis, public safety and the discretion of the City. Signalization shall be considered at, but not limited to, the following intersections: (a) South and Sixth streets; (b) Date and Sixth streets; (c) Papst and Walker streets; (d) I-5 northbound ramps and SR 32; (e) I-5 southbound ramps and SR 32; and (f) Newville Road and County Road HH.
- Realign intersections of Papst and Yolo streets and County Road HH and County Road 14.
- Complete road connections at Papst and Road 13 and Rennat and Almond Way.
- Refer to Caltrans any request to signalize a State Route located in the City.

Goal 3.6: Encourage Transportation alternatives to the automobile.

Policy 3.6.B: The City shall encourage the use of car-pooling, vanpooling and flexible employment hours.

Program 3.6.B.1: New development shall consider Transportation System Management and Transportation Demand Management as strategies for the mitigation of traffic and parking congestion. Public transit, traffic management, ride sharing and parking management are to be used to the greatest extent practical.

Goal 3.8: A safe sidewalk system which provides maximum opportunities for pedestrian traffic throughout the City.

Policy 3.8.A: Adequate sidewalks shall be planned and constructed in connection with street construction work in the City. Where existing roads may require additional right-of-way to accommodate full improvements including sidewalks, and where it is impractical to acquire sufficient right-of-way, the vehicle travelway will be the first priority.

City of Orland Municipal Code

The City of Orland Municipal Code outlines internal circulation standards within the Community Commercial Zone:

> 17.40.070- Site organization: L. Design and locate a project's internal circulation pattern for maximum ease of movement and a minimum of safety hazards.
>
> 17.40.105- Service facilities: B. Provide convenient access for all service and emergency vehicles. Separate service drives from other on-site circulation patterns when possible.

3.8.3 Environmental Impacts

Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. Transportation impacts are considered significant when the Project would answer affirmatively to whether the project would:

1. conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?
2. conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
3. substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
4. result in inadequate emergency access?

Methodology

Level of Service Definition and Calculation

To quantitatively evaluate traffic conditions, and to provide a basis for comparison of operating conditions with and without traffic generated by the Proposed Project, LOS' were determined at study area intersections and at freeway ramp terminals. LOS is a quantitative measure of traffic operating conditions using letter grades "A" through "F" to characterize operating conditions at an intersection, on highways and at freeway ramp terminals. LOS A through F represents progressively worsening traffic conditions. The characteristics associated with the various LOS' for intersections and freeway merge-diverge areas are presented in **Table 3.8-3**.

Table 3.8-3. Level of Service Definitions

LOS	Signalized Intersection	Unsignalized Intersection	Freeway Ramp Terminal
A	Uncongested operations, all queues clear in a single-signal cycle. Delay < 10.0 sec	Little or no delay. Delay ≤10 sec/veh	Density < 10.0 pc/ln/mi
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and < 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤15 sec/veh	Density > 10 and < 20 pc/ln/mi
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and < 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤25 sec/veh	Density >20 and < 28 pc/ln/mi
D	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and < 55.0 sec	Long traffic delays. Delay >25 sec/veh and ≤35 sec/veh	Density >28 and < 35 pc/ln/mi
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and < 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤50 sec/veh	Density > 35 pc/ln/mi
F	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Demand Exceeds Capacity

Source: KD Anderson, 2019

LOS' were calculated for the TIA by KD Anderson using the methodology contained in the *2010 Highway Capacity Manual*. At signalized intersections and intersections controlled by four-way stop signs, the overall LOS for intersections is based on the average length of delays for all motorists at the intersection. At two-way stop sign-controlled unsignalized intersections (or one-way stop T-intersections), the LOS is based on the length of the average delay experienced by motorists on the worst single movement, which is typically a left turn made from the stop sign-controlled approach to the intersection. It should be noted that overall intersection average LOS at un-signalized intersections is better, often much better, than the LOS for the worst single movement.

LOS calculations for intersections specifically account for the presence of large trucks whose acceleration and deceleration characteristics differ from passenger vehicles. Both calculations include truck percentage as an input and reduce the theoretical facility capacity accordingly to account for the presence of large vehicles. As noted later in this chapter, current truck percentages were identified in the new traffic counts and adjusted under each scenario as needed to reflect future conditions.

Level of Service Based on Roadway Segment Volume

The Orland General Plan EIR addressed the LOS at a planning level on roadway segments based on daily traffic volume. The roadway segment LOS criteria identifies maximum daily traffic volume thresholds for

each LOS grade. Thresholds are identified based on facility classification (i.e., arterials, major collectors, minor collectors, and local roadways) and the number of through travel lanes. The thresholds presented in the City of Orland General Plan EIR are shown in **Table 3.8-4**.

Traffic volumes vary substantially during a 24-hour period and at locations within roadway segments. As a result, LOS based on roadway segments daily volume is an inherently generalized analysis approach that is intended to approximate conditions at the most congested locations during the peak period of the day.

Table 3.8.4. Existing LOS on Roadway Segments

Classification	Lanes	Maximum Daily Volume at LOS				
		A	B	C	D	E
Arterial	4	18,000	21,000	24,000	27,000	30,000
	2	9,000	10,500	12,000	13,500	15,000
	2+	13,500	15,750	18,000	20,250	22,500
Major Collector	2	7,620	8,890	10,160	11,430	12,700
Minor Collector	2	4,800	5,600	6,400	7,200	8,000
Local	2	2,700	3,150	3,600	4,050	4,500

Source: Orland General Plan EIR 2010b
Notes: 2+ indicates capacity created on Newville Road by second eastbound lane dropping onto SB SR-32 per Pilot Flying J Travel Center DEIR.

Level of Service Standards

Minimum LOS standards are adopted by local agencies and Caltrans for their respective facilities and presented in various documents.

Caltrans is responsible for maintaining and operating I-5 and SR-32. In accordance with guidance from Caltrans District 3, methods described in the *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002) were used in this analysis. This document notes that:

> "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' (see Appendix 'C-3') on State highway facilities . . ."

Therefore, for this analysis, LOS C and better are considered acceptable, and LOS D and worse is considered unacceptable at intersections along SR-32. The *Guide for the Preparation of Traffic Impact Studies* specifies application of these criteria to signalized intersections. The document does not specify a minimum acceptable LOS for un-signalized intersections. However, for this analysis, these criteria are also applied to un-signalized intersections.

The City of Orland General Plan Circulation Element identified the minimum standard adopted by the City.

> "Policy 3.3.A: Construct street and highway improvements to maintain an overall daily roadway Level of Service of "C" with an a.m. and p.m. peak hour roadway and intersection Level of Service of "D" or better, unless other public health, safety, or welfare factors determine otherwise."

Procedures for Traffic Signal Warrants

Traffic signal warrants are a series of standards which provide guidelines for determining if a traffic signal is appropriate. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign-controlled minor streets. If one or more signal warrants are met, signalization of the intersection may be appropriate. However, a signal should not be installed if none of the warrants are met, since the installation of signals would increase delays on the previously-uncontrolled major street, resulting in an undesirable increase in overall vehicle delay at the intersection. Signalization may also increase the occurrence of particular types of accidents. Therefore, if signals are installed where signal warrants are not met, the detriment of increased accidents and overall delay may be greater than the benefit in traffic operating conditions on the single worst movement at the intersection. Signal warrants, then, provide an industry-standard basis for identifying when the adverse effect on the worst movement is substantial enough to warrant signalization.

The City of Orland conducted a complete traffic signal warrant analysis for the I-5/SR-32 ramp intersections based on November 2016 data. That assessment determined that traffic signals were not immediately justified.

For this traffic impact study, available data are limited to a.m. and p.m. peak hour volumes. Thus, un-signalized intersections were evaluated using the Peak Hour Warrant (Warrant Number 3) from the Caltrans document entitled, "*Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California*) (MUTCD) (KD Anderson 2019). Urban analysis criteria were employed based on the speed limit on Newville Road – SR-32 (i.e., 35 mph). Existing a.m./p.m. peak intersection hours of service are depicted above in **Figure 12.**

Trip Generation of Proposed Project

The number of vehicle trips expected to be generated by development of the Project has been estimated based on trip generation rates that are applicable to the nature and size of Project land uses. Specific trip generation rates published by the Institute of Transportation Engineers (ITE) were used when available for known uses. Where no published data was available, a similar use was observed. Where a range of uses is possible, composite trip generation rates were created based on the typical mix of uses that is possible.

A set of composite trip generation rates was created for the Highway Commercial zoning based on a mix of gasoline station, restaurants, motel and specialty retail uses that might typically be expected in small centers near freeways. The resulting "per acre" trip generation rates are noted in **Table 3.8-5**.

There are no published trip generation rates for facilities that cater to large trucks and provide wash and repair services. For this analysis a similar truck wash in Corning was observed, and its p.m. peak hour automobile and truck activities were assumed to be applicable to the new truck wash uses.

Table 3.8-5. Typical Highway Commercial Trip Generation Characteristics

Land Use	Unit	Prototypical		Trips per Unit						
					AM Peak Hour			PM Peak Hour		
		Quantity	Acres	Daily	In	Out	Total	In	Out	Total
Gasoline with C-Store	fueling position			152.84	51%	49%	11.84	51%	49%	13.86
		12	1.0	1,834	72	70	142	85	81	166
Internal	25%			458	18	18	36	21	21	42
External	75%			1,376	54	52	106	64	60	124
Pass-by	50%			688	27	26	53	32	30	62
Net New External Trips	50%			688	27	26	53	32	30	62
Fast Food Restaurant	ksf	1		496.12	51%	49%	45.42	52%	48%	32.65
		3.5	1.0	1,736	81	78	159	59	55	114
Internal	25%			434	20	20	40	15	14	29
External	75%			1,302	61	58	119	44	41	85
Pass-by	62%-56%			729	38	36	74	25	23	48
Net New External Trips				573	23	22	45	19	18	37
Sit Down Restaurant	ksf	5.0		127.15	55%	45%	10.81	60%	40%	9.85
		5.0	1.0	636	30	24	54	30	19	49
Internal	25%			159	8	6	14	8	4	12
External	75%			477	22	18	40	22	15	37
Pass-by	43%			205	9	8	17	9	7	16
Net New External Trips				272	13	10	23	13	8	21
Hotel	rooms	1		8.17	59%	41%	0.53	51%	49%	0.60

Land Use	Unit	Prototypical		Trips per Unit						
					AM Peak Hour			PM Peak Hour		
		Quantity	Acres	Daily	In	Out	Total	In	Out	Total
		80	1.5	653	25	17	42	24	24	48
Internal	25%			163	6	5	11	6	6	12
Net New External Trips	75%			490	19	12	31	18	18	36
Retail - Shopping Center	Ksf	1		42.7	62%	38%	0.96	48%	52%	3.71
		16.0	1.5	683	10	6	16	28	31	59
Internal	25%			171	3	1	4	7	8	15
External	75%			512	7	5	12	21	23	44
Pass-by	34%			174	0	0	0	7	8	15
Net New External trips				338	7	5	12	14	15	29
Total Gross Trips	Total		6	5,542	217	196	413	226	210	436
			acre	923.67	53%	47%	68.83	52%	48%	72.67
	Internal			1,385	54	49	103	57	53	110
	External			4,155	163	147	310	169	157	326
			acre	692.5	53%	47%	51.66	51%	49%	54.33
Pass-by Trips				1,796			192			188
Total New Trips			6	2,359			221			251
				393.17	54%	46%	24.56	51%	49%	41.83

Source: KD Anderson, 2019

Table 3.8-6 notes the overall trip generation estimate. As shown, under these assumptions the uses in the Project could generate 2,736 daily trips, with 211 trips in the a.m. peak hour and 221 trips in the p.m. peak hour.

Table 3.8-6. Project Trip Generation Estimates

Area		Unit	Quantity	Trips Generated						
					AM Peak Hour			PM Peak Hour		
				Daily	In	Out	Total	In	Out	Total
1	2-Bay Truck Wash	-	-	150	7	11	18	11	7	18
	Highway Commercial Rate	acre	1	923.67	53%	47%	68.83	52%	48%	72.67
4	Highway Commercial		2.8	2,586	102	91	193	106	97	203
			Total	***2,736***	**109**	**102**	**211**	**117**	**104**	**221**

Source: KD Anderson, 2019

Trip Distribution

The geographic distribution of Project-related trips used in this analysis is based on consideration of the nature of the proposed uses and distribution patterns assumed in the Orland General Plan Update EIR traffic study and Pilot Flying J DEIR traffic study. There are two key factors to be considered. Based on its location, many of the trips associated with the highway commercial uses will be drawn from the stream of traffic passing the site on I-5 or SR-32. Automobile trips would be expected to be drawn from existing traffic on state highways, but a share of the Project's automobile traffic may originate in Orland. Truck traffic is expected to be drawn primarily from vehicles that are already part of the 25 percent of current daily traffic on I-5. Automobile and truck trips could also be drawn from the traffic already visiting the Pilot Flying J.

Under normal conditions, the trips associated with retail uses are divided between "primary", "diverted linked", "pass-by" and "internal" trips. Primary or "new" trips represent those trips specifically made for the purpose of visiting the site. These trips would affect the Project access as well as the local and regional circulation system. Pass-by trips are those made as part of another trip by patrons who simply turn into the project. Pass-by trips would not affect the regional circulation system. Link diverted trips are those that already occur on part of the regional circulation system but may use local streets to reach the project. In this case, trips drawn from existing traffic on I-5 to the project are diverted linked trips. "Internal" trips are those made between complementary uses in the same area that do not actually use the circulation system. Because the volume of through traffic on Newville Road and County Road HH is low, it has been assumed that the project's trips drawn from traffic on I-5 are diverted-linked trips that would be "new" to the local street system. Trips made by Flying J customers or trips made between complimentary onsite uses on the site would be "internal". The project would create few new "primary" trips on I-5.

Table 3.8-7 presents the assumptions made regarding the directional distribution of project trips.

Table 3.8-7. Project Trip Distribution

Direction	Route	Percentage
North	Interstate 5	22%
South	Interstate 5	16%
	County Road HH	6%

Direction	Route	Percentage
East	Newville Road (SR-32) beyond 8th Street	26%
West	Newville Road	5%
Internal	(Flying J)	25%
	Total	**100%**

Source: KD Anderson, 2019

Trip Assignment

The trips generated by the Proposed Project were assigned to the study area street system based on the location of site access and the regional distribution patterns noted previously. **Figure 13. Project Only Traffic Volumes and Lane Configurations** presents the resulting trip assignment for the Proposed Project.

Project Impact Analysis

Impact 3.8.1: Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities

Threshold:	*Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?*

Currently, the City does not have a bicycle or trails plan. All bicycle and pedestrian facilities are guided by policies and programs in the General Plan. For example, Policy 3.8 states that a safe sidewalk system that provides maximum opportunities for pedestrian traffic throughout the City shall be maintained.

The Project may result in impediments to safe travel by pedestrians and bicyclists who would travel between the site and the balance of the Orland area east of I-5. The number of pedestrians is not likely to be appreciable, and the safe path of travel to Orland that was created with the Pilot Flying J project will remain upon construction of the Proposed Project. In order to mitigate impacts to pedestrian safety to be less than significant, mitigation measure **TRAN-1** shall be implemented. mitigation measure **TRAN-1** requires sidewalks along the frontage and a crosswalk across Commerce Lane and County Road 13 to the Pilot Flying J site should be included.

Bus service is provided to the City of Orland through Glenn Ride. This system provides seven round trips every weekday and three round trips on Saturday from Willows to Chico. There are currently 14 bus stops in Orland. These transit options would remain intact and not otherwise be affected by the Project. Therefore, impacts related to existing alternative transportation would not result from the Project, and the Proposed Project would not conflict with adopted policies, plans, or programs supporting alternative transportation. Implementation of the Proposed Project will not conflict with adopted policies, plans, or programs supporting alternative transportation.

The Proposed Project mitigation measure **TRAN-1** will require the Project applicant to incorporate a designated pedestrian crossing into improvements to the County Road HH/County Road 13 intersection. These improvements will assist in the creation of pedestrian pathways adjacent to the site. and mitigate this impact to a less than significant level.

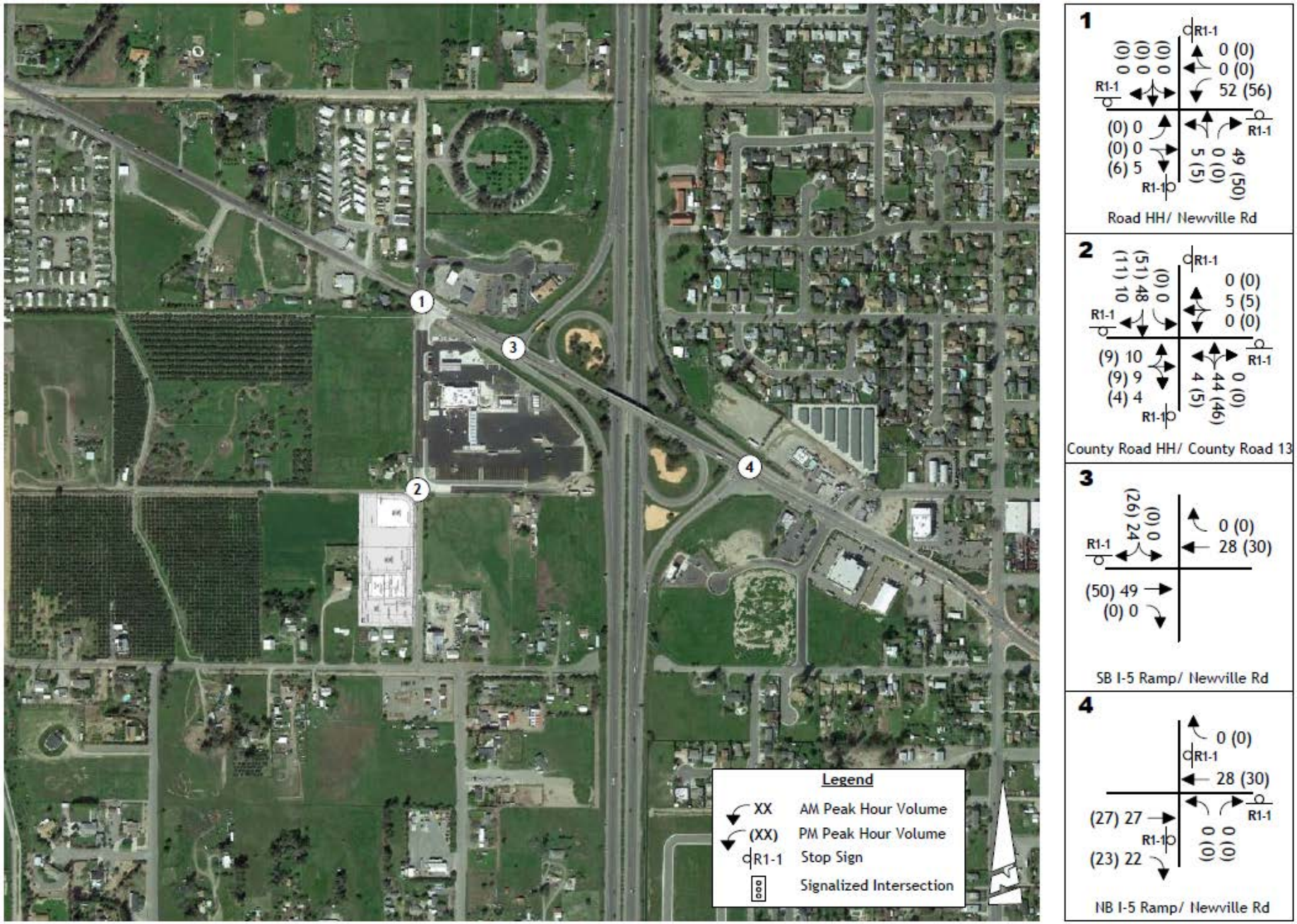

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Figure 13. Project Only Traffic Volumes and Lane Configurations

Sunny Truck Service Center Project

Impact 3.8.2: Result in a substantial Increase in Traffic Volume (VMT or LOS) – Existing Plus Project

Threshold:	*Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?*

CEQA Guidelines Section 15064.3, subdivision (b) provides criteria for analyzing transportation impacts based on a vehiVMT methodology instead of the now superseded (as of January 1, 2019) LOS methodology. Pertinent to the Proposed Project are those criteria identified in Section 15064.3(b)(1) Land Use Projects. According to this section:

> "Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor[1] should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact."

However, Section 15064.3(b)(3) allows an agency to determine a project's transportation impact on a qualitative basis if a VMT methodology is unavailable, as is the case with the Proposed Project.

Section 15064.3(b)(3) is as follows:

> "Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate."

Additionally, Section 15064.3(c) allows an agency to use the VMT methodology immediately or defer until July 1, 2020 when the VMT methodology is required of all agencies in the state. Section 15064.3(c) is as follows:

> "The provisions of this section shall apply prospectively as described in section 15007. 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."

Because the City does not have an adopted VMT methodology at this time, the City has chosen to defer to the existing LOS methodology to determine the Project's impact to local roadways.

[1] "High-quality transit corridor" means an existing corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. For the purposes of this Appendix, an "existing stop along a high-quality transit corridor" may include a planned and funded stop that is included in an adopted regional transportation improvement program.

Existing Plus Project Conditions

Existing Plus Project Conditions Traffic Volumes

Existing Plus Project conditions traffic volumes are derived by adding trips forecast to be generated by the Proposed Project to existing traffic volumes. **Figure 14. Existing Plus Project Traffic Volumes and Lane Configurations** shows the existing plus project conditions in terms of AM and PM peak-hour volumes at the study intersections. The Project would have a less than significant impact to traffic volumes.

Table 3.8-8 summarizes existing plus project conditions AM and PM peak-hour LOS of the study intersections. As shown, the addition of Project-generated traffic results in slightly longer delays at the study intersections on Newville Road and SR-32. However, at all locations the average delays are indicative of conditions that satisfy the City's LOS D minimum standard. Thus, the Project would have a **less than significant** impact on intersection LOS.

Table 3.8-8. Existing Plus Project Level of Service

Intersection	Control	AM Peak Hour				PM Peak Hour			
		Existing		EX plus Project		Existing		EX Plus Project	
		Ave Delay (Sec/Veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (Sec/Veh)	LOS	Ave Delay (sec/veh)	LOS
Newville Road/ County Road HH	All-Way Stop	12	B	13	B	13	B	15	B
Newville Road (SR-32)/ SB I-5 ramps SB approach	SB Stop	15	C	16	C	21	C	25	D
Newville Road (SR-32)/ NB I-5 ramps	All-Way Stop	12	B	13	B	15	B	16	C
County Road HH /Road 13	All-Way Stop	8	A	8	A	8	A	9	A

Source: KD Anderson, 2019

Existing Plus Project Conditions Signal Warrant Analysis

The TIA indicates that projected traffic volumes with the Project remain below the level that would satisfy traffic signals. As such, no new traffic signals are required with implementation of the Proposed Project. Therefore, the Project would have a **less than significant** impact in this area.

Conclusion

As shown in **Table 3.8-9** and **Figure 14**, based on the City of Orland's thresholds of significance for City roadway facilities, the addition of Project-generated trips is not forecast to result in a significant impact at the intersection of Road HH/ Newville Road, County Road HH/ County Road 13, SB 1-5 Ramp/ Newville road, or NB 1-5 Ramp/ Newville Road during PM peak hour.

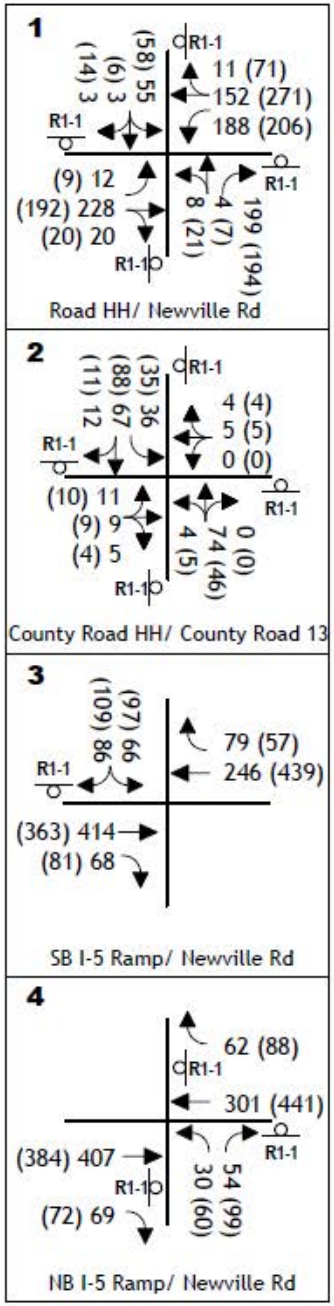

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Figure 14. Existing Plus Project Traffic Volumes and Lane Configurations

Sunny Truck Service Center Project

The Proposed Project would result in an increase in traffic under the existing plus project scenario. However, the increase in traffic would not be substantial in relation to the existing traffic load and capacity of the street system or exceeds an established level of service standard (i.e., results in a substantial increase in either the volume-to-capacity ratio and/or the level of service at intersections). This impact is thus considered **less than significant.**

Impact 3.8.3: Roadway or Traffic Hazard

Threshold:	*Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Existing and Proposed Roadways

The Project site plan indicates that the Project requires an entrance on County Road 13. A stop sign presently located on the east side of the intersection of County Road HH and County Road 13 is to be relocated. The Proposed Project does not include plans for the alteration of existing roadways or the construction of new roadways. Mitigation required for the Proposed Project will, however, require road improvements for enhanced safety improved flow of traffic.

Left Turn Channelization

The project will result in full size trucks and automobiles turning into and out of the site via access on Commerce Lane (County Road HH) and via County Road 13. The City of Orland required that the recently constructed Pilot Flying J Project respond to that activity on County Road HH by widening the road to provide a separate southbound left turn lane at the County Road 13 intersection. Ultimately County Road HH will be widened in the area north of County Road 13 when adjoining property is developed to create a continuous two-way left-turn lane.

The addition of trucks as a result of the Proposed Project will create conflict relating to the turning requirements of large trucks on the southwest corner of the intersection. Without improvements, trucks turning in this area will leave the pavement or conflict with vehicles in opposing lanes. This is a significant safety impact.

Development of the Project will create similar turning movements but arguably many fewer trucks than Pilot Flying J. Thus, projected traffic volumes do not create the immediate need for a separate northbound left turn lane at the truck wash access, but the Project's frontage improvements should be positioned so as to accommodate a continuous southbound left turn lane when future west side improvements occur. Mitigation measure **TRAN-2** shall be implemented, which would require the widening of the intersection to reduce safety impacts due to left turn channelization to a less than significant level.

Truck Turning Requirements

The Project will result in full size trucks (Surface Transport Assistance Act [STAA]) turning into and out of the site via the access on County Road HH and on County Road 13. The Newville Road/County Road HH intersection has already been widened to accommodate trucks and the northeast corner of the County Road HH/County Road 13 intersection can accommodate truck turns.

As mentioned previously, the Project's truck entrance on County Road HH will need to be designed to accommodate truck movements, through the implementation of mitigation measure **TRAN-2**. The turning requirements of large trucks (i.e., STAA trucks) will need to be reviewed when final plans for Project frontage improvements at the County Road HH/Road 13 intersection are prepared.

Summary of Impacts

Implementation of the Proposed Project will result in increased hazards due to left turn conflicts at the County Road HH/County Road 13 intersection. These impacts are considered a potentially significant and as such, mitigation is required. However, implementation of mitigation measure **TRAN-2** would reduce this impact to a **less than significant** level.

Impact 3.8.4: Emergency Access

Threshold:	*Result in inadequate emergency access?*

As shown on **Figure 6**, access to the Project site would be provided by County Road HH and County Road 13. The Proposed Project will not impede the use of either roadway by emergency vehicles. The Project provides three driveways to the site allowing access to all areas of the site. Having multiple driveways would allow adequate access to the site in the event that one or two of the driveways became unusable during an emergency event. As with all development projects in the City, any future development of the remaining parcels will be reviewed for site access by the City Fire Chief including adequate emergency access. In addition, all roadway improvements required for mitigation purposes would be required to safety standards to ensure they are designed properly and would not create a hazard. Compliance with existing City policies, which would be evaluated through the City's existing review process, would ensure this impact would be **less than significant.**

3.8.4 Mitigation Measures

TRAN-1 **Create safe pedestrian crossing.** The Project proponents shall incorporate a crosswalk into improvements to the County Road HH/County Road 13 intersection and install sidewalks along the Project frontage as development proceeds. With this improvement, pedestrians will be able to safely walk along and cross Commerce Lane and County Road 13.

Timing/Implementation: *Prior to finalization of plans for project frontage improvements at the County Road HH/Road 13 intersection*

Enforcement/Monitoring: *City of Orland Engineer and Project proponents*

TRAN-2 **Widen the southwest corner of the County Road HH/County Road 13 intersection.** The Project proponent shall be responsible for widening the intersection of County Road HH/County Road 13 to the satisfaction of the City Engineer. The road widening plans shall be approved by the City Engineer prior to finalization of plans for project frontage improvements. With this improvement the, large trucks will be able to turn without exiting the roadway or entering an adjacent lane.

Timing/Implementation: *Prior to finalization of plans for project frontage improvements at the County Road HH/Road 13 intersection*

Enforcement/Monitoring: *City of Orland Engineer and Project proponents*

3.8.5 Residual Impacts after Mitigation

The Project has potential to result in significant safety impacts both to pedestrians and due to trucks making left turns on County Road HH/County Road 13. However, through the implementation of mitigation measures **TRAN-1** and **TRAN-2**, these impacts will be reduced to a less than significant level and no residual impacts will remain.

TRAN-1 will require the addition of a crosswalk to the County Road HH/County Road 13 intersection and the installation of sidewalks along the project frontage. **TRAN-2** shall be implemented to require the widening of the County Road HH/County Road 13 intersection to allow large trucks to safely make left turns.

3.8.6 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

This report section describes the cumulative impacts of the Proposed Project within the context of two cumulative conditions. The first condition assumes occupancy of other approved projects in this area. The second longer term cumulative condition is based on the Orland General Plan EIR. The text which follows describes the approach used to forecast future "Cumulative" traffic volumes under "No Project" and "Plus Project" conditions.

Scenarios

Scenario 1: Short-Term Cumulative Impacts- Hotel-Restaurant Project and With Versus Without Truck Wash:

The City of Orland considered and approved an application for a development on a three-acre portion of the property across County Road HH from the Pilot Flying J. That project, which involved an 80-room hotel and a 6,000-sf high turnover sit down restaurant with access to both County Road HH and County Road 13, was the subject of a traffic analysis conducted in 2016[2]. This project was forecast to generate 211 trips in the a.m. peak hour and 221 trips in the p.m. These trips would be assigned to the local street system based on trip distribution assumptions that were similar to those identified for the proposed Truck Wash/Commercial project.

[2] TIA for Hotel/Restaurant Near Pilot Flying J Truck Stop In Orland, CA, KDA, August 8, 2016**.**

Scenario 2: Long-Term Cumulative Impacts- Hotel-Restaurant Project and With Versus Without Truck Wash:

The Orland General Plan Update EIR traffic study included creation of a local traffic assignment model to address the overall effect of community development as well as through traffic increases on state highways. The General Plan Projects a build-out year of 2028, which is utilized for the long-term analysis. For this analysis, this tool was reviewed to identify assumptions regarding regional through traffic and development on the subject site.

Land Use: The General Plan EIR traffic model assumed development would occur at various locations throughout Orland over the life of the General Plan. The following list summarizes land use development assumed in that study:

- 1,209 single-family dwelling units,
- 192 multiple-family dwelling units,
- 290,610 building square feet of retail commercial uses,
- 8.90 acres of office land use,
- 61.97 acres of light industrial/commercial use, and
- 23.31 acres of heavy industrial use.

The Orland General Plan 2008-2028 EIR traffic study made assumptions regarding development in the area west of I-5. A total of 8.3 acres of commercial development was assumed in the area south of Newville Road and north of County Road 14. This development was assumed to be in the general area of the Pilot Flying J Travel Center site.

As noted above, the City of Orland considered and approved an application for development on a three-acre portion of the property with an 80-room hotel and a 6,000-sf high turnover sit down restaurant with access to both County Road HH and County Road 13. Together this Project and the Pilot Flying J Travel Center would occupy acreage that was similar to but larger than the allocation made in the General Plan EIR.

For this analysis, two cumulative land use scenarios have been evaluated under short-term versus long-term cumulative conditions:

1. **Cumulative, Plus Project, Plus Approved Project (Hotel-restaurant Project):** Development per the General Plan EIR in Orland, including the hotel and restaurant on County Road HH, *with the Proposed Project*.

2. **Cumulative Plus Hotel-Restaurant Only Conditions:** *No development on Project site* but development per the General Plan EIR elsewhere in Orland, including the hotel and restaurant on County Road HH.

Cumulative Impacts and Mitigation Measures

Impact 3.8.5: Cumulative Traffic Impacts on Local Roadways and Highway Ramps

Threshold	*Would the project, when considered with existing, proposed, planned, and approved development in the region, implementation of the proposed project would contribute to cumulative traffic volumes on local roadways that result in significant impacts to level of service and operations?*

Evaluation of Short-Term Cumulative Conditions

Traffic Volumes: **Figure 15- Cumulative Plus Project and Hotel – Restaurant Traffic Volumes and Lane Configurations** illustrates short term future peak hour traffic volumes assuming that the Proposed Project proceeds and the hotel/restaurant project is occupied. **Table 3.8-9**- Peak Hour Intersection LOS presents the short-term LOS projected at study intersections if both the proposed and approved projects proceed. As shown the minimum LOS D standard will still be satisfied.

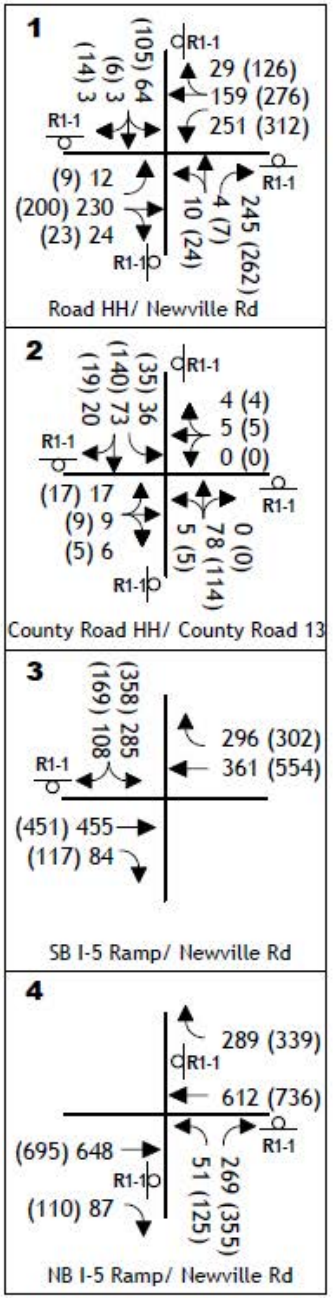
Table 3.8-9: Short-Term Cumulative, Project, and Hotel-Restaurant Project Projected Peak Hour Intersection LOS

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Cumulative, Project, and Hotel-Restaurant		Cumulative, Project, and Hotel-Restaurant	
		Average Delay (Sec/Veh)	LOS	Average Delay (Sec/Veh)	LOS
Newville Rd/County Road HH	All-Way Stop	15	C	17	C
Newville Rd (SR-32)/SB I-5 ramps SB approach	SB Stop	18	C	31	D
Newville Rd (SR-32)/NB I-5 ramps	All-Way Stop	14	B	18	C
County Rd HH/Road 13	All-Way Stop	9	A	9	A

Source: KD Anderson, 2019

Traffic Signal Warrants: The short-term volume of traffic forecast at study intersections under (1) cumulative and no Project, (2) cumulative with Project, and (3) cumulative with both Project and hotel-restaurant was compared to MUTCD peak hour warrant requirements to see whether traffic signals will be justified. As indicated in **Table 3.8-10**, signal warrants do not carry volumes that satisfy peak hour warrants at the Newville Road/County Road HH intersection, either of the two I-5 ramp intersections, or the intersections on County Road HH south of Newville Road.

As noted previously in the discussion of intersection LOS', funding for these traffic signals has been identified in the City traffic impact mitigation fee program.



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 15. Cumulative Plus Project and Hotel-Restaurant Traffic Volumes and Lane Configurations

Table 3.8-10. Short-Term Traffic Signal Warrants for the Cumulative No Project, Cumulative with Project, and Cumulative with Project and Hotel-Restaurant Scenarios

Location	AM Peak Hour			PM Peak Hour		
	No Project	With Project	With Project and Hotel/ Restaurant	No Project	With Project	With Project and Hotel/ Restaurant
Newville Rd/Commerce Lane (County Road HH)	No	No	No	No	No	No
Newville Rd/SB I-5 ramps	No	No	No	No	No	No
Newville Rd/NB I-5 ramps	No	No	No	No	No	No
County Road HH/Road 13	No	No	No	No	No	No

Source: KD Anderson, 2019

Evaluation of Long-Term Cumulative Conditions

Traffic Volume Forecasts: Traffic volume forecasts were created for the two cumulative scenarios using the General Plan EIR traffic model. The model was modified to make use of current traffic volumes in the area of the project and to address the presence of Flying J in those new counts. **Figure 16. Cumulative Hotel-Restaurant Only Traffic Volumes and Lane Configurations** presents the cumulative hotel-restaurant only conditions at study area intersections, while **Figure 15** presents the peak hour volumes under cumulative Project and hotel-restaurant conditions.

These figures also illustrate assumed intersection geometry. As shown, while the City's traffic impact fee program includes funds for improvements to study intersections, no improvements have been assumed in order to determine the extent of Project impacts. Those funded improvements are presented as mitigations.

Intersection LOS': Projected LOS' at study area intersections with and without the Project assuming no improvements are made are noted in **Table 3.8-11**. As indicated, the two un-signalized intersections on SR-32 at the I-5 ramps intersections are projected to operate with LOS' that exceed the City's LOS D standard with and without the Proposed Project if improvements are not made (LOS F). The Project's trips will exacerbate conditions that are forecast to be deficient, and the Project's cumulative impact is significant at these locations.

At the Newville Road/SB I-5 ramps intersection an all-way stop with auxiliary southbound right turn lane would still result in LOS F in the p.m. peak hour. A traffic signal would operate at LOS C with and without the Project. A traffic signal at this location is currently included in the City traffic impact mitigation fee program.

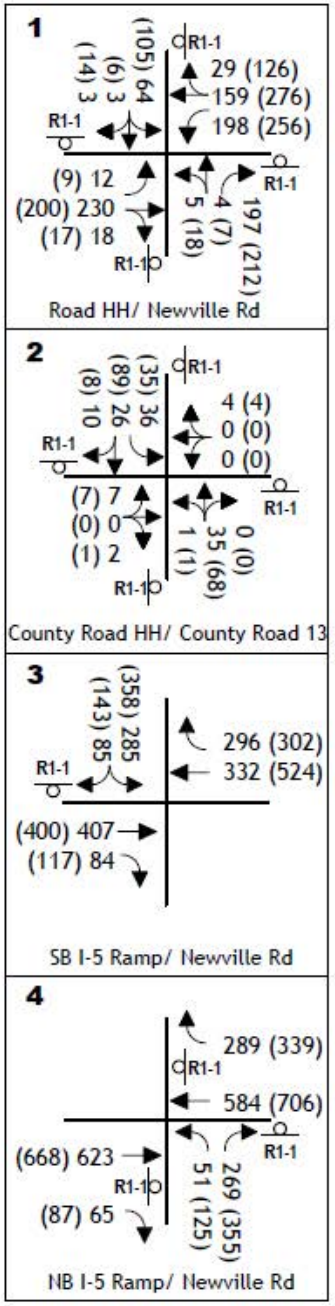


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Figure 16. Cumulative Hotel-Restaurant Only Traffic Volumes and Lane Configurations

Sunny Truck Service Center Project

Similarly, the Newville Road (SR-32)/NB I-5 ramps intersection would operate at LOS C with a traffic signal. A traffic signal at this location is currently included in the City's traffic impact mitigation fee program.

As indicated, the existing configuration of the Newville Road/Commerce Lane (County Road HH) intersection would deliver LOS C under Cumulative plus Project conditions. Thus, it may not be necessary to install a traffic signal at this location unless coordinated operation of multiple signalized intersections is required. Review of the City's existing traffic impact mitigation fee program indicates that a traffic signal at this location is currently included.

The LOS' occurring at the County Road HH/County Road 13 intersection are projected to be LOS B or better with or without the Project which satisfies the City's minimum LOS D standard. No additional improvements are needed beyond the Project's frontage improvements on the southeast corner.

Table 3.8-11. Long-Term Cumulative Intersection LOS- Cumulative Plus Hotel-Restaurant Versus Cumulative Plus Hotel-Restaurant Plus Project

Intersection	Control	AM Peak Hour				PM Peak Hour			
		Cumulative Plus Hotel-Restaurant		Cumulative Plus Hotel-Restaurant Plus Project		Cumulative Plus Hotel-Restaurant		Cumulative Plus Hotel-Restaurant Plus Project	
		Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
Newville Road/County Road HH	All-Way Stop	14	B	16	B	20	C	24	C
	Signal	32	C	33	C	29	C	29	C
Newville Road (SR-32)/SB I-5 ramps SB approach	SB Stop	127	F	199	F	417	F	540	F
	Signal	25	C	26	C	27	C	29	C
Newville Road (SR-32)/NB I-5 ramps	All-Way Stop	107	F	124	F	163	F	183	F
	Signal	26	C	27	C	26	C	26	C
Commerce Lane (County Road HH)/County Road 13	All-Way Stop	8	A	9	A	9	A	9	A

Source: KD Anderson, 2019

Traffic Signal Warrants: The volume of traffic forecast at study intersections under Cumulative and Cumulative plus Project conditions was compared to MUTCD peak hour warrant requirements to see whether traffic signals will be justified in the future. As indicated in **Table 3.8-12**, the Newville Road/Commerce Lane (County Road HH) intersection carries volumes that approach but may not satisfy peak hour warrants. Signal warrants are satisfied at the two I-5 ramp intersections with and without the Project. None of the intersections on County Road HH south of Newville Road carry volumes that satisfy peak hour warrants.

As noted previously in the discussion of intersection LOS', funding for these traffic signals has been identified in the City traffic impact mitigation fee program.

Table 3.8-12. Cumulative Traffic Signal Warrants

Location	AM Peak Hour		PM Peak Hour	
	No Project	With Project	No Project	With Project
Newville Rd/Commerce Lane (County Rd HH)	No	No	No	No
Newville Rd/SB I-5 ramps	Yes	Yes	Yes	Yes
Newville Rd (SR-32)/NB I-5 ramps	Yes	Yes	Yes	Yes
County Rd HH/Road 13 intersection	No	No	No	No

Source: KD Anderson, 2019

As also shown in **Table 3.8-12**, based on City of Orland thresholds of significance, the addition of Project-generated trips is forecast to result in cumulatively considerable impacts at the following two study intersections under cumulative with Project conditions, requiring mitigation measures:

- Newville Rd/SB I-5 ramps (both AM and PM peak hour only)
- Newville Rd (SR-32)/NB I-5 ramps (both AM and PM peak hours)

Roadway Segment LOS'. Table 3.8-13 identifies projected daily traffic volumes on study area roads with and without the Proposed Project and uses that information to determine the planning level LOS for each facility. Because a comprehensive analysis of existing daily traffic volumes was not performed, this analysis makes use of data from the Pilot Flying J DEIR traffic study. As noted earlier the City's minimum LOS based on daily volume is LOS C.

No Project Conditions. As shown, if the Proposed Project does not proceed, the long-term background traffic volume on SR-32 will exceed the LOS C threshold between the SB I-5 ramps and the NB I-5 ramps. In addition, the daily volume on County Road HH would exceed the LOS C threshold for a two-lane Minor Collector. Improvements to a Major Collector standard will be needed, and this improvement was acknowledged in the Pilot Flying J DEIR.

Cumulative Plus Project Conditions. The addition of trips generated by the Project will increase the cumulative traffic volume on study area streets. Streets that were deficient without the Project would now operate with LOS that exceeds the LOS C standard.

The volume of traffic on SR-32 over I-5 would be indicative of LOS F, and the Project would exacerbate the deficient "No Project" conditions. This is considered a cumulatively considerable impact

Measures to improve the LOS on study area roadway segments have been evaluated, however, it is important to note that in urban areas the flow of traffic through major intersections is generally the controlling factor for the quality of traffic flow. Thus, if the intersections can be made to operate with an adequate LOS, the intermediate roadway segments typically perform adequately even though the planning level LOS suggests otherwise.

The structure over I-5 would theoretically have to be widened between the southbound and northbound I-5 ramps to deliver LOS C based on City thresholds. This level of improvement has not been

contemplated in the City General Plan or in the SR-32 TCR. Modifications to the SR-32 structure over I-80 are not included in the City's traffic impact mitigation fee program.

On County Road HH development of a two-lane Major Collector-Arterial type roadway would provide additional capacity and deliver LOS C under Cumulative Plus Project conditions.

Table 3.8-13. Cumulative Plus Project Roadway Segment LOS

Street	From	To	Class	Lanes	Cumulative		Cumulative Plus Project		
					Daily Volume	LOS	Project Only	Total	LOS
Newville Road	Co Rd HH	I-5 SB ramps	Arterial	2+	13,595	B	1,320	14,915	B
SR-32	I-5 SB ramps	I-5 NB ramps		2	**17,030**	**F**	**1,020**	**18,050**	**F**
County Rd HH Commerce Lane	Newville Road	County Road 13	Minor Col	2	**6,950**	**D**	**1,450**	**8,400**	**E**
			Major Col	2				8,400	A
	County Road 13	County Road 15	Minor Col	2	1,320	A	1,310	2,630	A

Source: KD Anderson 2019
Notes:
Bold values exceed the City of Orland LOS C threshold for daily volume based on LOS.
Highlighted values are a significant impact.
2+ indicates the addition of a second eastbound lane dropping onto the southbound on-ramp

3.8.7 Conclusion

Short-Term Cumulative Impacts

Because satisfactory conditions remain, no additional mitigation is required.

Long-Term Cumulative Impacts

Impact to LOS at Newville Road/SB I-5 Ramps intersection: The addition of Project-generated automobile and truck traffic and cumulative background traffic (resulting from other development and through traffic on SR-32) will result in the off-ramp approach to the Newville Road/SB I-5 ramps intersection operating with LOS F conditions. This is a significant impact as LOS F exceeds the City's LOS D standard during peak hour or LOS C during non-peak hours. In the long term, traffic conditions would exceed thresholds of significance both with the Project only and with the Project plus approved hotel-restaurant Project. To mitigate this cumulative impact to a less than significant level in the long-term, mitigation measures **TRAN-3** is required.

Impact to LOS at Newville Road/NB I-5 ramps intersection: The addition of Project generated automobile and truck traffic and cumulative background traffic resulting from other development and through traffic on SR-32 will result in the off ramp operating with LOS F conditions. This is a significant impact as LOS F exceeds the City's peak-hours LOS D standard and non-peak hours LOS C standard. In the long-term, traffic conditions would exceed thresholds of significant both with the Project only and with the Project

plus approved hotel-restaurant project. To mitigate this cumulative impact to a less than significant level in the long-term, mitigation measures **TRAN-4** is required.

Impact to LOS at Newville Road/County Road HH intersection: The addition of Project generated automobile and truck traffic and cumulative background traffic resulting from other development may not result in satisfaction of traffic signal warrants at the Newville Road/County Road HH intersection, but because the traffic signal is also needed to ensure coordinated operation of the signals along SR-32, this is a significant impact. To mitigate this cumulative impact to a less than significant level in the long-term, mitigation measures **TRAN-5** is required.

Impact to LOS on Newville Road (SR-32) between SB I-5 and NB I-5 ramps based on Daily Traffic Volume: The addition of Project generated automobile and truck traffic and cumulative background traffic resulting from other development in Orland will result in total daily traffic volumes on Newville Road that exceed the LOS C standard for a two-lane arterial street. This is a significant impact. To mitigate this cumulative impact to a less than significant level in the long-term, mitigation measures **TRAN-6** is required.

Table 3.8-14. Fair Share Calculation

	Traffic Volume				Fair Share	
	A	B	C	D		
	Existing	Pre-Pilot Flying J*	Project Only	Cumulative Plus Project	Percent of all Traffic (C/D)	Percent of New Traffic C/ (D-B)
Based on PM Peak Hour Traffic						
Newville Rd/County Rd HH	952	660	39	1,285	3%	6%
Newville Rd (SR-32)/SB I-5 ramps	1,040	771	35	1,879	2%	3%
Newville Rd (SR-32)/NB I-5 ramps	1,063	857	26	2,306	1%	2%

Source: KD Anderson, 2019
Notes:
(C/D) is fair share based on all future traffic
< C/ (D-B) > is fair share as a percentage of "new" future traffic only
(*) source: Traffic Impact Analysis for Pilot Flying J Travel Center and Annexation, KDA, 1/7/2015

Cumulative Mitigation Measures

TRAN-3 **Newville Road/Southbound I-5 Ramps.** The Project shall contribute its fair share of three percent of the cost to widen the Newville Road/SB I-5 Ramps intersection off-ramp to provide a separate right turn lane and installing a traffic signal.

Timing/Implementation: *Prior to issuance of Building Permit*

Enforcement/Monitoring: *City of Orland Engineer and Project Proponents*

This improvement would result in LOS B conditions, which satisfy the City's minimum LOS D standard. Implementation will require work within the Caltrans right-of-way and an encroachment permit would be

required. A traffic signal is identified in the City General Plan EIR and is in the City's traffic impact mitigation fee program. Because this improvement is not required solely as a result of the Project, Project proponents should contribute their fair share to the cost of this mitigation. With this mitigation, the project's cumulative impact would be **less than cumulatively considerable**.

TRAN-4 **Newville Road/Northbound I-5 Ramps.** The Project shall contribute its fair share of two percent of the cost of installing a traffic signal at the Newville Road/NB I-5 ramps intersection.

Timing/Implementation: *Prior to issuance of Building Permit*

Enforcement/Monitoring: *City of Orland Engineer and Project Proponents*

This improvement would result in LOS C conditions, which satisfy the City's minimum LOS D standard. Without this mitigation measure, LOS F is expected to result at the Newville Road/NB I-5 ramps intersection Implementation will require work within the Caltrans right of way and an encroachment permit would be required. This improvement is identified in the City General Plan EIR and is in the City's traffic impact mitigation fee program. Because this improvement is not required solely as a result of the Project, Project proponents should contribute their fair share to the cost of this mitigation. With this mitigation, the project's impact would be **less than cumulatively considerable**.

TRAN-5 **Newville Road/County Road HH intersection.** The Project shall contribute its fair share of one percent of the cost of installing a traffic signal at the Newville Road/County Road HH intersection.

Timing/Implementation: *Prior to issuance of Building Permit*

Enforcement/Monitoring: *City of Orland Engineer and Project Proponents*

This improvement would result in LOS C conditions, which satisfy the City's minimum LOS D standard. This mitigation measure will ensure the satisfaction of traffic signal warrants at the Newville Road/County Road HH intersection, but because the traffic signal is also needed to ensure coordinated operation of the signals along SR-32. Implementation will require work within the Caltrans right-of-way and an encroachment permit would be required. This improvement is identified in the City General Plan EIR and is in the City's traffic impact mitigation fee program. Because this improvement is not required solely as a result of the Project, Project proponents should contribute their fair share to the cost of this mitigation. With this mitigation, the Project's cumulative impact would be **less than cumulatively considerable**.

TRAN-6 **Traffic Signals on Newville Road.** The Project shall contribute its fair share of one percent to the cost of coordinating traffic signals on Newville Road.

Timing/Implementation: *Prior to issuance of Building Permit*

Enforcement/Monitoring: *City of Orland Engineer and Project Proponents*

To deliver LOS C conditions it would be necessary to widen SR-32 to provide additional lanes on the crossing structure. However, this improvement is not included in the General Plan EIR or the City's traffic impact fee program. Widening the structure is not identified in the SR-32 Transportation Concept Report (TCR). Thus, there is no identified funding mechanism for a project of this magnitude and is unreasonable to expect that local development in Orland would be capable of funding this improvement. As noted earlier, short roadway segments can carry high traffic volumes but operate adequately when the intersections have the capacity to handle peak period traffic volumes at a good LOS. This is the case with the intersections on SR-32 that are expected to operate at LOS C or better with identified improvements. Coordinating the operation of the study area signals with the operation of the signals further east on SR-32 will be appropriate. Because this improvement is not required solely as a result of the Project, Project proponents should contribute their fair share to the cost of this mitigation.

Implementation of this mitigation measure will require work within the Caltrans right-of-way and an encroachment permit would be required. Because of a lack of programmatic funding mechanism for the coordination of signals, this mitigation measure cannot be assumed to be implemented. As such, this impact would be considered **cumulatively considerable** and **significant and unavoidable impact**.

3.8.8 References

Caltrans

2002 Need reference - *Guide for the Preparation of Traffic Impact Studies in section 3.8.2*

City of Orland

2010a General Plan 2008-2028. http://cityoforland.com/_documents/DraftGeneralPlanOct2010.pdf.

2010b *City of Orland General Plan Update Draft Environmental Impact Report*. http://cityoforland.com/_documents/OrlandGeneralPlanDEIR27-0153_FINAL6-25.pdf.

2019 Municipal Code. https://library.municode.com/ca/orland/codes/code_of_ordinances.

[Glenn] Glenn County General Plan.

1993a Policy Plan, Volume I. https://www.countyofglenn.net/sites/default/files/images/1%20Policy%20Plan%20Glenn%20County%20General%20Plan%20Vol.%20I%20Reduced%20Size.pdf.

KD Anderson and Associates Inc.

2019 Traffic Impact Analysis for Orland Truck Wash/ Commercial.

Michael Baker International

2016 Gateway to Temecula Project Traffic Impact Analysis.

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SECTION 3.9 TRIBAL CULTURAL RESOURCES

This section considers and evaluates the potential impacts of the Proposed Project on cultural resources of the California Native American tribes. This section describes the affected environment and regulatory setting for Tribal Cultural Resources in the Project Area. The following information is based on the Cultural Resources Inventory Report prepared by ECORP Consulting, Inc. (2019).

Prehistoric information of the California Native Americans has been previously discussed in **Section 3.5.** The reader is referred to that section for further information on California Native Americans during the prehistoric time period.

3.9.1 Environmental Setting

Ethnography

Prior to the arrival of Euro-Americans in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. Ethnographers recognized the uniqueness of California's indigenous groups and classified them as belonging to the California culture area. Kroeber (1925) further subdivided California into four subculture areas: Northwestern, Northeastern, Southern, and Central.

When the first European explorers entered the regions between 1772 and 1821, an estimated 100,000 people, about one-third of the state's native population, lived in the Central Valley. At least seven distinct languages of Penutian stock were spoken among these populations: Wintu, Nomlaki, Konkow, River Patwin, Nisenan, Miwok, and Yokuts. Common linguistic roots and similar cultural and technological characteristics indicate that these groups shared a long history of interaction (Rosenthal et al. 2007). The Central area encompasses the current Project Area and includes the Wintu and Nomlaki.

Ethnographically, the Project Area is located in a region known to have been occupied by the Nomlaki Indians who speak a Wintuan language that was closely related to Wintu and Patwin. Nomlaki territory encompassed portions of present-day Tehama and Glenn counties. The territory is bounded in the north by Cottonwood Creek and occupied the foothill land extending from the Coast Range in western Glenn and Tehama counties. There are two distinct Nomlaki Indian groups: Hill Nomlaki and River Nomlaki. The Wintuan language is in the Penutian Language family and is part of the Wintuan language group that includes the Wintu, the Nomlaki, and the Patwin Indians. The Nomlaki hunted deer, grizzly bears, fish, quails, rabbits, rats, squirrels and birds. family units would collect acorns, roots, wild seeds, and fruit.

Village structures included headman houses, dance houses, and menstrual huts. Chief's houses were faced toward the stream where men would plunge into after sweating ceremonials. Dance houses were a post-contact addition to the village structure and were placed away from the village. Houses were built near the water source. Menstrual huts were built at the opposite end of the village away from the water supply.

The Nomlaki population prior to contact with Europeans is estimated to have been over 2,000 (Goldschmidt 1978). A malaria epidemic swept through the Central and Upper Sacramento Valley in 1830-1833, killing off 75 percent of the indigenous population and severely hampering the ability of the

Nomlaki to resist incursions into their territory by settlers. As settlers moved into the region, the Nomlaki faced the destruction of vital resources by livestock, the pollution of fishing areas by gold miners, and violent conflict with settlers. These factors further diminished the Nomlaki population, and by 1910 the Wintu population is estimated to have been 1,000.

Known Tribal Cultural Resources in the Project Area

Two previous cultural resource investigations have been conducted within 0.5 mile of the Project Area, covering approximately one percent of the total area surrounding the property within the record search radius. These studies failed to reveal the presence of historic-period or pre-contact resources. The previous studies were conducted between 2000 and 2002 and vary in size from 2.72 acres to several linear blocks.

The results of the records search indicate that none of the Project Area has been previously surveyed for tribal cultural resources and indicate that one previously recorded historic-period cultural resource is located within 0.5 mile of the Project Area. The historic resource was recorded by Caltrans as 1999 and is identified as two historic buildings (recorded as one resource) dating from 1925 and 1948. The historic resource is not believed to be a tribal cultural resource.

The Project Area falls within the ethnographic territory of the Nomlaki. The *Handbook of North American Indians, Volume 8*, lists the closest Native American Village as *Sômpôn*. The village is located approximately nine miles northwest of the Project Area, near Grindstone Creek and present-day Black Butte Lake.

3.9.2 Regulatory Framework

Federal

National Historic Preservation Act

The NHPA requires that the federal government list significant historic resources on the NRHP, which is the nation's master inventory of known historic resources. The NRHP is administered by the NPS and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a historic district can also be included in the NRHP.1 The criteria for listing in the NRHP include resources that:

[1] A [historic] district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development (NPS 2015).

a) are associated with events that have made a significant contribution to the broad patterns of history;

b) are associated with the lives of persons significant in our past;

c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d) have yielded or may likely yield information important in prehistory or history.

State

California Register of Historical Resources

The State Historical Resources Commission designed the CRHR for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The CRHR is the authoritative guide to the state's significant historical and archaeological resources. This program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and affords certain protections under CEQA.

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both historical resources and unique archaeological resources. Pursuant to Public Resources Code (PRC) § 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

Historical resource is a term with a defined statutory meaning (PRC § 21084.1; determining significant impacts to historical and archaeological resources is described in CEQA Guidelines Section 15064.5[a], [b]). Under CEQA Guidelines Section 15064.5(a), historical resources include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC § 5024.1).

2. A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of

California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (PRC § 5024.1), including the following:

a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
b. Is associated with the lives of persons important in our past;
c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
d. Has yielded, or may be likely to yield, information important in prehistory or history.

4. The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC § 5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC § 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC § 5020.1(j) or 5024.1.

Historic resources are usually 45 years old or older and must meet at least one of the criteria for listing in the CRHR, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC Section 5024.1 and CCR, Title 14, § 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

For historic structures, CEQA Guidelines Section 15064.5(b)(3) indicates that a project which follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*, or the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995) is considered as mitigating impacts to a less than significant level.

As noted above, CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. PRC § 21083.2(g) states:

> "Unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Treatment options under PRC § 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource).

Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered, as follows:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

CEQA Guidelines Section 15064.5(e) requires that excavation activities stop whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5(f), these provisions should include "an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

Local

City of Orland General Plan

The City of Orland General Plan emphasizes the importance of historic and cultural resource preservation to the City of Orland. The following policy relates to historic preservation:

Policy 1.1.B: Encourage the preservation and restoration of significant historic structures.

3.9.3 Environmental Impacts

Thresholds of Significance

Following Appendix G of the CEQA Guidelines, tribal cultural resource impacts are considered to be significant if the project would result in any of the following:

1. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

    a. Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC § 5020.1(k), or
    b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe?

Methodology

Records Search

A records search for the Project Area was completed at the Northeastern Information Center (NEIC) of the CHRIS at California State University, Chico, on March 14, 2019 (NEIC Search# W19-44). The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the proposed Project Area, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

In addition to the official records and maps for archaeological sites and surveys in Glenn County, the following historic references were also reviewed: Historic Property Data File for Glenn County (OHP 2012); *The National Register Information System websit*e (NPS 2019); *Office of Historic Preservation, California Historical Landmarks* website (OHP 2019); *California Historical Landmarks* (**OHP 1996** and updates); *California Points of Historical Interest* (OHP 1992 and updates); *Directory of Properties in the Historical*

Resources Inventory (1999); *Caltrans Local Bridge Survey* (Caltrans 2018a); *Caltrans State Bridge Survey* (Caltrans 2018b); and *Historic Spots in California* (Kyle 2002).

In addition to the record search, ECORP contacted the California NAHC on March 7, 2019 to request a search of the Sacred Lands File for the APE. This search will determine whether or not Sacred Lands have been recorded by California Native American tribes within the Project Area, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. A search of the Sacred Lands File by the NAHC did not indicate the presence of Native American cultural resources in the Project Area.

AB 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City of Orland has not received any formal notification requests by any California Native American tribes.

Pedestrian Survey

On March 14, 2019, ECORP subjected the Project Area to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (NPS 1983) using transects spaced 15 meters apart. ECORP expended 0.5 person-day in the field. At that time, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

All cultural resources encountered during the survey were recorded using DPR 523-series forms approved by the California OHP. The resources were photographed, mapped using a handheld GPS receiver, and sketched as necessary to document their presence. Resources were recorded on DPR 523 Primary Records and their location marked on DPR 523 Location Maps.

Project Impact Analysis

Impact 3.9.1: Impacts to Tribal Cultural Resources

Threshold:	*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:* • *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* • *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?*

In addition to the lack of tribal cultural resources revealed during the pedestrian survey, the records search did not identify any culturally significant tribal resources. Although no evidence of tribal cultural resources was uncovered, the ground disturbance required for Project construction has potential to reveal objects of this nature. Implementation of mitigation measure **CUL-3** (see **Section 3.3.4**) would assure that any discovery of tribal cultural resources within the Project site would be subject to these procedural requirements. Implementation of this mitigation measure would reduce impacts associated with the discovery/disturbance of human remains to a **less than significant** level.

3.9.4 Mitigation Measures

Implementation of mitigation measure **CUL-3.**

3.9.5 Residual Impacts After Mitigation

Implementation of mitigation measure **CUL-3** would ensure the Project construction appropriately monitored to minimize risk of harm to potential tribal cultural resources. Therefore, with implementation of mitigation measure **CUL-3**, this residual impact would be less than significant.

3.9.6 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The cumulative setting associated with the Proposed Project includes approved, proposed, planned, and other reasonably foreseeable projects and development in Orland. Developments and planned land uses, including the Proposed Project, would cumulatively contribute to impacts to known and unknown tribal

cultural resources in the area. **Section 3.9.1** Environmental Setting provides an overview of tribal cultural resources and the history of the region.

Cumulative Impacts and Mitigation Measures

Impact 3.9.5: Cumulative Impacts to Cultural Resources

Threshold:	*Would Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to tribal cultural resources?*

As mitigated, the direct impacts associated with the Proposed Project will be reduced to a less than significant level. While it is possible that grading and development will result in the discovery of tribal cultural resources, mitigation measure **CUL-3** and state and federal laws already in place will set in motion actions designed to mitigate these potential impacts. The Proposed Project is adjacent to existing development that has disturbed the soil and likely already affected any cultural resources. As a result of surrounding development, mitigation proposed in this section, and existing federal and state laws, this impact is considered **less than cumulatively considerable**.

Cumulative Mitigation Measures

None required.

3.9.7 References

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SECTION 4.0 ALTERNATIVES TO THE PROPOSED PROJECT

The alternatives analysis consists of the following components: An overview of CEQA requirements for alternatives analysis, descriptions of the alternatives evaluated, a comparison between the anticipated environmental effects of the alternatives and those of the Proposed Project, and identification of an environmentally superior alternative.

4.1 Introduction

4.1.1 CEQA Requirements for Alternatives

CEQA requires that an EIR consider a reasonable range of alternatives to a proposed project that can attain most of the basic project objectives but has the potential to reduce or eliminate significant adverse impacts of the Proposed Project and may be feasibly accomplished in a successful manner, considering the economic, environmental, social, and technological factors involved. An EIR must evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6(a), (d) and (e)). If certain alternatives are found to be infeasible, the analysis must explain the reasons and facts supporting that conclusion.

Section 15126.6(d) also requires that, if an alternative would cause one or more significant effects in addition to those caused by a proposed project, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the Project as proposed. One of the alternatives analyzed must be the "No Project" alternative (CEQA Guidelines Section 15126.6(e)). The EIR must also identify alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and should briefly explain the reasons underlying the lead agency's determination (CEQA Guidelines Section 15126.6(c)).

CEQA Guidelines Section 15126.6(e)(2) requires that the EIR identify the environmentally superior alternative. If that alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The environmentally superior alternative is discussed in **Section 4.3**.

4.1.2 Development of Project Alternatives

This section discusses the reasoning for selecting and rejecting alternatives. This section also summarizes the assumptions identified for the alternatives. The range of alternatives included for analysis in an EIR is governed by the "rule of reason." The primary objective is formulating potential alternatives and choosing which ones to analyze to ensure that the selection and discussion of alternatives fosters informed decision-making and informed public participation. This is accomplished by providing sufficient information to enable readers to reach conclusions themselves about such alternatives. This approach avoids assessing an unmanageable number of alternatives or analyzing alternatives that differ too little to provide additional meaningful insights about their environmental effects. The alternatives addressed in this Draft EIR were selected in consideration of one or more of the following factors:

- The extent to which the alternative would avoid or reduce any of the identified significant effects of the project and yet would accomplish most of the basic objectives of the project.
- The feasibility of the alternative, taking into account site suitability and surrounding existing land uses, and consistency with applicable public plans, policies, and regulations.
- The appropriateness of the alternative in contributing to a reasonable range of alternatives necessary to permit a reasoned choice.

The alternatives analyzed in this Draft EIR were ultimately chosen based on each alternative's ability to feasibly attain the basic Project objectives while avoiding or reducing one or more of the Project's significant effects. The analysis provides readers with adequate information to compare the effectiveness of identified mitigation or significant adverse impacts and to enable readers to make decisions about the project. CEQA requires environmental impact reports to address a reasonable range of reasonable alternatives, but not all potential alternatives.

4.1.3 Project Objectives

As noted above, an EIR must describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives while avoiding or reducing one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)). In identifying the range of alternatives for analysis in this EIR, the Project objectives identified in **Section 2.0** are reiterated below:

1. Annex the Project site into the City of Orland to provide a catalyst for new economic development.
2. Develop an economically viable truck wash consistent with the City of Orland General Plan.
3. Provide business and job opportunities within the City of Orland.
4. Generate tax revenue to the City of Orland from new retail and commercial development within the Project site.
5. Provide trucks traveling on I-5 greater options for convenient truck wash and tire services.
6. Create varied lot sizes with a commercial Land Use Designation to allow for diverse uses.
7. Provide commercial opportunity near a major freeway interchange in order to minimize traffic generation on local streets.
8. Utilize existing utility features (sewer, water, joint trench) along Road HH (Commerce Lane).
9. Provide infrastructure improvements for public health and safety.
10. Encourage the development of these previously developed parcels with improved access and connectivity.

4.2 Alternatives Descriptions and Analysis

4.2.1 Alternatives Considered but Rejected as Infeasible

Alternate Site Alternative

There are a number of parcels within the City boundaries that are vacant and within the C-H zoning district and thus able to accommodate this type of development. However, only one parcel is of sufficient size to accommodate the 2.28-acre Proposed Project. This property, located at 134 Frances Lane, carries two zoning designations, C-H in the northern half of the parcel and C-2 in the southern half. The City's policy on parcels with more than one zoning designation is defined in the Orland Municipal Code Section 17.12.070 - Split Zoning which states the following:

> "Parcels with split zoning may be developed in conformance with the applicable zone district as long as each zoned area meets the minimum parcel size requirement for the zone. If the zoned area does not have sufficient area to meet the minimum parcel size requirement for the zone district, such area may only be used for purposes permitted in the applicable zone district upon approval of a use permit."

As such, the proposed truck service center would be allowed under the C-H zoning district for this parcel.

However, while this parcel would be available for the type of use proposed for the Proposed Project, this parcel was considered but rejected for a number of reasons. These reasons include: purchasing and assembling properties in another location that are of the necessary acreage for the Project would be cost prohibitive and infeasible, and the Project site is already adjacent to the Pilot Flying J Travel Center. The Travel Center is of a complementary use to the Proposed Project and would allow for truck drivers to access a range of services in one stop and thereby reduce the potential impacts related to truck travel (i.e. air quality emissions, noise, traffic). As such, the Project's proposed site is considered to be a better location with regard to potential environmental impacts than other available sites.

4.2.2 Description of Alternatives

Alternative 1: No Project

CEQA Guidelines Section 15126.6(e)(1) states that a No Project Alternative must be analyzed in every EIR. Alternative 1 evaluates the environmental impacts if the Project site were to remain in its current state as rural residential uses. The existing site is made up of five parcels and has three single- family homes, a wooden barn, a steel storage building, and a small storage shed on the site. As discussed in **Section 2.0**, the existing site occupies ±4.98 acres. The aerial photographs from 1998 to present show about 10 structures within the Project site. By 2013, seven structures are present within the Project site. Orchard crops are no longer present on the property on aerial photographs taken after 1998 (ECORP 2019a).

Alternative 2: No Future Commercial

As with the Proposed Project, this alternative would require a General Plan Amendment, Prezoning and Annexation. Alternative 2 would eliminate the future commercial on the Project site and only include the

Sunny Truck Service Center. Alternative 2 would include the 11,800-sq ft Sunny Truck Service Center with its tire and oil change service building and the truck wash on 2.28 acres. However, this alternative would not include the potential for future commercial development on the two adjacent southern parcels as a part of the Proposed Project and these two parcels will be annexed based on the City's General Plan land use designation as R-1 and R-3. **Table 4.0-1** illustrates the potential residential development densities using the General Plan designations for these parcels. This alternative was chosen for analysis to determine if the reduced potential for future commercial development on APNs 045-170-021 and 045-170-024 would result in reduced environmental impacts. However, residential development may also result in environmental impacts, This potential is discussed in the analysis section, **Section 4.2.2**. All other proposed uses would be the same as the Proposed Project.

Table 4.0-1. Potential Residential Densities for APNs 045-170-021 and 024

Parcel APN	Proposed Acres	Prezoning (Max Density/Ac)	Maximum Units
045-170-021	0.99	R-3 (25 du/ac)	25
045-170-024	0.92	R-1 (6 du/ac)	5

Alternative 3: Truck Wash Only

The Truck Wash Only Alternative would remove the tire and oil change service center from the Project and only include the truck wash. Alternative 3 would include the development of a truck wash building. The truck wash building is an approximately 5,700-square-foot single-story building and includes a two-bay truck washing facility, three restrooms, office/waiting room, breakroom, and a chemical room. The number of trucks anticipated to use the remaining truck washing facilities is 20 to 25 per day. All other commercial development assumptions would be the same as the Proposed Project.

Elimination of the oil and tire operation would eliminate approximately five to 10 trucks that would otherwise be serviced there daily. This alternative would eliminate the need for once-weekly delivery trips of 20-50 tires and 300-500 gallons of oil. The three truck trips per month to dispose of waste oil and tires would also be eliminated.

However, as with the Proposed Project, future commercial uses on the remaining non-truck wash parcels, could still be developed on those parcels. The 0.74-acre future commercial use area would continue to be assumed for developed in the future. As with the Proposed Project, APNs 045-170-021 and 045-170-024 are not proposed for development at this time but are a part of the General Plan Amendment, Prezoning and Annexation.

Significance Findings of the EIR

This EIR determined that the Proposed Project resulted in significant and unavoidable impacts to greenhouse gas emissions, noise, and transportation. The alternatives discussion and analysis focuses on environmental impacts of the Proposed Project that either require mitigation measures or that could not

be mitigated to less than significant. Please refer to **Table ES-1** in the Executive Summary for a complete listing of Project impacts and mitigation measures.

The analysis presented in the technical sections of this DEIR (**Sections 3.1 through 3.9**) determined that the following significant and unavoidable impacts would result from implementation of the Proposed Project:

Impact 3.6.1: **During operation, the Project would produce GHG emissions in excess of Sacramento Metropolitan Air Quality Management District (SMAQD) thresholds of significance. The significant number of trucks utilizing the Sunny Truck Service Center would produce a significant and unavoidable impact (ECORP 2019b).**

Impact 3.6.6: **When considering the cumulative setting, the Proposed Project along with other existing and approved development would produce GHG emissions in excess of SMAQD thresholds of significance. Ultimately, the Project would not meet California's AB 2 GHG reduction goals. Thus, the Project would produce a cumulatively considerable and significant and unavoidable impact (ECORP 2019b).**

Impact 3.7.1: **Operation of the Proposed Project would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in the Project vicinity. The majority of the traffic noise would be a result of the Project attracting more large trucks to the area. The trucks would produce operational noise in excess of the City of Orland General Plan standards. Because no feasible mitigation is available to reduce this impact to a less than significant level, this impact would be considered significant and unavoidable.**

Impact 3.8.5: **Implementation of the Proposed Project when considered with existing, proposed, planned, and approved development in the region, would contribute to cumulative traffic volumes on local roadways that result in significant impacts to levels of service and operations. Roadway LOS would not meet the City of Orland General Plan standard of LOS C or better during normal operation and LOS D or better during peak-hour operation. This cumulatively considerable impact will be reduced to a less than significant level at all affected intersections through the installation of traffic signals. Along Newville Road, however, the necessary funding mechanism does not exist, and Caltrans has not approved the encroachment permit that would be required to mitigate this impact. Thus, the impact to LOS along Newville Road would be cumulatively considerable and significant and unavoidable.**

4.2.3 Analysis of Alternatives

Because the Initial Study determined that only certain impact analysis areas were to be analyzed in this EIR, each alternative is compared to the Proposed Project using the analysis presented in this DEIR. The Project alternatives are evaluated in less detail than those of the Proposed Project, and the impacts are described in terms of difference in outcome compared with implementing the Proposed Project. **Table 4.0-3** at the end of this section provides an at-a-glance comparison of the environmental impacts of each alternative. **Table 4.0-4** compares how the alternatives meet the Project Objectives as compared to the Proposed Project.

Alternative 1: No Project

Under the No Project, future development of the Proposed Project would not occur, and the Project site would remain unchanged. The Project site would remain partially developed with three single-family homes, a wooden barn, a steel storage building, and a small storage shed. The Glenn County General Plan designations would remain as they are at present for the five parcels: Service Commercial.

Agriculture and Forestry Resources

As discussed in **Section 3.1**, the Proposed Project would result in a less than significant impact to agricultural or forestry resources. Of the 3.07 acres of land to be developed by the Proposed Project, 2.0 acres are designated as Prime Farmland. The remaining 1.1 acres are designated as Other Land. The LESA, a tool developed by the DOC, was utilized to determine the impact of converting the farmland for the Project. The LESA modeling performed for the Project show that the impact to agricultural land is not considered significant. Further, the Project has a less than significant impact in regard to causing changes in the existing environment, which due to its location in nature, may result in the conversion of farmland to nonagricultural use.

Alternative 1 would involve no development of the Project site beyond the structures that currently exist at the site (i.e. homes, a barn, and a shed). As such, Alternative 1 would have no impact to agriculture resources and thus is considered superior to the Proposed Project in regard to impacts to agriculture and forestry resources.

Air Quality

The Proposed Project would increase truck traffic at the Project site due to the addition of new truck services. Although the Project inevitably would increase emissions to a degree, the impact to air quality would not exceed thresholds of significance. As discussed in the EIR, the Project-generated air emissions would not exceed applicable air quality thresholds, result in TAC impacts, or conflict with regional air quality management planning. The Project would have an overall less than significant impact to air quality (ECORP 2019c).

Alternative 1 would not exceed any air quality thresholds as the site would remain in its existing condition. The three homes present on the Project Site would not produce emissions that exceed air quality thresholds. Therefore, no impact to air quality would occur and Alternative 1 is considered superior to the Proposed Project with regard to air quality.

Biological Resources

As noted in **Section 3.3**, the biological resource assessment performed for the Proposed Project would result in potential impacts to special-status bird species, namely the Swainson's hawk and burrowing owl (ECORP 2019b). Both species have the potential to nest within the Project Area. Further, the Project site contains vegetation communities that support nesting habitat for a variety of bird species protected under the MBTA. The structures existing on the Project Site may also serve as bat maternity roosts, which would be disturbed by demolition of the buildings for construction of the Proposed Project. However, mitigation measures **BIO-1** and **BIO-2** would be implemented to reduce potential impacts to nesting birds and burrowing owls to a less than significant level. Mitigation measure **BIO-3** would reduce potential impacts to bat maternity sites to be less than significant.

Comparatively, Alternative 1 would result in no impact to biological resources as the Proposed Project site would remain in its current condition. The Project Area would continue to serve as potential nesting habitat for special-status bird species and bird species protected under the MBTA. The buildings present on the site would remain as potential bat nesting habitat. Thus, Alternative 1 is considered superior to the Proposed Project with regard to impacts to biological resources, as the impacts to these resources would be greater with the Proposed Project than with Alternative 1.

Cultural Resources

The EIR prepared for the Proposed Project determined that the Project would result in potential impacts to unknown/undiscovered historical, archaeological, paleontological and tribal resources. However, as defined in the EIR, mitigation measures **CUL-1** through **CUL-4** would reduce these potential impacts to a less than significant level.

As no new construction is proposed with Alternative 1, this alternative would result in no impacts to cultural resources. As such, the impacts to cultural resources under this alternative are less than the Proposed Project. Alternative 1 is considered superior to the Proposed Project in regard to impacts to cultural resources.

Energy

The Proposed Project would not result in a significant environmental impact due to the wasteful, unnecessary, or inefficient consumption of energy resources or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The Proposed Project would have a less than significant impact on energy use.

No new structures or other uses are proposed with Alternative 1. Thus, this alternative would not result in potential impacts to energy resources. As such, the impacts resulting from Alternative 1 would be less than those that would result under the Proposed Project. Alternative 1 is considered superior to the Proposed Project in regard to impacts to energy resources.

Greenhouse Gases and Climate Change

The Proposed Project's GHG emissions were determined to be significant and unavoidable. Neither Glenn County nor Orland have established thresholds of significance for GHG emissions, so SMAQMD

thresholds were utilized for the GHG emissions analysis in this EIR. Greenhouse gas emissions would exceed the SMAQMD thresholds of significance during operation, but not during construction. Further, the Project will contribute to significant cumulative GHG emission impacts due to conflicts with AB 2 goals. No feasible mitigation measures exist beyond current efforts made by the state. As such, the impacts of the Proposed Project on GHG and climate change is both significant and unavoidable and cumulatively considerable and significant and unavoidable.

Alternative 1 would not result in GHG emissions beyond what currently exists, as the current land use would remain unchanged. Alternative 1 would result in no additional development and therefore no increase of GHG emissions would occur. As such, Alternative 1 is considered superior to the Proposed Project with regard to impacts to GHG and climate change.

Noise

The Proposed Project would create noise during construction. However, as with most cities, noise standards do not exist for construction in the City of Orland. Rather, construction is limited to between the hours of 7 a.m. and 5 p.m. by the City of Orland General Plan. Thus, the construction noise impact is less than significant. During operation, SoundPlan modeling showed the Project is expected to generate a significant and unavoidable impact due to stationary noise produced by trucks moving about the Project site. When considering the cumulative setting, the Project would contribute to significant and unavoidable cumulative impacts due to traffic noise and the stationary noise generated by trucks accessing and utilizing the Sunny Truck Service Center.

Alternative 1 would not result in increased noise levels. Because Alternative 1 would not result in changes to the existing conditions of the site, no noise impacts would occur. Overall, Alternative 1 would have less of an impact on noise than the Proposed Project and is considered superior in terms of noise generation.

Transportation and Circulation

The Project would potentially impact pedestrian safety and fail to comply with a safety policy included in the City of Orland General Plan. However, mitigation requiring a crosswalk be constructed at the County Road HH/ County Road 13 intersection and a sidewalk be installed along the Project frontage would reduce this impact to be less than significant. Further, the Traffic Impact Study prepared for the Proposed Project revealed that the Project would have significant impacts to safety due to large trucks leaving the pavement or entering adjacent lanes when turning left at County Road HH/County Road 13. This impact would be mitigated to a less than significant level by widening the southwest corner of the intersection.

Under long-term cumulative conditions, the Project would have a significant impact on LOS at the Newville Road/SB I-5 intersection, Newville Road/NB ramps intersection, and Newville Road/County Road HH intersection. Requiring the Project Proponents contribute a fair share to widen of the Newville Road/ SB I-5 Ramp and install traffic signals at all three locations would mitigate impact to LOS to a less than significant level. Furthermore, the Project is expected to significantly impact LOS on Newville Road (SR-32) between I-5 and NB I-5 Ramps. To mitigate this impact, the Project proponents shall contribute a fair share to the cost of coordinating surrounding traffic signals on Newville road. Because the neither the required funding mechanism nor the granting of the required Caltrans Encroachment Permit can be

guaranteed for this mitigation, the impact to traffic on Newville Road is considered cumulatively considerable and significant and unavoidable.

Alternative 1 would result in no increases in traffic nor increases in the demand for public transit or bicycle/pedestrian facilities. The residents of the three existing homes onsite would remain. The Project would substantially increase the number of vehicle trips to and from the Project site and thus would have impacts on LOS and safety. Alternative 1 would eliminate all safety and LOS impacts expected to directly result from the Project. As such, Alternative 1 would have significantly less of an impact when compared to the Proposed Project regarding transportation and circulation. Alternative 1 is considered superior to the Proposed Project regarding transportation and circulation.

Tribal Cultural Resources

The Proposed Project has the potential to impact unknown tribal cultural resources present at the Project site that were not uncovered during the cultural resources inventory survey. Thus, mitigation measure **CUL-3** is required to reduce potential impacts to unknown tribal cultural resources to a less than significant level.

Alternative 1 would involve no new construction and thus would not involve disturbance to the soil for construction purposes beyond baseline levels of disturbance resulting from the three mobile homes present at the site. Thus Alternative 1 is considered superior to the Proposed Project in regard to potential impacts to tribal cultural resources.

Alternative 2: No Future Commercial Alternative

Under the No Future Commercial Alternative, the Proposed Project would be completed without the potential for future commercial development on the Project site. Alternative 2 would include the 11,800 sq ft Sunny Truck Service Center with its tire and oil change service building and the truck wash on 2.28 acres. However, this alternative would not include the potential for future commercial development on the two adjacent southern parcels as a part of the Proposed Project and these parcels will be annexed as residential land uses consistent with Orland General Plan. This alternative was chosen for analysis to determine if the reduced potential for future commercial development would result in reduced environmental impacts. However, residential development may also result in environmental impacts, This potential is discussed in the analysis section below. All other proposed uses would be the same as the Proposed Project.

Agriculture and Forestry Resources

As discussed in **Section 3.1**, the Proposed Project would result in a less than significant impact to agricultural or forestry resources. The 3.07 acres of land to be developed by the Proposed Project, 2.0 of these acres are designated as Prime Farmland. The remaining 1.1 acres are designated as Other Land. The LESA performed for the Project shows that the impact to agricultural land is not considered significant. Further, the Project has a less than significant impact in regard to causing changes in the existing environment, which due to its location in nature, may result in the conversion of farmland to

nonagricultural use. The Proposed Project includes the pre-zone of APNs 045-170-021 and 045-170-024 for future commercial development.

APNs 045-170-021 and 045-170-024 are identified as "Other Land" by the DOC and do not contain any Prime Farmland. Alternative 2 would eliminate the potential future commercial construction on these two parcels. However, under Alternative 2, the two parcels would be allowed for residential use per the Orland General Plan land use designations of the parcels. APN 045-170-021 could be developed to a maximum density of 25 du/ac and APN 045-170-024 could be developed to a maximum density of 5 du/ac. Subsequently, both the Proposed Project and Alternative 2 would involve development on land designated as Other Land, which is located adjacent to Prime Farmland. Additionally, land surrounding the two parcels is also identified as Other Land, so conversion of these two parcels to urban uses would not result in the conversion of adjacent farmland to urban uses.. Thus, Alternative 2 would have an equivalent, less than significant impact to agriculture resources, as with the Proposed Project. With both Alternative 2 and the Proposed Project, the development of the Sunny Truck Service Center on a small section of Prime Farmland would occur.

Air Quality

The Proposed Project would increase truck traffic at the Project site and subsequently result in increased emissions. However, the impact to air quality would not exceed thresholds of significance. As discussed in the EIR, the Project-generated air emissions would not exceed applicable air quality thresholds, result in TAC impacts, or conflict with regional air quality management planning. The Project would have an overall less than significant impact to air quality.

Alternative 2 would have the same potential to exceed air quality thresholds during construction and upon completion of the Proposed service center. However, due to the elimination of land set aside for future commercial use, there is a reduced potential for future significant impacts to air quality, which may result from future commercial development at that location. Under Alternative 2, the potential remains for the two parcels to be developed for residential use. APN 045-170-021 could be developed to a maximum density of 25 du/ac and APN 045-170-024 could be developed to a maximum density of 5 du/ac. However, as shown in **Table 4.0.2**, the residential development would generate far fewer vehicle trips than typical commercial development. Further, the residential units would not be attracting a large number of truck trips as is likely with commercial developments such as convenience stores and gas stations. Thus, the impacts to air quality would be reduced under Alternative 2. Further, this type of residential development is typical in the City of Orland. As such, the impacts to air quality under this alternative are less than the Proposed Project.

Biological Resources

The Proposed Project would result in potential impacts to special-status bird species, namely the Swainson's hawk and burrowing owl. Both species have the potential to nest within the Project Area. Further, the Project site contains vegetation communities that support nesting habitat for a variety of bird species protected under the MBTA. The structures existing on the Project Site may also serve as bat maternity roosts which would be disturbed by demolition of the buildings for construction of the Proposed Project. However, mitigation measures **BIO-1** and **BIO-2** would be implemented to reduce

potential impacts to nesting birds and burrowing owls to a less than significant level. Mitigation measure **BIO-3** would reduce potential impacts to bat maternity sites to be less than significant.

Alternative 2 would result in an equivalent potential to impact to biological resources, as the land set aside for commercial use could be developed for residential use under this alternative. Thus, an equivalent total land area that could serve as nesting habitat for special-status and MBTA bird species would be disturbed. Further, APNs 045-170-021 and 045-170-024 contain four structures that may serve as bat maternity roots. Thus, the potential impact to bat species would remain. Alternative 2 is considered equivalent to the Proposed Project with regard to potential impacts to biological resources.

Cultural Resources

The DEIR prepared for the Proposed Project determined that the Project would result in potential impacts to unknown/undiscovered historical, archaeological, paleontological and tribal resources. However, as defined in the **Section 3.4**, mitigation measures **CUL-1** through **CUL-4** would reduce these potential impacts to a less than significant level.

With Alternative 2, there is no commercial construction to occur on the two southern parcels; ±1.9-acres in total size. Under Alternative 2, unlike with the Proposed Project, these parcels would not be set aside for future commercial use. However, the two parcels would be zoned for commercial use and thus would have an equivalent likelihood of being developed. As such, Alternative 2 is considered equivalent to the Proposed Project in regard to impacts to cultural resources.

Energy

The Proposed Project would not result in a significant environmental impact due to the wasteful, unnecessary, or inefficient consumption of energy resources or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The Proposed Project would have a less than significant impact on energy use.

Unlike the Proposed Project, Alternative 2 would not set aside two parcels for future commercial development. However, the two parcels would have the potential to be developed for residential use at a density of 25 du/ac on APN 045-170-021 and 5 du/ac on APN 045-170-024. The residential uses would not likely have significant energy impacts due to inefficient energy use of non-compliance with an applicable energy plan. Thus, Alternative 2 is considered equivalent to the Proposed Project in regard to impacts to energy resources.

Greenhouse Gases and Climate Change

The Proposed Project's GHG emissions were determined to be significant and unavoidable. Neither Glenn County nor Orland have established thresholds of significance for greenhouse gas emissions, so SMAQMD thresholds were utilized for the GHG emissions analysis in this EIR. GHG emissions would exceed the SMAQMD thresholds of significance during operation, but not during construction. Further, the Project will contribute to significant cumulative GHG emission impacts due to conflicts with AB 2 goals. No feasible mitigation measures exist beyond current efforts made by the state. As such, the

impacts of the Proposed Project on GHG and climate change is both significant and unavoidable and cumulatively considerable and significant and unavoidable.

Alternative 2 would result in the same amount of GHG emissions from the construction and operational Project components proposed as part of the Proposed Project. However, Alternative 2 eliminates the set-aside of two parcels for future commercial use. Alternative two would allow for residential development at a density of 25 du/ac on APN 045-170-021 and 5 du/ac on APN 045-170-024. Residential development would produce far fewer vehicle trips than typical commercial development, as shown in **Table 4.0.2** below. Further, emissions from regular car traffic is typically less significant as compared to emissions produced by heavy truck traffic and heavy truck idling time produced by the commercial development. Thus, Alternative 2 is considered superior to the Proposed Project with regard to future potential impacts to GHG and climate change.

Noise

The Proposed Project would create noise during construction. However, as with most cities, noise standards do not exist for construction in the City of Orland. Rather, construction is limited to between the hours of 7 a.m. and 5 p.m. by the City of Orland General Plan. Thus, the construction noise impact is less than significant. During operation, SoundPlan modeling showed the Project is expected to generate a significant and unavoidable impact due to stationary noise produced by trucks moving about the Project site. When considering the cumulative setting, the Project would contribute to significant and unavoidable cumulative impacts due to traffic noise and the stationary noise generated by trucks accessing and utilizing the Sunny Truck Wash Service Center.

Alternative 2 would result in the same increase in noise above baseline levels as the Proposed Project prior to considering potential future commercial development included in the Proposed Project. Because Alternative 2 would result in no prezone and setting aside for future commercial development of the two parcels, Alternative 2 would eliminate consideration of potential future noise impacts produced from construction and operation of a commercial use at that location. As seen with the Sunny Truck Service Center, the operation of commercial developments often creates a significant noise impact. Under Alternative 2, the two parcels would be developed for residential use at low and high densities. The residential uses would produce noise from typical car use and urban activities As shown in **Table 4.0.2**, vehicle trips generated by residential development are far fewer than trips generated by commercial development and subsequently they produce less noise. Is unlikely that the noise impact produced by residential development would be significant. Subsequently, Alternative 2 would have less of an impact to noise than the Proposed Project.

Transportation and Circulation

The Project would potentially impact pedestrian safety and fail to comply with a safety policy included in the City of Orland General Plan. However, mitigation requiring a crosswalk be constructed at the County Road HH/County Road 13 intersection and a sidewalk be installed along the Project frontage would reduce this impact to be less than significant. Further, the Traffic Impact Study prepared for the Proposed Project revealed that the Project would have significant impacts to safety due to large trucks leaving the

pavement or entering adjacent lanes when turning left at County Road HH/County Road 13. This impact would be mitigated to a less than significant level by widening the southwest corner of the intersection.

Under long-term cumulative conditions, the Project would have a significant impact on LOS at the Newville Road/ SB I-5 intersection, Newville Road/ NB ramps intersection, and Newville Road/ County Road HH intersection. Requiring the Project Proponents contribute a fair share to widen of the Newville Road/SB I-5 Ramp and install traffic signals at all three locations would mitigate impact to LOS to a less than significant level. Furthermore, the Project is expected to significantly impact LOS on Newville Road (SR-32) between I-5 and NB I-5 Ramps. To mitigate this impact, the Project proponents shall contribute a fair share to the cost of coordinating surrounding traffic signals on Newville road. Because the neither the required funding mechanism nor the granting of the required Caltrans Encroachment Permit can be guaranteed for this mitigation, the impact to traffic on Newville Road is considered cumulatively considerable and significant and unavoidable.

Alternative 2 would result in an identical increase in traffic, impacts to safety, and demand for public transit and bicycle/pedestrian facilities; when considering the Project components to be immediately constructed. Both the Proposed Project and Alternative 2 would result in several less than significant impacts after mitigation and one cumulatively considerable and significant and unavoidable impact, as both would substantially increase the number of vehicle trips, namely large truck trips, to and from the Project site.

Alternative 2, however, eliminates the set-aside of two parcels for future commercial development and instead allows future low and high-density residential development on APNs 045-170-021 and 045-170-024. Utilizing the 9th Edition ITE Trip Generation Manual, estimated daily trips based on development type were compared. The results are shown in **Table 4.0-2** below. As shown in the table, commercial developments typically generate far more traffic than the residential use allowed if the zoning remained unchanged under Alternative 2. As such, Alternative 2 would have a reduced impact when compared to the Proposed Project regarding transportation and circulation and is considered superior to the Proposed Project.

Table 4.0-2. Comparison of Future Predicted Trip Generation by the Proposed Project Versus Alternative 2

Development Type	Total Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Proposed Project			
Highway Commercial[1]	2,586	193	203
Alternative 2			
5 Single-Family Homes[2]	48	4	5
25 Apartments[2]	166	13	16

Source: KD Anderson, 2019; Spack Consulting n.d.
Notes: 1) Based on assumptions provided in the Traffic Impact Analyses and shown in **Table 3.8-6**.
2) Trip counts based on ITE Code 210 Single Family Homes
3) Trip counts based on ITE Code 220 Apartment

Tribal Cultural Resources

The Proposed Project has the potential to impact unknown tribal cultural resources present at the Project site that were not uncovered during the cultural resources inventory survey. Thus, mitigation measure **CUL-3** shall be implemented to reduce potential impacts to unknown tribal cultural resources to a less than significant level.

Alternative 2 would include the new construction of the Sunny Truck Service Center and future commercial development on the remaining 0.74-acre parcel. However, Alternative 2 would also involve the future potential development for residential use rather than commercial use on the southern two parcels. Because all areas could result in ground disturbing processes at some point in the future, the potential to uncover unknown Trible Cultural Resources is the same as the Proposed Project. Therefore, Alternative 2 is considered equivalent to the Proposed Project in regard to potential impacts to tribal cultural resources.

Alternative 3: Truck Wash Only

The Truck Wash Only Alternative would remove the tire and oil change service center from the Project and only include the truck wash. Alternative 3 would include the development of a truck wash building only. The truck wash building is an approximately 5,700-sq ft single-story building and includes a two-bay truck-washing facility, three restrooms, office/waiting room, breakroom, and a chemical room. All other commercial development assumptions would be the same as the Proposed Project.

Elimination of the oil and tire operation would eliminate approximately five to 10 trucks that would otherwise be serviced there daily, the need for once-weekly delivery trips of 20-50 tires and 300-500 gallons of oil, and the three truck trips per month to dispose of waste oil and tires would also be eliminated.

As with the Proposed Project, APN 045-170-021 and 045-170-024 are not proposed for development at this time but are a part of the General Plan Amendment, Prezoning and Annexation. Future commercial uses on the remaining two parcels set-aside as part of the Proposed Project would remain.

Agriculture and Forestry Resources

As discussed in **Section 3.1**, the Proposed Project would result in a less than significant impact to agricultural or forestry resources. Of the 3.07 acres of land to be developed by the Proposed Project, 2.0 of these acres are designated as Prime Farmland. The remaining 1.1 acres are designated as Other Land. The LESA performed for the Project shows that the impact to agricultural land is not considered significant. Further, the Project has a less than significant impact in regard to causing changes in the existing environment, which due to its location in nature, may result in the conversion of farmland to nonagricultural use.

Alternative 3 would eliminate construction of the tire and oil building from the Proposed Project and a portion of the total area of Prime Farmland that would otherwise be transformed to commercial use as part of the Proposed Project would not be altered. Thus, Alternative 3 would result in a slightly reduced impact to agriculture resources due to reduced conversion of Prime Farmland. However, the

approximately 6,000 sq. ft. of undisturbed Prime Farmland would be surrounded by commercial development and this area is very small in size making future agricultural use of this area unlikely. Thus, the reduced conversion of Prime Farmland would not significantly change the impact to agricultural resources because the land would still be rendered unusable. Thus, Alternative 3 is equivalent to the Proposed Project in terms of agriculture and forestry resources.

Air Quality

The Proposed Project would increase truck traffic at the Project site due to the addition of new truck services. Although the Project inevitably would increase emissions to a degree, the impact to air quality would not exceed thresholds of significance. As discussed in the EIR, the Project-generated air emissions would not exceed applicable air quality thresholds, result in TAC impacts, or conflict with regional air quality management planning. The Project would have an overall less than significant impact to air quality.

Alternative 3 would have a slightly reduced air quality emissions potential. Alternative 3 require less construction time, less equipment, and would attract approximately five to 10 fewer trucks per day to the service center. However, the reduction in truck trips is so small when considering the estimated 2,736 total daily trips, that the reduction in impacts to air quality and the production of air quality emissions would be insignificant. Thus, Alternative 3 would have an approximately equivalent impact to air quality as the Proposed Project.

Biological Resources

The Proposed Project would result in potential impacts to special-status bird species, namely the Swainson's hawk and burrowing owl. Both species have the potential to nest within the Project Area. Further, the Project site contains vegetation communities that support nesting habitat for a variety of bird species protected under the MBTA. The structures existing on the Project Site may also serve as bat maternity roosts, which would be disturbed by demolition of the buildings for construction of the Proposed Project. However, mitigation measures **BIO-1** and **BIO-2** would be implemented to reduce potential impacts to nesting birds and burrowing owls to a less than significant level. Mitigation measure **BIO-3** would reduce potential impacts to bat maternity sites to be less than significant.

Alternative 3 would result in a slight reduction in total disturbed land area. Due to the similarity in disturbance, there is a negligible reduction in likelihood of disturbing bats nesting habitat and special-status and MBTA bird species. Due to the small area of land that would not be constructed on under this alternative (6,000 sq. ft.), the potential impacts to bat maternity sites, special-status birds, and MBTA bird species would remain approximately equivalent to the Proposed Project. Alternative 3 is thus considered equivalent to the Proposed Project with regard to impacts to biological resources.

Cultural Resources

The EIR prepared for the Proposed Project determined that the Project would result in potential impacts to unknown/undiscovered historical, archaeological, paleontological and tribal resources. However, as defined in the EIR, mitigation measures **CUL-1** through **CUL-4** would reduce these potential impacts to a less than significant level.

With Alternative 3, there is a reduced likelihood for construction activities to impact unknown historical, archaeological, paleontological or tribal resources due to the reduced ground area disturbed by grading of the site. As such, Alternative 3 is considered superior to the Proposed Project in regard to impacts to cultural resources.

Energy

The Proposed Project would not result in a significant environmental impact due to the wasteful, unnecessary, or inefficient consumption of energy resources or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The Proposed Project would have a less than significant impact on energy use.

Alternative 3 would reduce the total size and number of services provided by the service center. Thus, this alternative would result in reduced impacts to energy resources as compared to the Proposed Project. Alternative 3 is considered superior to the Proposed Project in regard to impacts to energy resources.

Greenhouse Gases and Climate Change

The Proposed Project's GHG emissions were determined to be significant and unavoidable. Neither Glenn County nor Orland have established thresholds of significance for greenhouse gas emissions, so SMAQMD thresholds were utilized for the GHG emissions analysis in this EIR. Greenhouse gas emissions would exceed the SMAQMD thresholds of significance during operation, but not during construction. Further, the Project will contribute to significant cumulative GHG emission impacts due to conflicts with AB 2 goals. No feasible mitigation measures exist beyond current efforts made by the state. As such, the impacts of the Proposed Project on GHG and climate change is both significant and unavoidable and cumulatively considerable and significant and unavoidable.

Alternative 3 would result in the less GHG emissions than the Proposed Project. Alternative 3 would eliminate approximately five to 10 trucks that would otherwise be serviced there daily, the need for once-weekly delivery trips of oil and tires, and the three truck trips per month for oil and tire disposal. The reduced number of trucks travelling to the and idling at the Project site would slightly reduce operational GHG emissions. However, the reduction in truck trips is not enough to eliminate the significant and unavoidable impact to GHG emissions and climate change. Thus, Alternative 3 is considered equivalent to the Proposed Project with regard to future potential impacts to GHG and climate change.

Noise

The Proposed Project would create noise during construction. However, as with most cities, noise standards do not exist for construction the City of Orland. Rather, construction is limited to between the hours of 7 a.m. and 5 p.m. by the City of Orland General Plan. Thus, the construction noise impact is less than significant. During operation, SoundPlan modeling showed the Project is expected to generate a significant and unavoidable impact due to stationary noise produced by trucks moving about the Project site. When considering the cumulative setting, the Project would contribute to significant and unavoidable cumulative impacts due to traffic noise and the stationary noise generated by trucks accessing and utilizing the Sunny Truck Wash Service Center.

Section 3.7 identifies current noise levels at the Project site. Due to the reduced Project size, Alternative 3 would result in a less significant increase in noise above baseline levels for construction compared to the Proposed Project.

Alternative 3 would attract between five and 10 fewer trucks to the service center and less noise would be produced from operations related to oil changes and tire services. Additionally, Alternative 3 would eliminate some of the significant and unavoidable noise impact the Project will generate from the Sunny Truck Service Center operations. However, because the decrease in trucks serviced is very small under this alternative, it is likely that the noise impact would still be significant and unavoidable under this alternative. Thus, the Proposed Project and Alternative 3 would have an equivalent impact to noise.

Transportation and Circulation

The Project would potentially impact pedestrian safety and fail to comply with a safety policy included in the City of Orland General Plan. However, mitigation requiring a crosswalk be constructed at the County Road HH/County Road 13 intersection and a sidewalk be installed along the Project frontage would reduce this impact to be less than significant. Further, the Traffic Impact Study prepared for the Proposed Project revealed that the Project would have significant impacts to safety due to large trucks leaving the pavement or entering adjacent lanes when turning left at County Road HH/ County Road 13. This impact would be mitigated to a less than significant level by widening the southwest corner of the intersection.

Under long-term cumulative conditions, the Project would have a significant impact on LOS at the Newville Road/ SB I-5 intersection, Newville Road/ NB ramps intersection, and Newville Road/ County Road HH intersection. Requiring the Project Proponents contribute a fair share to widen of the Newville Road/SB I-5 Ramp and install traffic signals at all three locations would mitigate impact to LOS to a less than significant level. Furthermore, the Project is expected to significantly impact LOS on Newville Road (SR-32) between I-5 and NB I-5 Ramps. To mitigate this impact, the Project proponents shall contribute a fair share to the cost of coordinating surrounding traffic signals on Newville road. Because the neither the required funding mechanism nor the granting of the required Caltrans Encroachment Permit can be guaranteed for this mitigation, the impact to traffic on Newville Road is considered cumulatively considerable and significant and unavoidable.

Alternative 3 would result in slightly less traffic as compared to the Proposed Project. The service center would attract five to 10 less trucks per day under Alternative 3. Alternative 3 would produce a slightly reduced overall increase in LOS as a result of the Project, reduced impact on pedestrian safety, and reduced safety concerns due to truck leaving narrow lanes during left turns. However, it is unlikely that the elimination of a mere five to 10 truck trips would be significant enough to eliminate the significant and unavoidable impact to transportation. Thus, Alternative 3 would have an equivalent impact on transportation and circulation.

Tribal Cultural Resources

The Proposed Project has the potential to impact unknown tribal cultural resources present at the Project site that were not uncovered during the cultural resources inventory survey. Thus, mitigation measure

CUL-3 shall be implemented to reduce potential impacts to unknown tribal cultural resources to a less than significant level.

Alternative 3 would involve decreased construction and operation. The decreased total area of soil to be disturbed by construction activities under Alternative 3 would effectively reduce the likelihood of impacting unknown tribal cultural resources. Alternative 3 is thus considered superior in regard to impact to tribal cultural resources.

4.3 Environmentally Superior Alternative

Table 4.0-3 summarizes the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the Proposed Project. **Table 4.0-4** identifies how well an alternative meets the Project objectives. Based on the evaluation contained in **Section 4.2**, Alternative 1 would have fewer adverse environmental impacts than the Proposed Project and was determined to have the fewest adverse impacts of the lowest magnitude on the physical environment of the three alternatives. However, CEQA requires that when the environmentally superior alternative is the no project alternative, another alternative be identified as the environmentally superior alternative [CEQA Guidelines section 15126.6(e)(2)].

An EIR must describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives while avoiding or reducing one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)). The Proposed Project has 10 objectives. **Table 4.0-4** illustrates a comparison of the alternatives to the basic Project objectives. As shown in this table, Alternative 1 does not meet any of the Project objectives, and Alternatives 2 and 3 both meet nine of the 10 Project objectives. Alternative 2 would reduce four of the eight Project impacts whereas Alternative 3 would only reduce two of the Project impacts.

As such, Alternative 2, No Future Commercial, would be the environmentally superior alternative, as it would result in fewer impacts to four resource categories when compared to the Proposed Project and still meet the majority of Project objectives (nine of 10).

Table 4.0-3. Alternatives Impacts Comparison

Environmental Issue	Proposed Project Impact Finding (Mitigated)	Alternatives		
		1	2	3
Agriculture and Forestry Resources	Less Than Significant	-	=	=
Air Quality	Less Than Significant	-	-	=
Biological Resources	Less Than Significant	-	=	=
Cultural Resources	Less Than Significant	-	=	-
Greenhouse Gases and Climate Change	Significant and Unavoidable	-	-	=
Noise	Significant and Unavoidable	-	-	=
Transportation and Circulation	Significant and Unavoidable	-	-	=
Tribal Resources	Less Than Significant	-	=	-
Overall Determination		-	-	-

- Impacts less than those of the proposed project
+Impacts greater than those of the proposed project
= Impacts similar to those of the proposed project, or no better or worse

Table 4.0-4. Comparison of Alternatives by Project Objectives

	Alternatives		
	1	2	3
Annex the Project site into the City of Orland to provide a catalyst for new economic development.	-	=	=
Develop an economically viable truck wash that is consistent with the City of Orland General Plan.	-	=	=
Provide business and job opportunities within the City of Orland.	-	=	=
Generate tax revenue to the City of Orland from new retail and commercial development within the project site.	-	=	=
Provide trucks traveling on Interstate 5 greater options for convenient truck wash and tire services.	-	=	-
Create varied lot sizes with a commercial Land Use Designation to allow for diverse uses.	-	=	=
Provide commercial opportunity near a major freeway interchange in order to minimize traffic generation on local streets.	-	=	=
Utilize existing utility features (sewer, water, joint trench) along Road HH (Commerce Lane).	-	=	=
Provide infrastructure improvements for public health and safety.	-	=	=
Encourage the development of these previously developed parcels with improved access and connectivity.	-	-	=
Total Project Objectives Met	0	9	9

= Meets project objective
- Does not meet project objective

4.4 References

[ECORP] ECORP Consulting, Inc.

2019a *Cultural Resources Inventory Report, Orland Truck Wash and Annexation Area Project*

2019b *Biological Resources Assessment, Orland Truck Wash and Annexation Area Project*

2019c *Emissions Report, Orland Sunny Truck Wash and Annexation Area Project*

Spack Consulting

No Date Institute of Transportation Engineers (ITE) Transportation Manual- 9th Edition

KD Anderson and Associates Inc.,

2019 Traffic Impact Analysis for Orland Truck Wash/ Commercial.

SECTION 5.0 OTHER CEQA ANALYSIS

This section discusses additional topics statutorily required by CEQA, including growth inducement and irreversible changes.

5.1 Growth-Inducing Impacts

5.1.1 Introduction

The CEQA Guidelines Section 15126.2(d) require that an EIR "discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth-inducing impacts can occur in a variety of ways, including the construction of new homes and businesses, and the extension of urban services, such as utilities and improved roads, to previously undeveloped areas.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as a project providing the extension of water supply lines to an in an area where the lack of water service historically limited the growth in the area.

CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

CEQA Guidelines Section 15126.2[d]) states that it is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment. However, growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce "disorderly" growth (growth that conflicts with local land use plans) could indirectly cause additional adverse environmental impacts and other public services impacts. Thus, to assess whether a growth-inducing project would result in adverse secondary effects, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

5.1.2 Project-Specific Growth-Inducing Impacts

Construction of the Project would result in the construction of a commercial truck wash and service center on three parcels of land that are currently lightly developed and designated as Prime Farmland. Approval of the Project would result in a General Plan Amendment to commercial uses by the City of Orland which are currently designated in the General Plan for Low Density Residential and High Density Residential use. The Project is not expected to have growth-inducing impacts as it will not attract new permanent residents to the City by providing additional housing. Additionally, the Project would not result in a substantial increase in employment opportunities resulting in increased growth. Development of the Proposed Project would not bring any public services to the area that are not already available in the Project vicinity. No new public roadways or public infrastructure is proposed or needed for development of the Project.

As mentioned, the Project includes a General Plan Amendment request for commercial use. The parcels are currently designated for Low Density Residential and High Density Residential use under the General Plan. If the designations were to remain as Low Density Residential and High Density Residential use, the likelihood of a residential project attracting new residents to the area is much higher. Irrespective of the Project, this vacant land has high potential to be developed in the future. However, a commercial project such as the Proposed Project would attract far fewer new residents to the area than a residential project. For these reasons, the Proposed Project would not result in significant growth inducement.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines require that an EIR identify and focus on significant environmental effects, including significant irreversible environmental changes that would be caused by the project should the project be implemented.

CEQA Guidelines Section 15126.2 (c) states that "uses of nonrenewable resources during the initial and continued phases of the Proposed Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly secondary impacts (such as highway improvement which provides access to a previously inaccessible area), generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitment of resources should be evaluated to assure that such current consumption is justified."

5.2.1 Nonrenewable Resources

Implementation of the Proposed Project would result in an irretrievable commitment of renewable and nonrenewable resources including land, water, energy resources, and construction materials. Development consistent with the Proposed Project would irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure. Nonrenewable and limited resources that would likely be consumed as part of Project site development would include, but are not limited to, oil, natural gas, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar conventional building materials.

The new buildings will require utility services, as well as raw material resources for construction. However, the amount of resources to be committed is not considered to be significant and are comparable to other developments of this type. No special construction materials or resources are anticipated to be needed as part of the Project.

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SECTION 6.0 LIST OF PREPARERS

6.1 CITY OF ORLAND (LEAD AGENCY)

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SECTION 7.0 ACRONYMS AND ABBREVIATIONS

µg/m^3	micrometers per cubic meter over
1992 CO Plan	South Coast Air Quality Management District 1992 Federal Attainment Plan for Carbon Monoxide
AADT	Annual Average Daily Traffic
AB	Assembly Bill
ac	acre
AMSL	above mean sea level
ANSI	American National Standards Institute
APE	area of potential effects
APS	auxiliary power system
AQAP	air quality attainment plan
ATCM	airborne toxics control measure
BA	biological assessment
BCC	Bird of Conservation Concern
BIOS	Biogeographic Information and Observation System
BO	biological opinion
BP	before present
C-2	Community Commercial
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Cal-EPA	California Environmental Protection Agency
Caltrans	California Department of Transportation, District 3
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBOC	California Burrowing Owl Consortium
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife, Region 2
CEQA	California Environmental Quality Act

C-H	Highway Commercial
CH_4	methane
CHL	California Historical Landmark
CHRIS	California Historical Resources Information System
City	City of Orland
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
CRHR	California Register of Historic Resources
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DEIR	Draft Environmental Impact Report
DOC	California Department of Conservation
DOC	Department of Conservation
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
Draft EIR	Draft Environmental Impact Report
du	dwelling units
EO	Executive Order
ESA	California Endangered Species Act
FEIR	Final EIR
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FR	Federal Register
GCALUC	Glenn County Airport Land Use Commission
GCAPCD	Glenn County Air Pollution Control District
GHG	greenhouse gas
GLO	General Land Office
GPS	Global Positioning System

GVWR	gross vehicle weight rating
GWP	global warming potential
Hz	Hertz
I-5	Interstate 5
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
kWh	kilowatt-hours
LCC	land capability classification
L_{dn}	Day/Night Noise Level
L_{eq}	Equivalent Noise Level
LESA	Land Evaluation and Assessment Model
LIM	Land Inventory and Monitoring
LOS	Level of Service
MLD	most likely descendant
MMRP	Mitigation Monitoring and Reporting Program
mph	miles per hour
MUTCD	*Manual on Uniform Traffic Control Devices for Streets FHWA's MUTCD 2010 Edition, as amended for use in California*) *and Highways*
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEIC	Northeastern Information Center
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOA	Naturally occurring asbestos
NOC	Notice of Completion
NOP	Notice of Preparation
NOx	nitrous oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	USDA Natural Resources Conservation Service

NRHP	National Register of Historic Places
NSVAB	Northern Sacramento Valley Air Basin
NSVPA	North Sacramento Valley Planning Area
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation's
OHWM	ordinary high-water mark
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OUWUA	Orland Unit Water Users Association
parts per million	Ppm
PG&E	Pacific Gas and Electric Company
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
PPV	peak particle velocity
PRC	Public Resources Code
Project	Sunny Truck Service Center Project
Proposed Project	Sunny Truck Service Center Project
RHNA	Regional Housing Needs Allocation
Risk Reduction Plan	Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles
RMS	root mean square
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board, Region 5
SA	Site Assessment
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SFEI	San Francisco Estuary Institute
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
SR	State Route

SSC	Species of Special Concern
STAA	Surface Transport Assistance Act
SVBAPCC	Sacramento Valley Basinwide Air Pollution Control Council
SWPPP	Storm Water Pollution Prevention Plan
TACs	toxic air contaminants
T-BACT	toxics best available control technology
TIA	Traffic Impact Analysis
UCMP	University of California Museum of Paleontology
USACE	U.S. Army Corp of Engineers
USBR	U.S. Bureau of Reclamation
USC	U.S. Code
USDA	US Department of Agriculture
USFS	United States Forest Service
VMT	vehicle miles traveled
WEAL	Western Electro-Acoustic Laboratory, Inc.
$\mu g/m^3$	micrograms per cubic meter

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LIST OF APPENDICES


CITY OF
ORLAND
Proud History
Bright Future
INC. 1909
CALIFORNIA