COUNTY OF TULARE
RESOURCE MANAGEMENT AGENCY

5961 South Mooney Boulevard
Visalia, CA 93277

Initial Study for Draft Environmental Impact Report

Hampton Inn
(CEQ 20-004)

October 2020

Prepared by
County of Tulare Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division

INITIAL STUDY CHECKLIST

1. Project Title: Hampton Inn and Suites Three Rivers Project (CEQ 20-004)

2. Lead Agency: County of Tulare
Resource Management Agency
5961 S. Mooney Blvd.
Visalia, CA 93277

3. Contact Persons: Aaron Bock, Assistant Director - Economic Development and Planning Branch – 559-624-7000
Hector Guerra, Chief, Environmental Planning Division – 559-624-7121

4. Project Location: The Project site is located in the USGS 7.5 Minute Kaweah Quadrangle within the community of Three Rivers, California, east of State Route (SR) 198/Sierra Drive, approximately 1,300' north of the Old Three Rivers Road/SR 198 intersection and south of the Comfort Inn and Suites. The site lies within Section 26, Township 17 South, Range 28 East, MDB&M entirely within APN 068-080-010.

5. Applicant: Ineffable Hospitality, Inc.
6473 E. Hatch Road
Hughson, CA 95326

6. Owner(s) Sukhjinder and Kulvinder Sanghera
6743 E. Hatch Road
Hughson, Ca 95326

7. General Plan Designation: Community Commercial

8. Zoning: C-2-MU-SC (General Commercial-Mixed Use-Scenic Corridor Combining Zone)

9. Description of Project (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.) The proposed Project is consistent with the Tulare County General Plan, the Three Rivers Community Plan, and with the current Zoning classification. A 3-story hotel and associated site improvements are being proposed on the existing parcel with access from SR 198. A driveway road is proposed from State Route (SR) 198/Sierra Drive through the vacant lot to the west and to the subject property. This driveway will be situated within an existing 30-foot wide access easement. The hotel will consist of 105 guest rooms with an elevator, managers office, meeting room, in-house food preparation and breakfast area, and other typical hotel facilities (such as in-house and guest laundry, fitness center, various storage closets, etc.) and outdoor swimming pool/cabana building. Consistent with Tulare County parking requirements, the proposed Project includes 108 standard parking stalls (6 of which will be handicap accessible stalls). Utilities include a septic tank with filter and dripline system and new domestic well, and storm drainage will be retained on-site (with an option for biofiltration). The proposed Project is anticipated to have 12 employees, 70 customers, 1 delivery, and 1 shipment per day, for an average total of 825 daily vehicle trips. Figures 4 and 5 show the Project Layout Overview and Site Plan, respectively.

10. Surrounding land uses and setting (Brief description):

North: commercial (Comfort Inn & Suites Hotel);
South: scattered residential and above ground propane storage tanks;
East: undeveloped/vacant land; and
West: undeveloped/vacant land.

11. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):** Regional Water Quality Control Board, San Joaquin Valley Unified Air Pollution Control District, Tulare County Fire Department, Tulare County Environmental Health, Caltrans, other TBD.

12. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that include, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?** Pursuant to AB 52, a Sacred Land File search reply was received from the Native American Heritage Commission on May 13, 2020, indicating the search results were negative. On October 1, 2020, tribal consultation notices were sent to 13 tribal contacts representing five (5) Native American tribes. As of the date of release of this environmental document, the County has not received any responses from the tribes within the 30-day response time. Mitigation measures have been included in the project to reduce potential impacts on tribal cultural resources in the event that any are unearthed during construction-related activities.

It is noted that the following analyses/determinations are preliminary and subject to revision during and through the environmental review process. Additional and/or clarifying information may be provided to the lead agency by responsible and trustee agencies, and other interested parties (e.g., Southern California Edison, Native American Tribes, the general public, etc.) which may be incorporated into the Draft Environmental Impact Report prior to its release an d initiation of the review period. An environmental impact report also contains additional topic chapters/sections not included in the Initial Study such as Alternatives, Mandatory Findings (a preliminary mandatory finding is summarized is included based upon the information currently available as is subject to revision), Cumulative Impacts (preliminary cumulative impacts finding are summarized for each resource is included based upon the information currently available as is subject to revision), Economic & Social Effects & Growth Inducing, Immitigable Impacts, and a Mitigation Monitoring and Reporting Program (however; preliminary mitigation measures are included in this Initial Study).

Figure 1 - Vicinity Map

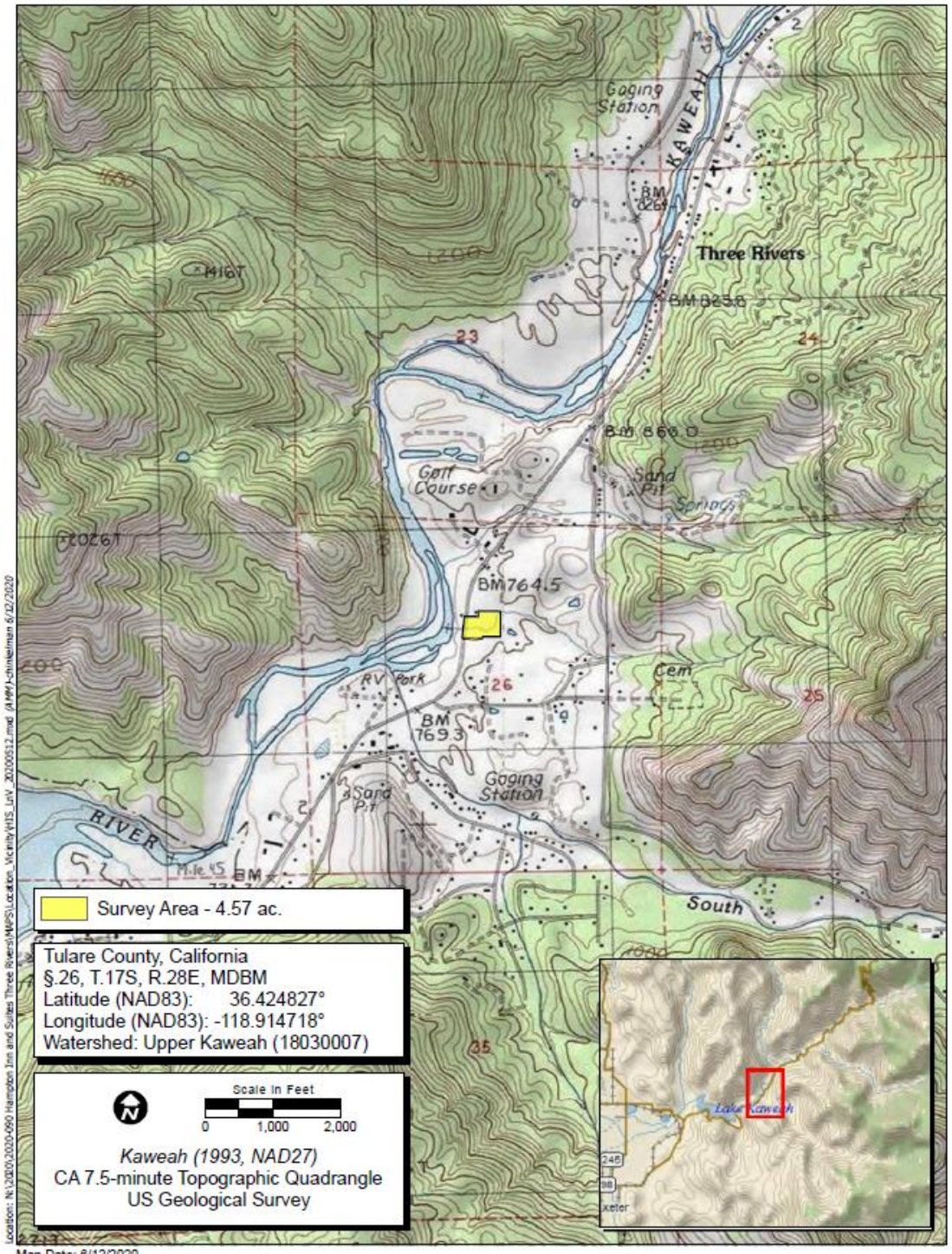


Figure 1. Project Location and Vicinity

2020-090 Hampton Inn and Suites in Three Rivers

Figure 2 - Aerial View of Site

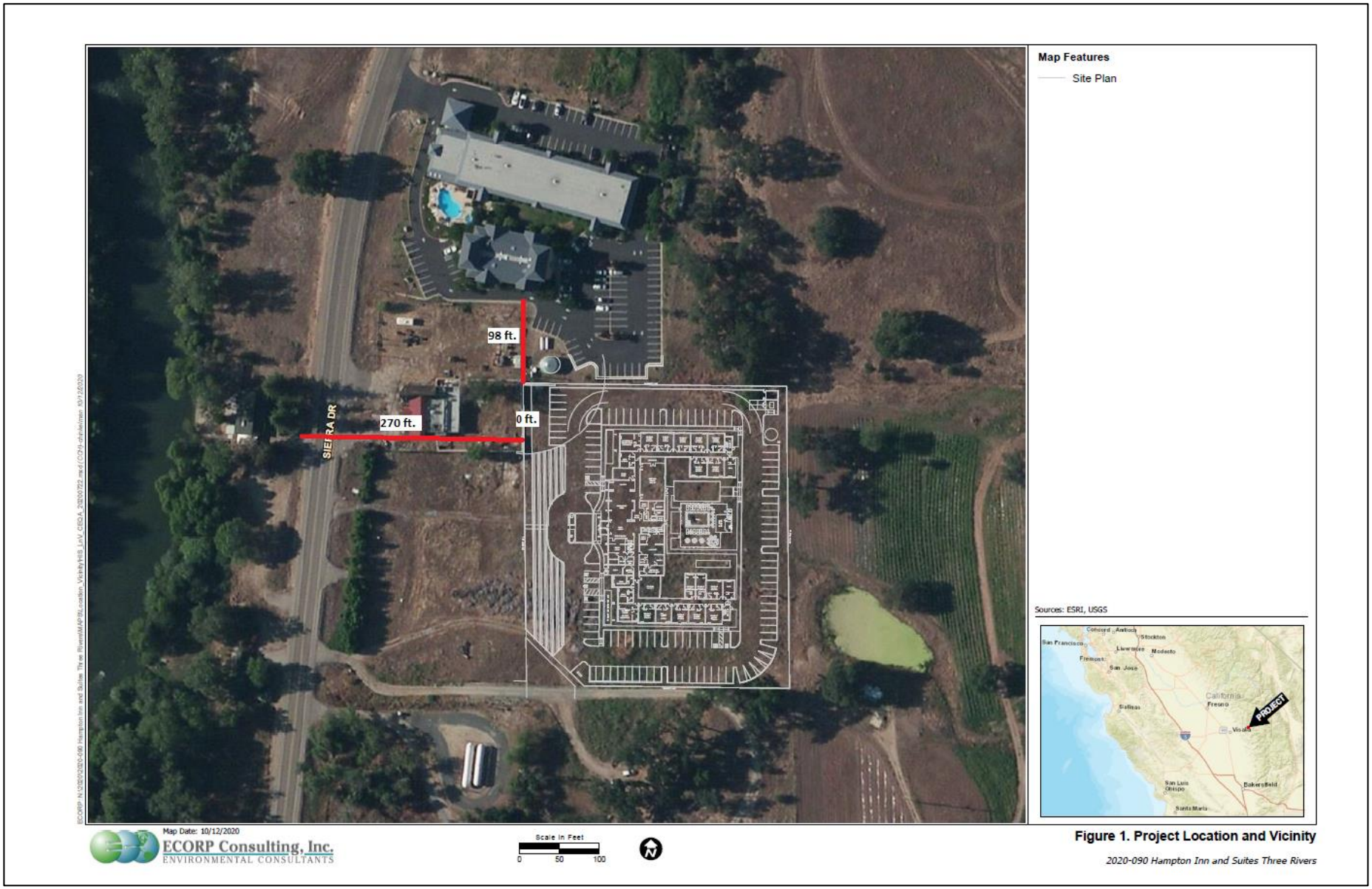


Figure 3 - Zoning

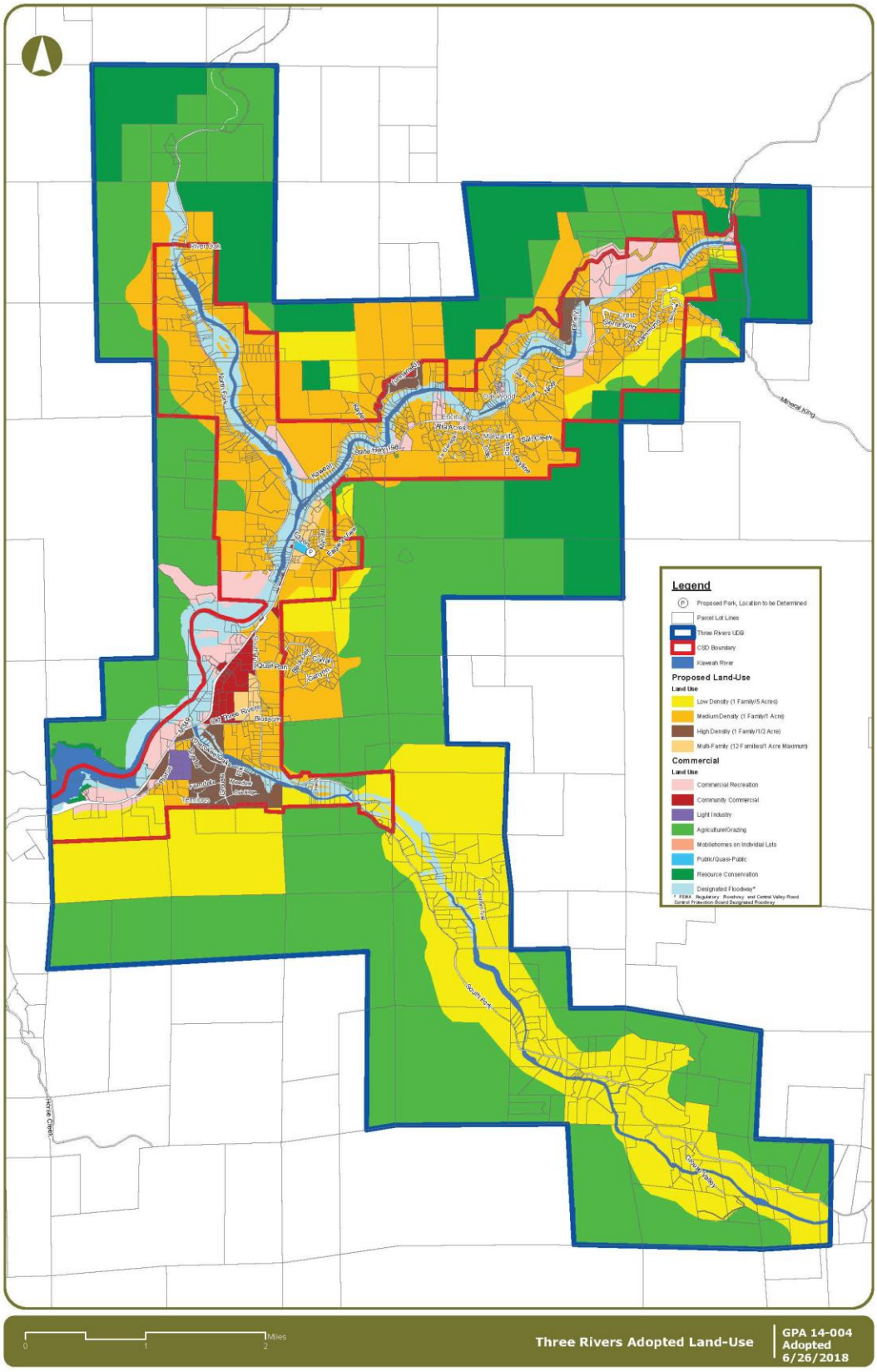


Figure 4 - Overall Site Plan

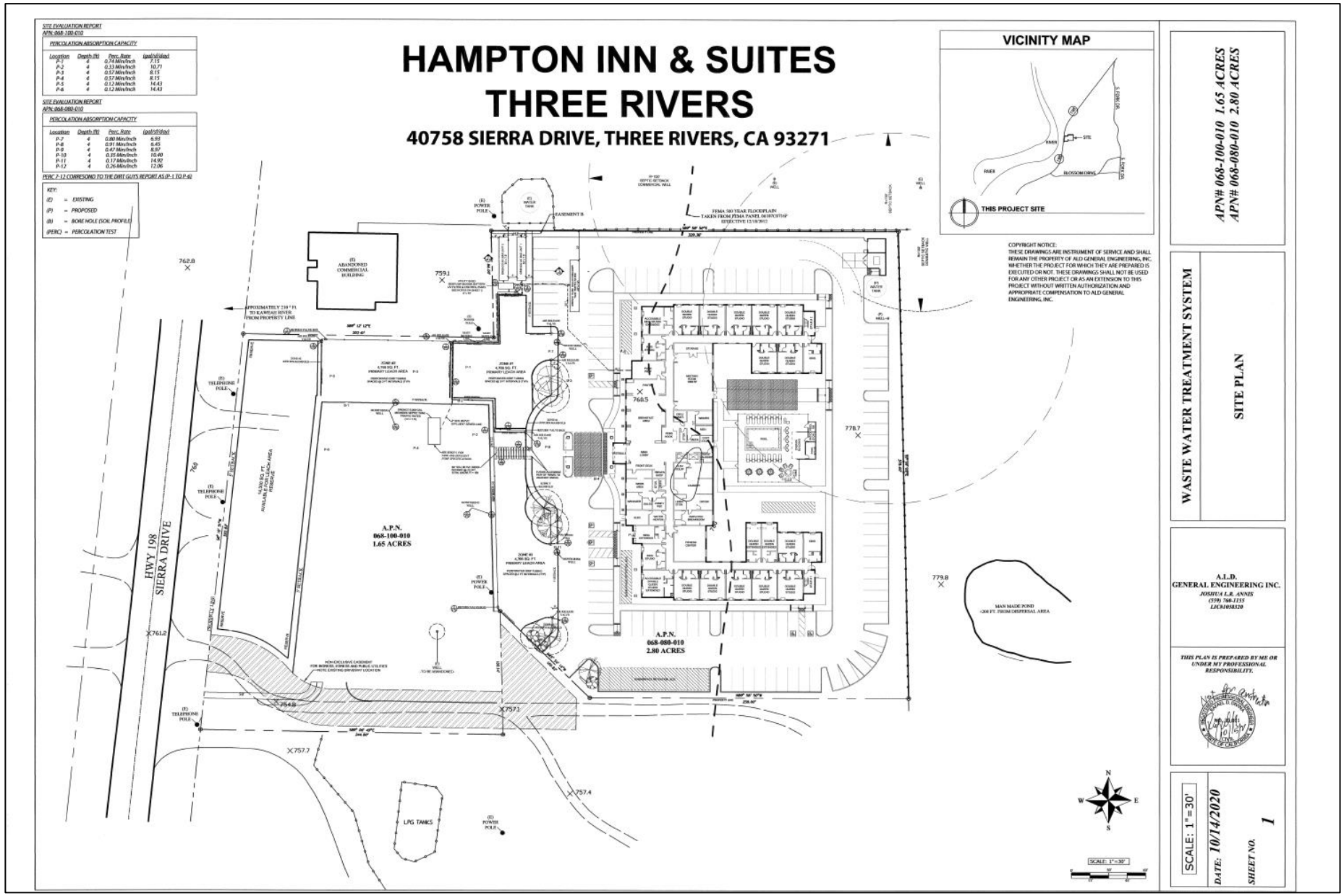


Figure 5 - Floor Plan (1 of 3)

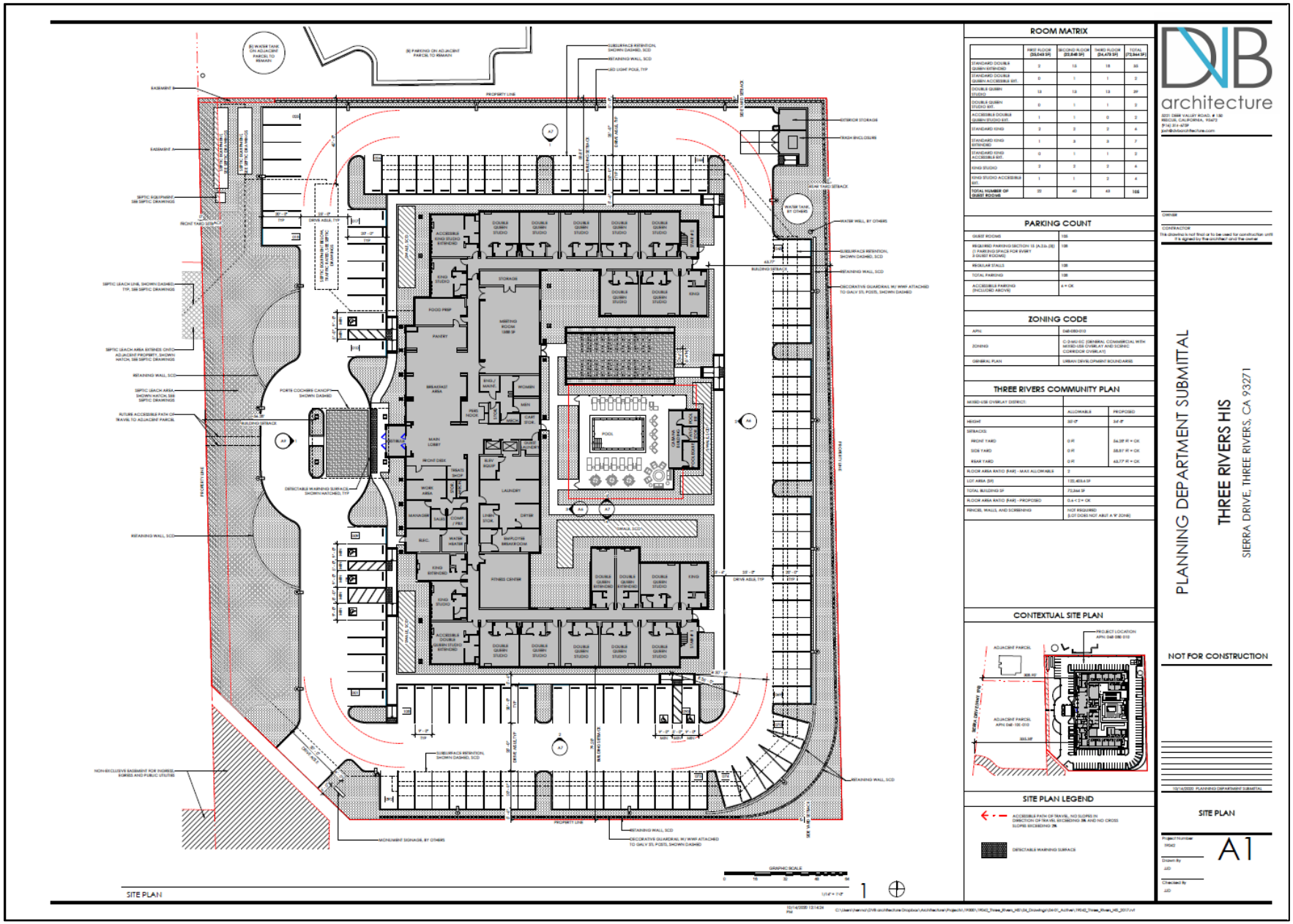


Figure 5 - Floor Plan (2 of 3)

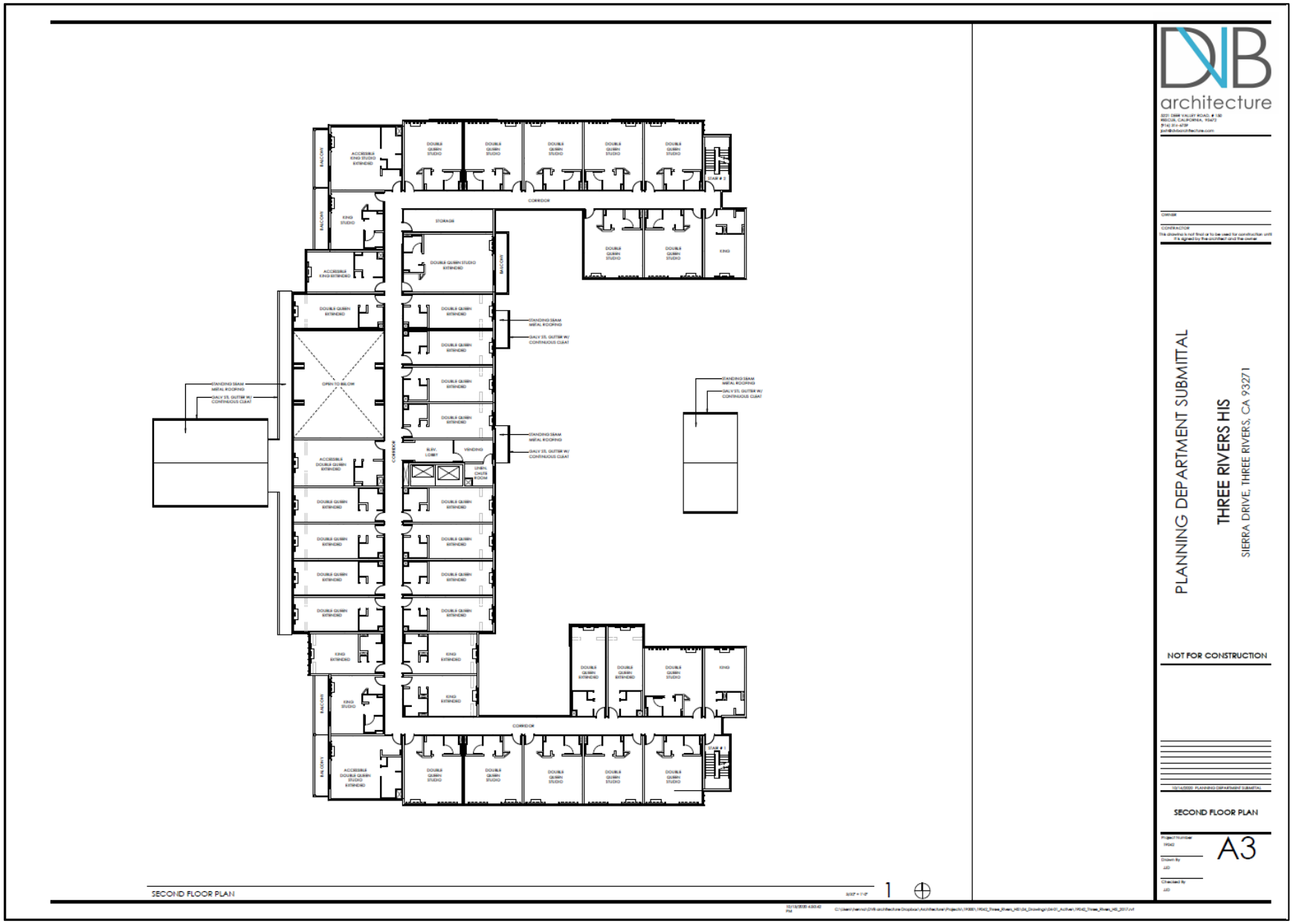
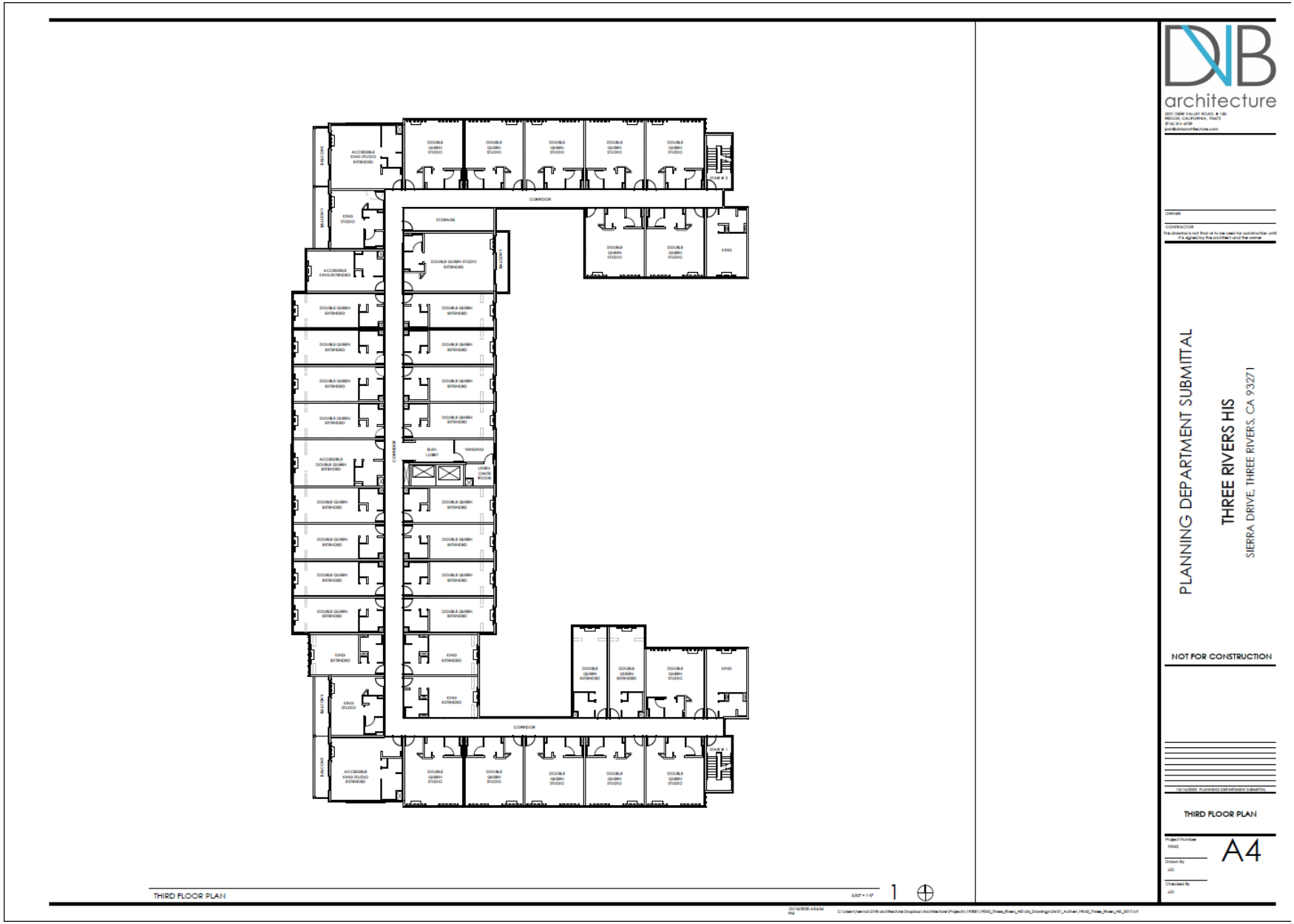


Figure 5 - Floor Plan (3 of 3)



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

A. The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

B. DETERMINATION:

On the basis of this initial evaluation:

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

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

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

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

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

Signature: _____ Date: 10/2/20

Hector Guerra
Printed Name

Chief Environmental Planner
Title

Signature: _____ Date: 11/2/2020

Reed Schenke, P.E.
Printed Name

Environmental Assessment Officer
Title

C. EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify: the significance criteria or threshold, if any, used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance.

https://www.fresno.gov/darm/wp-content/uploads/sites/10/2020/03/Initial-Study.pdf (Parc West Development Project)

1.	AESTHETICS					
	Would the project:					
Would the project:			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT	NO IMPACT
	a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
	b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
	c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
	d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Analysis:

Environmental Setting

The proposed Project area is located in the Sierran foothills on the western slope of the Sierra Nevada range at elevations between 700 and 3,000 feet. Geophysical factors including elevation, slope, hydrogeology and climate allow the area a high degree of biodiversity that supports a wealth of flora and fauna. This area is typified by undulating terrain that varies from relatively flat riparian valleys immediately adjacent to the Kaweah River to very rugged, mountainous terrain particularly at the southern end of South Fork Drive The North Fork area elevations range from approximately 980 to over 2,400 feet in the vicinity of Comb Rocks. Elevations along the State Highway 198 corridor range from approximately 772 feet at Lake Kaweah to a high elevation of 2,400 feet east of the entrance to the Sequoia National Park.

The proposed Project site is located in a rural residential and commercial center in the unincorporated community of Three Rivers along SR 198/Sierra Drive. This area is in the foothills of the Sierra Nevada at the edge of the San Joaquin Valley. Three Rivers geographically located in the Kaweah River canyon, the gateway to the entrance to Sequoia and Kings Canyon National Parks. The Project Area is along the southern bank of the Kaweah River, which is 200 feet west, and is approximately five miles northeast of Kaweah Lake. SR 198 separates the Project Area land from the Kaweah River. Elevations range from 755 to 765 feet above mean sea level.

Regulatory Setting

Federal

Aesthetic resources are protected by several federal regulations, none of which are relevant to this proposed Project because it will not be located on lands administered by a federal agency nor is the proposed Project applicant requesting federal funding or any federal permits.

State

Nighttime Sky – Title 24 Outdoor Lighting Standards

Title 24 Outdoor Lighting Standards were adopted by the State of California Energy Commission (CEC) (Title 24, Parts 1 and 6, Building Energy Efficiency Standards) on November 5, 2003, approved by the California Building Standards Commission (BSC) on July 21, 2004 and went into effect on October 1, 2005.[1] Recent updates to Title 24 requirements became effective on January 1, 2017.[2] The updates include definitions for outdoor lighting, which vary according to which "Lighting Zone" the equipment is in. The CEC defines rural areas in accordance with guidelines established by the United States Census Bureau. Rural areas are categorized as CEC Lighting Zone 2 (LZ2) and described as areas being exposed to "moderate" levels of ambient illumination.[3]

California Scenic Highway Program

The Scenic Highway Program allows county and city governments to apply to the California Department of Transportation (Caltrans) to establish a scenic corridor protection program which was created by the Legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 284[4]. Two Eligible State Scenic Highways occur in Tulare County, SRs 198 and 190; however, they are not Designated State Scenic Highways.[5]

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 7 – Scenic Landscapes, contains the following goals and policies that relate to aesthetics, preservation of scenic vistas and daytime lighting/nighttime glare and which have potential relevance to the Project's CEQA review: *LU-7.14 Contextual and Compatible Design* wherein the County shall ensure that new development respects Tulare County's heritage by requiring that development respond to its context, be compatible with the traditions and character of each community, and develop in an orderly fashion which is compatible with the scale of surrounding structures; *LU-7.19 Minimize Lighting Impacts* wherein the County shall ensure that lighting in residential areas and along County roadways shall be designed to prevent artificial lighting from reflecting into adjacent natural or open space areas unless required for public safety; *SL-1.1 Natural Landscapes* which requires new development to not significantly impact or block views of Tulare County's natural landscapes*; SL-1.2 Working Landscapes* which requires that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape; and *SL-2.1 Designated Scenic Routes and Highways* which is intended to protect views of natural and working landscapes along the County's highways and roads by maintaining a designated system of County scenic routes and State scenic highways.

Tulare County's General Plan 2030 Update discusses State and County-designated and eligible scenic highways and encourages citizen and private sector initiatives to promote and protect such areas.[6] State Route 198 from Visalia to Three Rivers has been designated as an eligible State Scenic Highway by the State of California.[7] State Route 198 parallels Lake Kaweah and the Kaweah River. This highway travels through the agricultural areas of the valley floor to the foothills and the Sierra Nevada range. Figure 7-1 of the General Plan 2030 Update identifies State-designated scenic highways as well as County-designated scenic roads within Tulare County.[8]

Three Rivers Community Plan

Following is a summary list of some additional goals/objective/policies that may apply to the proposed Project contained in the Three Rivers Community Plan[9], including, but are limited to: *Goal 1: Compatible Development* to maintain the Rural Gateway

[1] California Energy Commission, 2017. Past Building Energy Efficiency Standards. http://www.energy.ca.gov/title24/standards_archive/.

[2] California Energy Commission, 2017. Building Energy Efficiency Program. *http://www.energy.ca.gov/title24/* .

[3] California Energy Commission, 2016, page 41. http://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf

[4] California Legislative Information., 2017. Article 2.5. State Scenic Highways [260 – 284]. https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=SHC&division=1.&title=&part=&chapter=2.&article=2.5.

[5] CADOT, 2017. Tulare County. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

[6] Ibid. Page 7-4, 7.2 Scenic Corridors and Places.

[7] CADOT, 2017. Tulare County. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

[8] Tulare County, 2012. Tulare County General Plan 2030 Update. Goals and Policies Report. Figure 7-1 Designated Candidate Scenic State Highways and County Scenic Routes. Page 7-5. Accessed at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf.

[9] Tulare County. Three Rivers Community Plan 2018 Update. Pages 235-242.

Character of Three Rivers through land uses and new development that are compatible and consistent with the existing development in Three Rivers, preserve the unique visual and community character and natural environment and create a distinct sense of place. *Objective 1.1 Development Compatibility* Ensure compliance with the Community Plan to ensure compatibility between and within new and existing development. *Policies: 1.1.2 Mixed Uses* to ensure that development to accommodate growth includes a balanced mix of residential, commercial and public uses that enhance the community's economic vitality while maintaining its rural character and quality of life; *1.1.3 Commercial Uses- Limiting Negative Impacts* to limit commercial or recreational uses that generate negative impacts, such as noise, lighting, traffic, odors and emissions in residential and rural residential neighborhoods which includes subset (a) The height, size, mass, scale, and design of new development shall be consistent in size, and compatible with the character of the surrounding natural or built environment. Structures shall be designed to follow natural contours of the landscape and clustered in the most accessible, least visually prominent and most geologically stable portion or portions of a site. Structures will be sited so as not to obstruct significant views and subset (b) Implement a development height standard, based on the existing building code, with maximum building height not to exceed 35' (as identified in the FGMP page 41). The following general provisions are recommended: (a) Distance: to be determined based on the following factors: (b) Stabilization of edge condition, (c). Types of operation, (d) Types of land uses (i.e. schools, etc.), (e). Building orientation, (f) Planting of trees for screening, (g) Location of existing and future rights-of-way, (h) Types of uses allowed inside the project area, (i). Unique site conditions, (j) Responsibility for maintenance, and (k). Scale of development; 1.1.4 Compatible Commercial Establishments Encourage compatible commercial establishments necessary to serve residents and tourists that are commensurate with the scale and intensity of the community, preserve the environment, and which do not have to the extent feasible, significant traffic, light, noise or visual impacts to the community; 1.1.5 Cluster Commercial Uses Cluster commercial uses in compact areas and development patterns to discourage strip development and encourage the development of a Town Center or Centers; *1.1.6 Land Use Protections* Protect land uses adjacent to SR 198 from noise impacts by requiring adequate landscape screening and buffering; *1.1.10 LU-3.8 Rural Residential Interface* wherein the County shall minimize potential land use conflicts at the interface between commercial, industrial, or medium to high density residential development and existing developed rural-residential areas; *1.1.12 LU-4.5 Commercial Building Design* wherein the County shall encourage that new commercial development is consistent with the existing design of the surrounding community or neighborhood by encouraging similar façades, proportionate scale, parking, landscaping, and lighting that provides for night sky conservation and protection; *1.1.15 LU-7.14 Contextual and Compatible Design* wherein the County shall ensure that new development respects Three Rivers' long heritage by requiring that development respond to its context, be compatible with the traditions and character of the community, and develop in an orderly fashion which is compatible with the scale of surrounding structures; *Objective 1.2 Rural Gateway Character* to maintain and balance the existing natural environment with the rural gateway character of Three Rivers. *Policies: 1.2.1 New Development Compatibility* to ensure that the size, type, and scale of new development in Three Rivers is compatible with the rural character of the community; *1.2.6 LU-7.9 Visual Access* wherein the County shall require new development to maintain visual access to views of hillsides, creeks, and other distinctive natural areas by regulating building orientation, height, and bulk; *1.2.7 LU-7.6 Screening* wherein the County shall require landscaping to adequately screen new industrial uses to minimize visual impacts; *1.2.13 SL-3.3 Highway Commercial* wherein the County shall require highway commercial uses to be located and designed to reduce their visual impact on the travel experience along State scenic highways and County scenic routes by: *a.* Encouraging commercial development to locate in existing communities and hamlets, *b.* Designing highway commercial areas as an extension of community street patterns and vernacular design traditions, allowing the individual personalities of each community to extend to the highway edge, and *c.* Discouraging development of frontage roads consistent with commercial strips except when consistent with regional growth corridor and community plans; *1.2.19 FGMP-6.4 Development Within Scenic Corridors* wherein the County shall require that projects located within a scenic corridor be designed in a manner, which does not detract from the visual amenities of that thoroughfare. The County shall support through the use of its authority and police powers, the design of infrastructure that minimizes visual impacts to surrounding areas by locating roadways in areas that minimize the visual impact on rural and natural places whenever feasible; *1.3.4 Setbacks* that require adequate setbacks for residential, commercial and industrial uses, including, side and rear yards, landscaping and screening, as determined by the County Project Review Committee; *1.3.5 Signage Standards* that require standards for signage in Three Rivers, including regulations for: size, height, scale, color, lighting, and material. Incorporate Caltrans signage standards with community standards, as they apply to SR 198; *1.3.6 Lighting Standards* to establish lighting standards and guidelines as feasible and appropriate to minimize light pollution, glare, and light trespass and to protect the dark skies in Three Rivers; *1.3.7 Vegetation Standards* to establish vegetation standards for residential and commercial development, and encourage the use of native vegetation in landscaping, when visible to common roadways.

a) Less Than Significant Impact: For the purposes of this proposed Project, a scenic vista is defined as an area that is designated, signed, and accessible to the public for the purpose of viewing and sightseeing. The proposed Project site is located in the unincorporated community of Three Rivers and is adjacent to an existing hotel along and east of SR 198/Sierra Drive. The County requires development within existing eligible State Scenic Highway corridors to adhere to land use and design standards and guidelines required by the State Scenic Highway Program. The immediate area surrounding the Project site is generally level; there are two nearby hills northeast and east of the site and numerous hills west of the site (west of the Kaweah River).

The Comfort Inn and Suites is located to the north, the Kaweah River is west of site (west of SR 198) with scattered development (i.e., two rural residences), undeveloped land to the east and, a rural residence and two large compressed natural gas tanks to the southwest. The proposed Project would be three stories (approximately 30'-4" in height) and thus would not exceed the 75 feet maximum as specified in the Zoning Ordinance. No parts of the proposed Project would obstruct local scenic views. The primary structure (the hotel building) will be setback greater than 300 feet from the edge of SR 198/Sierra Drive thereby minimizing visual intrusion on scenic views as applicable to CEQA. To be clear, there are no ***designated scenic vistas*** (emphasis added) within or within visible distance of the proposed Project site (County of Tulare, 2010). Therefore, as the proposed Project would result in a less than substantial adverse affect on a scenic vista, the proposed Project would result in a less than significant impact to this resource.

b) No Impact and Less Than Significant Impact: There are no rock outcroppings, historic buildings[10], or other designated scenic resources within or near the proposed Project site. The California Scenic Highway Program allows counties to nominate an eligible scenic highway to be approved by the California Department of Transportation and placed under the scenic corridor protection program. In Tulare County, there is currently one officially designated scenic highway, and two highways that are eligible for designation. Approximately two miles of the officially designated Scenic Highway (State Route) 180 passes through Tulare County, but this segment of SR 180 is greater approximately 20 miles north of the proposed Project site. In addition to SR 198 (a segment of it passes through Three Rivers), SR 190 (approximately 21 miles south), are Eligible State Scenic Highways. As such, the proposed Project is located within the viewshed of an eligible highway segment of SR 198 but, it is not located within the viewshed of any ***designated scenic highway*** (emphasis added).

As noted in the Three Rivers Community Plan (Community Plan), the Three Rivers community is located within a segment of SR 198 appropriately labeled as the "Three Rivers Community segment."[11] The Community Plan contains policies for visual resources such as design quality, minimize viewshed impacts, skyline preservation, etc., that will apply to the proposed Project. As noted earlier, the proposed Project is located in a relatively flat area and does not contain scenic resources such as significant trees, rock outcroppings, or historic buildings.

Therefore, there would be no impact to a designated state scenic highway and a less than significant impact to an eligible state scenic highway. The would be no impact and a less than significant impact to other scenic resources as a result of the proposed Project.

c) No Impact: The proposed Project site is located in a mixed sparse, low density, scattered, non-intensive developed area. The proposed Project will be located greater than 200 feet from SR 198 (with the main structure (the hotel) greater than 300 feet from SR 198), will be limited to three-stories (30'-4"in height), and will designed to be minimally intrusive to surrounding uses. As such, even though the proposed Project location is in a generally urbanized area, it would not substantially degrade the existing visual character or quality of the site and its surroundings. As noted earlier, implementation of Tulare County General Plan and Three Rivers Community Plan policies and development standards would minimize or avoid substantial impacts to the visual character or quality of the site and its surroundings. Therefore, the proposed Project would not conflict with applicable zoning and other regulations governing scenic quality resulting in no impact to this resource.

d) Less Than Significant Impact: The proposed Project will likely including lighting at the entry/exit point, and include evening lighting in the parking areas, pedestrian walkways, and security lighting, it will be required to comply with Tulare County General Plan and Three Rivers Community Plan policies and development standards. The Community Plan contains specific standards for night sky conservation and protection at *Policy 1.1.12 LU-4.5 Commercial Building Design* (237), *4.5.2. Proposals Subject to County Project Review Committee* and, A-1 - Policy Matrix (6) Establishing Lighting Standards for Night Sky Conservation and Protection.[12]. As such, the proposed Project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area resulting in a less than significant impact to this resource.

Cumulative Impact: As noted earlier, the proposed Project will be setback greater than 200 feet (with the main structure (the hotel), greater than 300 feet from SR 198), will be limited to three-stories (30'-4"in height), will designed to minimize intrusion to surrounding uses, and as there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers that would impact aesthetics, the proposed Project will not significantly contribute to the overall aesthetics of the area.

[10] *"Cultural Resources Inventory Report Hampton Inn and Suites Three Rivers".* Page 21. June 2020. Prepared by ECORP Consulting, Inc.

[11] Three Rivers Community Plan Update. Page 80. Accessed at: https://tularecounty.ca.gov/rma/index.cfm/planning-building/community-plans/updated-community-plans/three-rivers-community-plan-adopted-pdf/. Adopted by the Tulare County Board of Supervisors on June 26, 2018 via Resolution Nos. 2018-0481, 2018-0482, 2018-0483, and 2018-0484.

[12] Ibid. Pages 237, 264, and 351; respectively.

2.	**AGRICULTURAL AND FOREST RESOURCES**					
	In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the Rural Valley Lands Plan point evaluation system prepared by the County of Tulare as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT**	**NO IMPACT**
	a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
	b)	Conflict with existing zoning for agriculture use, or a Williamson Act contract?	☐	☐	☐	☒
	c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources code 12220(g), timberland (as defined in Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
	d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
	e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Analysis:

Environmental Setting

Tulare County exhibits a diverse ecosystems landscape created through the extensive amount of topographic relief (elevations range from approximately 200 to 14,000 feet above sea level). The County is essentially divided into three eco-regions. The majority of the western portion of the County comprises the Great Valley Section, the majority of the eastern portion of the County is in the Sierra Nevada Section, and a small section between these two sections comprises the Sierra Nevada Foothill Area."[13]

Three Rivers lies in this foothill area generally at elevations between 700 and 3,000 feet. Geophysical factors including elevation, slope, hydrogeology, and climate allow the area a high degree of biodiversity that supports a wealth of flora and fauna. The area is typified by undulating terrain that varies from relatively flat riparian valleys immediately adjacent to the North, South, and Middle forks of the

[13] Tulare County, 2010. General Plan 2030 Update RDEIR, page 3.11-5. Accessed at: http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf

Kaweah River to very rugged, mountainous terrain.

According to the General Soils Map of Tulare County, Three Rivers contains three soil classes: Class VI, Class VII and Class VIII. These soils are not suitable for cultivation however they lend themselves to pasture, rangelands, grazing and wildlife purposes. Three Rivers' soils are conducive to cattle and grazing operations and to this end extensive grazing occurs along north and south forks (Case Mountain) of the Kaweah River on private ranches and lands leased from the BLM. The proposed Project site itself consists of Blasingame sandy loam and Tujunda sand soils; both are not hydric and are not rated as prime farmland.[14]

Forest Lands

"Timberlands that are available for harvesting are located in the eastern portion of Tulare County in the Sequoia National Forest. Hardwoods found in the Sequoia National Forest are occasionally harvested for fuel wood, in addition to use for timber production. Since most of the timberlands are located in Sequoia National Forest, the U.S. Forest Service has principal jurisdiction, which encompasses over 3 million acres. The U.S. Forest Service leases these federal lands for timber harvests."[15]

The proposed Project is not located on timberland or a forest. As noted earlier, the proposed Project site is located on vacant, undeveloped land and does not contain trees either intended for or suitable for use as timber.

Regulatory Setting

Federal

Federal regulations for agriculture and forest resources are not relevant to this proposed Project because it is not a federal undertaking (the proposed Project site is not located on lands administered by a federal agency, and the proposed Project applicant is not requesting federal funding or any federal permits).

State

California Environmental Quality Act (CEQA) Definition of Agricultural Lands

Public Resources Code Section 21060.1 defines "agricultural land" for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP serves as a tool to analyze agricultural land use and land use changes throughout California. As such, the proposed is Project is being evaluated using the FMMP pursuant to CEQA.

California Department of Conservation, Division of Land Resource Protection

The California Department of Conservation (DOC) applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands. These agricultural designations are used in planning for the present and future of California's agricultural land resources. Pursuant to the DOC's FMMP, these designated agricultural lands are included in the Important Farmland Maps (IFM). As noted earlier the FMMP was established in 1982 to assess the location, quality and quantity of agricultural lands, and the conversion of these lands. The FMMP serves as tool to analyze agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

The following list provides a comprehensive description of all the categories mapped by the DOC. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are referred to as Farmland.[16]

- Prime Farmland. Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained

[14] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Accessed September 2020 at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

[15] Ibid. 4-20.

[16] California Department of Conservation. FMMP – Important Farmland Map Categories. ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/ ; then select tul16_no. pdf Accessed May 2019.

high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- Farmland of Statewide Importance. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- Unique Farmland. Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated groves or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- Farmland of Local Importance. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- Grazing Land. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
- Urban and Builtup Land. Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- Other Land. Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act)

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. The Department of Conservation assists all levels of government, and landowners in the interpretation of the Williamson Act related government code. The Department also researches, publishes and disseminates information regarding the policies, purposes, procedures, and administration of the Williamson Act according to government code. Participating counties and cities are required to establish their own rules and regulations regarding implementation of the Act within their jurisdiction. These rules include but are not limited to: enrollment guidelines, acreage minimums, enforcement procedures, allowable uses, and compatible uses.[17]

Williamson Act Contracts are formed between a county or city and a landowner for the purpose of restricting specific parcels of land to agricultural or related open space use. Private land within locally-designated agricultural preserve areas are eligible for enrollment under a contract. The minimum term for contracts is ten years. However, since the contract term automatically renews on each anniversary date of the contract, the actual term is essentially indefinite. Landowners receive substantially reduced property tax assessments in return for enrollment under a Williamson Act contract. Property tax assessments of Williamson Act contracted land are based upon generated income as opposed to potential market value of the property.[18]

Forestry Resources

State regulations regarding forestry resources are not relevant to the proposed Project because no forestry resources exist at the proposed Project site.

Local

County of Tulare

On February 26, 2013, per Resolution No. 2013-0104, Tulare County adopted a two-level review process for evaluating the siting of public and private utility structures on agricultural zoned land to analyze potential agricultural conversion impacts. However, as the proposed Project does not entail nor impact any agricultural land, this Resolution does not apply to the proposed Project.

[17] California Department of Conservation. Williamson Act Program. https://www.conservation.ca.gov/dlrp/wa. Site accessed May 2019.

[18] https://www.conservation.ca.gov/dlrp/wa/Pages/contracts.aspx Site accessed May 2019.

a) No Impact: As noted earlier, the Tulare County Board of Supervisors (Board) approved Resolution No. 2013-0104 on February 26, 2013, whereby Tulare County adopted a two-level review process for evaluating the siting of public and private utility structures on agricultural zoned land to analyze potential agricultural conversion impacts. However, as noted earlier, this Resolution does not apply to the proposed Project. The proposed Project would not result in the Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. Therefore, the proposed Project would result in a less than significant impact to this resource.

b) No Impact: The proposed Project site is zoned C-2-MU-SC (General Commercial-Mixed Use-Scenic Corridor Combining Zone); as such, the proposed Project is an allowed use. The proposed Project site is not under a Williamson Act Contract. Therefore, the proposed Project would not conflict with existing zoning or a Williamson Act Contract and no impact would occur.

c and d) No Impact: The proposed Project will not occur on land zoned as forest land or timberland, or result in a loss of forest land. As such, the proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources code 12220(g), timberland (as defined in Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

e) No Impact: The proposed Project site is not located near land zoned as forest land or timberland and therefore would not result in any changes in the environment that might convert forest land to non-forest land. Also, the proposed Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use. Therefore, the proposed Project would not result in other changes to the environment that could result in the conversion of forest land to no-forest land nor farmland to non-farmland. There would be no impact on this Item.

Cumulative Impact: As the proposed Project will not replace agricultural or timberland, it would not contribute to any cumulative impact to this resource.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
	b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
	c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
	d)	Result is other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

Analysis

The proposed Project will result in Less Than Significant Impacts With Mitigation to Air Quality. The "Air Quality & Greenhouse Gas Assessment Three Rivers Hampton Inn and Suites Project" (AQ Assessment) was prepared by ECORP Consulting, Inc. (Consultant) in July 2020 (updated October 2020) which is included in Attachment "A" of this Initial Study. The AQ Assessment is used as the basis for determining that, based on the evidence/documentation (including incorporation of recommendations contained in the AQ Assessment) and the expertise of qualified Consultant, the proposed Project will result in a less than significant impact.

Environmental Setting

The proposed Project is located in the San Joaquin Valley Air Basin (SJVAB), a continuous inter-mountain air basin. The Sierra Nevada Range forms the eastern boundary; the Coast Range forms the western boundary; and the Tehachapi Mountains form the southern boundary. These topographic features restrict air movement through and beyond the SJVAB. The SJVAB is comprised of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties and the valley portion of Kern County; it is approximately 25,000 square miles in area. Tulare County lies within the southern portion of the SJVAB. Air resources in the SJVAB is managed by the San Joaquin Valley Air Pollution Control District (Air District or SJVAPCD).

Regulatory Setting

Both the federal government (through the United State Environmental Protection Agency (EPA)) and the State of California (through the California Air Resources Board (CARB or ARB)) have established health-based ambient air quality standards (AAQS) for six air pollutants, commonly referred to as "criteria pollutants." Criteria pollutants are air pollutants for which acceptable levels of exposure can be determined and for which AAQS has been set. The six criteria pollutants are: carbon monoxide (CO), ozone (O3), sulfur dioxide (SO2), nitrogen dioxide (NO2), respirable or coarse particulate matter (PM10), fine particulate matter (PM2.5), and lead (Pb).

National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for each criteria pollutant to protect the public health and welfare. The federal and state standards were developed independently with differing purposes and methods, although both processes are intended to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent.

Federal

The Federal Clean Air Act requires EPA to set NAAQS for the six criteria pollutants, noted above, that occur throughout the United States. Of the six pollutants, particle pollution and ground-level ozone are the most widespread health threats. EPA regulates the criteria pollutants by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards.

EPA is required to designate areas as meeting (attainment) or not meeting (nonattainment) the air pollutant standards. The Federal Clean Air Act (CAA) further classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. The Federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states will use to attain the NAAQS. The Federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the Federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and impose additional control measures.

The SJVAB is considered to be in attainment for federal and state air quality standards for carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2); attainment for federal and non-attainment for state air quality standards for respirable particulate matter (PM_{10}); and non-attainment of state and federal air quality standards for ozone (O_3) and fine particulate matter ($PM_{2.5}$). To meet federal CAA requirements, the Air District has adopted the following attainment plans: the 2004 Extreme Ozone Attainment Demonstration Plan (for the 1979 1-hour standard); the 2007 Ozone Plan (for the 1997 8-hour standard); the 2009 RACT SIP; the 2013 Plan for the Revoked 1-Hour Ozone Standard; the 2014 RACT SIP; the 2016 Plan for the 2008 8-Hour Ozone Standard; 2020 RACT Demonstration (for the 2015 8-hour standard); the 2007 PM10 Maintenance Plan; the 2008 PM2.5 Plan (for the 1997 annual standard); the 2012 PM2.5 Plan (for the 2006 24-hour standard); the 2015 Plan for the 1997 PM2.5 Standard (for annual and 24-hour standards); the 2016 Moderate Area Plan for the 2012 PM 2.5 Standard (for the annual standard); the 2018 Plan for the 1997, 2006, and 2012 PM 2.5 Standards (annual and 24-hour standards); and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide. The State does not have an attainment deadline for the ozone standards; however, it does require implementation of all feasible measures to achieve attainment at the earliest date possible. State PM_{10} and $PM_{2.5}$ standards have no attainment planning requirements, but must demonstrate that all measures feasible for the area have been adopted.

State

The California Air Resources Board (ARB) divides the state into air basins that share similar meteorological and topographical features and is the state agency responsible for implementing the federal and state Clean Air Acts. ARB has established California Ambient Air Quality Standards (CAAQS), which include all criteria pollutants established by the NAAQS, but with additional regulations for Visibility Reducing Particles, sulfates, hydrogen Sulfide (H2S), and vinyl chloride.

Air basins are designated as attainment or nonattainment. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an unclassified designation indicates insufficient data is available to determine compliance for that pollutant. The proposed Project is located within the San Joaquin Valley Air Basin, which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and parts of Kern counties and is managed by the San Joaquin Valley Unified Air Pollution Control District (Air District).

Standards and attainment status for listed pollutants in the Air District can be found in **Table AQ-1**. Note that both state and federal standards are presented.

Table AQ-1
SJVAB Attainment Status

	Designation/Classification	
Pollutant	**Federal Standards[a]**	**State Standards[b]**
Ozone – one hour	No Federal Standard[f]	Nonattainment/Severe
Ozone – eight hour	Nonattainment/Extreme[e]	Nonattainment
PM_{10}	Attainment[c]	Nonattainment
$PM_{2.5}$	Nonattainment[d]	Nonattainment
CO	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

a See 40 CFR Part 81
b See CCR Title 17 Sections 60200-60210
c On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM_{10} National Ambient Air Quality Standard (NAAQS) and approved the PM_{10} Maintenance Plan.
d The Valley is designated nonattainment for the 1997 $PM_{2.5}$ NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).
e Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010)
f Effective June 15, 2005, the U.S. EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Source: San Joaquin Valley Unified Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. http://www.valleyair.org/aqinfo/attainment.htm. Accessed October 2020.

The ARB is responsible for the statewide comprehensive air toxics program. This program was created to reduce exposure to air toxics and established a formal procedure for ARB to designate substances as toxic air contaminants (TACs). Once a TAC is identified, ARB adopts an airborne toxics control measure (ATCM) for sources that emit the designated TAC. 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 (BACT) to minimize emissions.

The ARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute. Assembly Bill (AB) 2588 (Air Toxics "Hot Spots" Information and Assessment Act of 1987) requires quantification

and prioritization of TAC emissions from individual facilities by the responsible air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA) and, if specific thresholds are exceeded, required to communicate the results to the public. The "Hot Spots" Act was amended by Senate Bill (SB) 1731, which requires facilities posing a significant health risk to the community to reduce their risk through a risk management plan.

Local

San Joaquin Valley Unified Air Pollution Control District (Air District)

The Air District is the local agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards to ensure that federal and state AAQS are not exceeded and air quality conditions are maintained within the SJVAB. The proposed Project is subject to various Air District rules/regulations, thresholds, and/or permitting requirements, as applicable. As indicated below, the mere size of the proposed Project (i.e., 105 guest room hotel) would not result in the exceedance of any Air District thresholds and, depending upon a final determination by the Air District, does not appear to meet permit applicability requirements. The Air District has several rules and regulations that may apply to the proposed Project, following is an example of those rules/regulations which likely apply to the proposed Project:

- Rule 3135 (Dust Control Plan Fees) – This rule requires the project applicant to submit a fee in addition to a Dust Control Plan. The purpose of this rule is to recover the Air District's cost for reviewing these plans and conducting compliance inspections.

- Rule 3180 (Administrative Fees for Indirect Source Review (ISR)) – This rule requires the project applicant to submit a fee when submitting an Air Impact Assessment application in accordance with ISR regulations.

- Rules 4101 (Visible Emissions) and 4102 (Nuisance) – This rule applies to any source of air contaminants and prohibits the visible emissions of air contaminants or any activity which creates a public nuisance.

- 4102 (Nuisance) – This rule applies to any source operation that emits or may emit air contaminants or other materials and prohibits any activity which creates a public nuisance.

- Rule 4601 (Architectural Coatings) – This rule limits volatile organic compound (VOC) emissions from architectural coatings and specifies practices for proper storage, cleanup, and labeling requirements. The rule contains VOC content limits for colorants and coatings with different VOC limits for prior to and after January 1st, 2022.

- Rule 4641 (Cutback, Slow Curve and Emulsified Asphalt, Paving and Maintenance Operations) – This rule limits VOC emissions by restricting the application and manufacturing of certain types of asphalt and maintenance operations and applies to the use of these materials.

- Regulation VIII (Fugitive PM10 Prohibitions) – This regulation is a series of eight rules designed to reduce PM10 emissions by reducing fugitive dust emissions. Regulation VIII requires implementation of control measures to ensure that visible dust emissions are substantially reduced.

- Rule 9510 (Indirect Source Review) - requires developers to mitigate project emissions through 1) on-site design features that reduce trips and vehicle miles traveled, 2) controls on other emission sources, and 3) with reductions obtained through the payment of a mitigation fee used to fund off-site air quality mitigation projects. Rule 9510 requires construction related NOx emission reductions of 20 percent and PM10 reductions of 45 percent. Rule 9510 requires a 33 percent reduction in operational NOx emissions and a 50 percent reduction in PM10. The reductions are calculated by comparing the unmitigated baseline emissions and mitigated emissions from the first year of project operation. The Air District recommends using the [CalEEMOD] model to quantify project emissions and emission reductions. Rule 9510 was adopted to reduce the impacts of development on Air District's attainment plans.

CEQA Guidelines define a significant effect on the environment as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project. To determine if a project would have a significant impact on air quality, the type, level, and impact of criteria pollutant emissions generated by the project must be evaluated. The Air District has prepared its guidance document, "Guidance for Assessing and Mitigating Air Quality Impacts" (GAMAQI), to assist Lead Agencies

in assessing project specific impact on air quality.[19] The Air District's significance thresholds and guidance for evaluation are provided below.

Air Quality Plans

The Air District has established thresholds of significance for criteria pollutant emissions. These thresholds are based on District New Source Review (NSR) offset requirements for stationary sources. "Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District's air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan"."[20]

The Air District has three sets of significance thresholds based on the source of the emissions. According to the GAMAQI, "The District identifies thresholds that separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations."[21]

Long-term (operational) emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, "District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District's significance thresholds… District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds…"[22]

The Air District's significance thresholds are provided in **Table AQ-2**.

Table AQ-2. Air District Criteria Pollutant Significance Thresholds

Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Source: Air District, GAMAQI, Table 2, page 80; and http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf, accessed October 2020.

Cumulative Impacts

"By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of State and Federal ambient air quality standards is a function of successful implementation of the District's attainment plans. Consequently, the District's application of thresholds of significance for criteria pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

A Lead Agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an

[19] Air District. GAMAQI. March 2015. Website: http://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf.

[20] Ibid. Section 7.12. 65.

[21] Op. Cit. Section 8.1 75.

[22] Op. Cit. Section 8.2.1. 76.

air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located [CCR §15064(h)(3)].

Thus, if project specific emissions exceed the thresholds of significance for criteria pollutants the project would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the District is in non-attainment under applicable Federal or State ambient air quality standards. This does not imply that if the project is below all such significance thresholds, it cannot be cumulatively significant."[23]

Exposure to Sensitive Receptors

"Determination of whether project emissions would expose sensitive receptors to substantial pollutant concentrations is a function of assessing potential health risks.

Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. When evaluating whether a development proposal has the potential to result in localized impacts, Lead Agency staff need to consider the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography.

Lead Agencies are encouraged to use the screening tools for Toxic Air Contaminant presented in section 6.5 (Potential Land Use Conflicts and Exposure of Sensitive Receptors) [pages 44-45 of the GAMAQI] to identify potential conflicts between land use and sensitive receptors and include the result of their analysis in the referral document."[24]

"Another useful tool is the CAPCOA Guidance Document: Health Risk Assessments for Proposed Land Use Projects. CAPCOA prepared the guidance to assist Lead Agencies in complying with CEQA requirements. The guidance document describes when and how a health risk assessment should be prepared and what to do with the results."[25], [26]

Nuisance Odors

"Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact. Rather, the District recommends that odor analyses strive to fully disclose all pertinent information.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley. These are presented in Chapter 8 [of the GAMAQI] along with a reasonable distance from the source within which, the degree of odors could possibly be significant."[27]

"The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley Air Basin. These are presented in Table 6 (Screening Levels For Potential Odor Sources) [of the GAMAQI] along with a reasonable distance from the source within which, the degree of odors could possibly be significant. Table 6 (Screening Levels for Potential Odor Sources) [of the GAMAQI], can be used as a screening tool to qualitatively assess a project's potential to adversely affect area receptors. This list of facilities is not all-inclusive. The Lead Agency should evaluate facilities not included in the table or projects separated by greater distances if warranted by local conditions or special circumstances. If the proposed project would result in sensitive receptors being located closer than the screening level distances, a more detailed analysis should be provided."[28]

[23] Op. Cit. Section 7.14. 65-66.

[24] Op. Cit. Section 7.15. 66.

[25] Op. Cit. Section 6.5. 45.

[26] The CAPCOA Guidance document can be found at http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf

[27] Air District. GAMAQI. March 2015 Section 7.15. 66-67.

[28] Ibid. Section 8.6. 102-103.

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to the proposed Project: *AQ-1.1 Cooperation with Other Agencies* requiring the County to cooperate with other local, regional, Federal, and State agencies (e.g., Valley Air District) in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards to achieve better air quality conditions locally and regionally; *AQ-1.5 California Environmental Quality Act (CEQA) Compliance* where the County will ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible*; AQ-2.2 Indirect Source Review* regarding mitigating air quality impacts associated with the Project to Valley Air District's Rule 9510*; AQ-3.4 Landscape* regarding the use of ecologically based landscape design principles that can improve local air quality by absorbing CO_2, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates*;* and *AQ-4.2 Dust Suppression Measures* regarding implementation of dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions.

Three Rivers Community Plan Update

The following Three Rivers Community Plan Update policies for this resource apply to the proposed Project: *Policy 1.1.3 Commercial Uses – Limiting Negative Impacts* requires new development to be consistent with the character of the surrounding natural and built environment while minimizing negative impacts; *Policy 1.1.4 Compatible Commercial Establishments* encourages compatible commercial establishments necessary to serve residents and which do not have significant traffic, light, noise or visual impacts to the community; *Policy 1.1.9 LU-1.3 Prevent Incompatible Uses* discourages new incompatible land uses that produce significant noise, odors, or fumes; and *Policy 1.4.7 AQ-1.4 Air Quality Land Use Compatibility* requires evaluation of compatibility of developments with regard to proximity of sensitive receptors.

a) Less Than Significant Impact: As discussed in Item b) below, the Air District has determined that projects with emissions below the thresholds of significance for criteria pollutants would not conflict or obstruct implementation of the Air District's air quality plan. As presented in **Tables AQ-3** and **AQ-4,** emissions during construction- and operation-related activities would not exceed the Air District significance thresholds. The proposed Project would be required to comply with applicable Air District rules and regulations, such as Regulation VIII (Fugitive PM10 Prohibitions) and Rule 9510 (Indirect Source Review), further reducing proposed Project-related emissions.

"As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a 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 to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The SJVAPCD prepared the 2004 Extreme Ozone Attainment Demonstration Plan, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2009 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plan, 2016 Plan for the 2008 8-Hour Ozone Standard, 2016 Moderate Area Plan for the 2012 PM2.5 Standard, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards, 2020 RACT Demonstration, and 2007 PM10 Maintenance Plan and Request for Re-designation. These plans collectively address the air basin's nonattainment status with the national and state O_3 standards as well as particulate matter by establishing a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and associated vehicle miles traveled projections for the region. SJVAPCD's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans.

The Project site is designated Urban Development by the General Plan. The General Plan identifies the Urban Development designation as meant for development generally characterized by low to high density residential development, commercial development, industrial development, and typically supported by public services such as central water and sewer systems. The Project is consistent with this General Plan designation and would not exceed the population or job growth projections used by the SJVAPCD to develop its air quality attainment plans. Additionally, as shown in [Table AQ-3] and [Table AQ-4] [below], both Project construction and Project operations would not generate emissions that would exceed SJVAPCD significance thresholds. Furthermore, the implementation of AQ-1 would reduce construction-generated emissions below what is required in Rule 9510 and AQ-2 would reduce operational-generated emissions or offset the emissions with payment of a fee, which is

then used to fund clean-air projects within the air basin. Note that reductions in construction-generated emissions due to AQ-1 will vary per the fleet used. Regardless, AQ-1 would reduce construction-generated emissions below what is required in Rule 9510.The Project would be consistent with the emission-reduction goals of the SJVAPCD Attainment Plans."[29]

As the proposed Project is consistent with the General Plan, including the Three Rivers Community Plan Update, and proposed Project-related emissions do not exceed Air District significance thresholds, the proposed Project will not conflict with or obstruct implementation of the air quality plan. Therefore, the proposed Project will have a less than significant impact to this resource.

b) Less Than Significant Impact with Mitigation: As previously discussed, the Air Basin is currently designated as non-attainment for the 1-hour state ozone standard as well as for the federal and state 8-hour standards. Additionally, the Air Basin is designated as non-attainment for the state 24-hour and annual arithmetic mean PM_{10} standards, as well as the state annual arithmetic mean and the national 24-hour $PM_{2.5}$ standards. See **Table AQ-1** for designations and classifications of all criteria pollutants.

The contribution of a project's individual air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the region also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions. The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

According to the Air District's GAMAQI, a project would be considered to contribute considerably to a significant cumulative impact if it would result in an increase in ROG, NO_x, SO_x, CO, PM10, or $PM_{2.5}$ of more than its respective significance thresholds. As such, air quality impacts were assessed in accordance with methodologies recommended by the ARB and the Air District. Emissions were modeled using CalEEMod, version 2016.3.2. Project construction-generated criteria air pollutant emissions were calculated using CalEEMod model defaults for Tulare County. Operational air pollutant emissions were based on the Project site plans and the estimated weekend traffic trip generation rates calculated by VRPA Technologies, Inc. (see Attachment "E" of this document), and the CalEEMod defaults for Tulare County for weekday trip generation.

Construction Emissions

"Construction associated with the Proposed Project would generate short-term emissions of criteria air pollutants, including ROG, CO, NOX, SOx, PM_{10}, and $PM_{2.5}$. The largest amount of ROG, CO, SOx, and NOX emissions would occur during the earthwork phase. PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to and from the site. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact."[30]

"During construction activities, the Project would be required to comply with SJVAPCD Regulation VIII (Fugitive PM10 Prohibitions). The purpose of this regulation is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources. For instance, the Project applicant would be required to prepare a dust control plan. Construction activities anywhere within the regulatory jurisdiction of the SJVAPCD, including the Proposed Project site, may not commence until the SJVAPCD has approved or conditionally approved the dust control plan, which must describe all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. Regulation VIII specifies … measures that may be included in the dust control plan to minimize fugitive dust emissions:"[31]

"As shown in Table 2-4 [in the AQ Assessment, **Table AQ-3** in this Initial Study], construction-generated emissions would not

[29] *"Air Quality & Greenhouse Gas Assessment Three Rivers Hampton Inn and Suites Project"* (AQ Assessment). July 2020 (updated October 2020). Page 24. Prepared by ECORP Consulting, Inc. and included in Attachment "A" of this Initial Study.

[30] Ibid. 15.

[31] Op. Cit.

exceed SJVAPCD significance thresholds."[32]

TABLE AQ-3
CONSTRUCTION-RELATED EMISSIONS – FUGITIVE PM_{10} PROHIBITIONS INCLUDED

Construction Year	Maximum Annual Emissions (tons per year)					
	ROG	NOx	CO	SO_2	Total PM_{10}	Total $PM_{2.5}$
2021	0.71	2.65	2.62	0.00	0.21	0.14
2022	0.20	0.71	0.78	0.00	0.05	0.03
SJVAPCD Thresholds	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No

Source: Table 2-4 of Attachment "A" of this Initial Study.

"In addition to the SJVAPCD criteria air pollutant thresholds, SJVAPCD Rule 9510, Indirect Source Review, Section 2.2, aims to fulfill the District's emission reduction commitments in the PM10 and Ozone Attainment Plans. … The project developers are required to reduce concentrations of NOx by 20 percent and PM10 by 45 percent during construction activities."[33]

"The Project is proposing the construction of more than 10,000 square feet of commercial space, permitted by-right. Thus, adherence to Rule 9510 is required of the Proposed Project. In accordance with Rule 9510, the Project applicant is required to prepare a detailed air impact assessment (AIA) for submittal to the SJVAPCD, which demonstrates reduction of NOx emissions from the Project's baseline by 20 percent and a reduction of PM10 by 45 percent. Therefore, the following mitigation is required.

Mitigation Measures

AQ-1 In accordance with SJVAPCD Rule 9510, a detailed air impact assessment (AIA) shall be prepared detailing the specific construction requirement (i.e., equipment required, hours of use, etc.). In accordance with this rule, emissions of NO_X from construction equipment greater than 50 horsepower used or associated with the development Project shall be reduced by 20 percent from baseline (unmitigated) emissions and PM_{10} shall be reduced by 45 percent. The Project shall demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit.
While the specific emission reduction measures will be developed to the satisfaction of the SJVAPCD, the following measures would reduce short-term air quality impacts attributable to the proposed Project consistent with Rule 9510:

- During all construction activities, all diesel-fueled construction equipment including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors shall be of a certified clean fleet.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. Equipment maintenance records shall be kept on-site and made available upon request by the SJVAPCD or the County.
- The Project applicant shall comply with all applicable SJVAPCD rules and regulations. Copies of any applicable air quality permits and/or monitoring plans shall be provided to the County.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *Tulare County*

As demonstrated in Table 2-5 [of the AQ Assessment, **Table AQ-3** in this Initial Study], implementation of Mitigation Measure **AQ-1** would reduce annual NOx emissions by as much as 75 percent during each phase of construction and would reduce annual PM10 emissions by more than 60 percent, which is far beyond the reduction needed to achieve the SJVAPCD Rule 9510 target. The actual emissions reduction would depend on the construction fleet utilized for construction, as clean fleet vehicles vary in emissions."[34]

"As previously stated, construction-generated emissions would not exceed SJVAPCD significance thresholds. …Mitigation measure AQ-1 would result in a greater than required reduction in NOx and PM_{10} emissions from baseline for all construction activities. …Since the project's emissions would not exceed SJVAPCD thresholds, no exceedance of the ambient air quality

[32] Op. Cit. 17.
[33] Op. Cit.
[34] Op. Cit. 18.

standards would occur, and no health effects from project criteria pollutants would occur."[35]

Operational Emissions

"Implementation 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 and NOx. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Table 2-6 [of the AQ Assessment, **Table AQ-4** in this Initial Study] summarizes operational emissions from the Proposed Project."[36]

"As indicated in Table 2-6 [of the AQ Assessment, **Table AQ-4** in this Initial Study], operational-generated emissions would not exceed SJVAPCD significance thresholds."[37]

TABLE AQ-4
OPERATION EMISSIONS

Emission Source	Maximum Annual Emissions (tons per year) – Commencing 2022					
	ROG	NOx	CO	SO_2	Total PM_{10}	Total $PM_{2.5}$
Area	0.33	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.08	0.07	0.00	0.00	0.00
Mobile	0.24	2.05	2.24	0.00	0.60	0.16
Total	**0.58**	**2.14**	**2.32**	**0.00**	**0.60**	**0.17**
SJVAPCD Thresholds	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No

Source: Table 2.6 of Attachment "A" of this Initial Study.

"As previously mentioned, SJVAPCD Rule 9510 is intended to fulfill the region's emission reduction commitments in the SJVAPCD PM10 and Ozone Attainment Plans. The Proposed Project is subject to Rule 9510 and would be required to consult with the SJVAPCD regarding the specific applicability of Rule 9510 in relation to Project operations. In accordance with Rule 9510, the Project applicant would be required to prepare a detailed air impact assessment for submittal to the SJVAPCD demonstrating the reduction from the Project's baseline of NOx emissions. The following mitigation is required.

Mitigation Measures:

AQ-2 In accordance with SJVAPCD Rule 9510, a detailed air impact assessment shall be prepared detailing the operational characteristics associated with the Proposed Project. In accordance with this rule, operational emissions of NOx shall be reduced by a minimum of 33.3 percent and operational emissions of PM10 must be reduced by a minimum of 50 percent over a period of ten years. (Emissions reductions are in comparison to the Project's operational baseline emissions presented in Table 2-6.) The Project would demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit.

Based on the findings of the air impact assessment, the applicant shall pay the SJVAPCD a monetary sum necessary to offset the required operational emissions that are not reduced by the emission reduction measures contained in the air impact assessment. The quantity of operational emissions that need to be offset will be calculated in accordance with the methodologies identified in Rule 9510, Indirect Source Review, and approved by the SJVAPCD. Operational emissions reduction methods will be selected under the direction of the SJVAPCD according to the air impact assessment process detailed in, and required by Rule 9510, Indirect Source Review (see Rule 9510, subsection 5).

Timing/Implementation: Prior to the issuance of building permits

Monitoring/Enforcement: County of Tulare Planning and Building Department"[38]

As presented in **Tables AQ-3** and **AQ-4**, proposed Project construction- and operational-related activities emissions would not exceed the Air District's thresholds of significance for ROG, NO_x, SO_x, CO, PM_{10}, and $PM_{2.5}$. Therefore, this Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the SJVAB is in nonattainment. The Project will result in a less than significant impact with mitigation.

[35] Op. Cit. 19.
[36] Op. Cit.
[37] Op. Cit. 20.
[38] Op. Cit. 20-21.

c) Less Than Significant Impact: "[S]ensitive 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. …The nearest sensitive receptors to the Project site are the Comfort Inn and Suites located approximately 98 feet north of the Project site boundary, the vacant commercial building located approximately zero feet west of the Project site boundary, and a residence located across State Highway 198 from the site, approximately 270 feet to the west. [T]he distance to the Comfort Inn and Suites was measured from the property line of the Proposed Project to the portion of the Comfort Inn and Suites property line which is located adjacent to the nearest hotel building on the property (see Figure 1 [of the AQ Assessment]). The parking lot located in the southeast section of the Comfort Inn and Suites site is not considered to be the nearest point to the sensitive receptor, as visitors to the hotel would spend the majority of their stay in their hotel room, at the nearby community center, and/or in Sequoia and Kings Canyon National Parks, thus remaining in the parking lot for a relatively short duration. In addition, hotel staff would spend relatively little time in the hotel parking lot."[39]

Construction-Generated Air Contaminants

"Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. However, as shown in Table [AQ-3], the Project would not exceed the SJVAPCD construction emission thresholds. The portion of the SJVAB which encompasses the Project area is classified nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$, and PM_{10} (CARB 2018). Thus, existing O_3, PM_{10}, and $PM_{2.5}$ levels in the SJVAB are at unhealthy levels during certain periods.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the SJVAPCD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SJVAPCD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (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 outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions (mitigated) of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 0.07 pounds/day (see Attachment A). ($PM_{2.5}$ exhaust 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., $PM_{2.5}$). Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) As with O_3 and NO_x, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SJVAPCD's thresholds. Additionally, the Project would be required to comply with Regulation VIII, Rules 8021–8071- Fugitive PM_{10} Prohibitions and Rule 9510- Indirect Source Review, as described above, which limit the amount of fugitive dust generated during construction. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants. Although health risk due to TACs cannot be accurately quantified, based on quantitative and qualitative analysis of anticipated Project emissions, a significant health risk would not result.

In summary, the Project would not result in a potentially significant contribution to regional or localized concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those

[39] Op. Cit. 24-25.

pollutants."[40]

Naturally Occurring Asbestos

"Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally-occurring asbestos-containing soils. The Proposed Project is not located within an area designated by the State of California as likely to contain naturally-occurring asbestos (DOC 2011). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos."[41]

Valley Fever

"*Coccidioidomycosis* (CM), often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus (an organism that grows and feeds on dead or decaying organic matter) lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley fever (Coccidioidomycosis) is found in California, including Tulare County. In about 50 to 75 percent of people, valley fever causes either no symptoms or mild symptoms and those infected never seek medical care; when symptoms are more pronounced, they usually present as lung problems (cough, shortness of breath, sputum production, fever, and chest pains). The disease can progress to chronic or progressive lung disease and may even become disseminated to the skin, lining tissue of the brain (meninges), skeleton, and other body areas.

Tulare County is considered a highly endemic area for valley fever. When soil containing this fungus is disturbed by ground-disturbing activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get valley fever. Fungal spores are small particles that can grow and reproduce in the body. The highest infection period for valley fever occurs during the driest months in California, between June and November. Infection from valley fever during ground-disturbing activities can be partially mitigated through the control of Project-generated dust. As noted, Project-generated dust would be controlled by adhering to SJVAPCD dust-reducing measures (Regulation VIII), which includes the preparation of a SJVAPCD-approved dust control plan describing all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity.

With minimal site grading and conformance with SJVAPCD Regulation VIII, dust from the construction of the Project would not add significantly to the existing exposure level of people to this fungus, including construction workers."[42]

Operational Air Contaminants

"Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract additional heavy-duty trucks that spend long periods queuing and idling at the site. Onsite Project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors. The maximum operation-related emissions of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 0.09 pounds per day, produced by the estimated 860 additional one-way vehicle trips per day on Saturdays, 625 additional one-way vehicle trips per day on Sundays, and 858 additional one-way vehicle trips per day on weekdays. Therefore, the Project would not be a source of TACs and there would be no impact as a result of the Project during operations. The Project would not have a high carcinogenic or non-carcinogenic risk during operation."[43]

[40] Op. Cit. 25-26.
[41] Op. Cit. 26.
[42] Op. Cit. 26-27.
[43] Op. Cit. 27.

Carbon Monoxide Hot Spots

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. Studies have been conducted by the South Coast Air Quality Management District (SCAQMD) and the Bay Area Air Quality Management District (BAAQMD) to determine what level of traffic is needed to result in a CO hot spot. The SCAQMD determined that an intersection with a volume of 100,000 vehicles per day would not exceed the CO standards, while the BAAQMD concluded a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.[44]

"Furthermore, the SJVAPCD Guidance for Assessing and Mitigating Impacts (2015b) includes the following CO hot spot criteria:
If neither of the following criteria are met at all intersections affected by the developmental project, the project will result in no potential to create a violation of the CO standard:

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity.

According to the Traffic Study prepared for the Project, LOS at the SR 198 (Sierra Drive) and Project Driveway and SR 198 (Sierra Drive) and Old 3 Rivers Road intersections would not exceed target LOS 'D' for all the study scenarios. In addition, the Project is expected to generate 860 trips generated per day on Saturdays and the estimated 625 trips generated per day on Sundays (VRPA Technologies, Inc. 2020). Using CalEEMod trip generation defaults for Tulare County, 858 trips are anticipated to be generated on weekdays. Thus, based on Project traffic generation and resultant LOS on affected roadways, it can be determined that the Project would not result in CO hotspots.

It is acknowledged that the Project site is located relatively close to the entrance of the Sequoia National Park entrance. Historically, there have been instances when a substantial amount of automobiles are queued for entrance into the park and idling along the road as far out as to Three Rivers. However, such instances are uncommon and very unlikely to result in traffic volumes of over 100,000 vehicles per day. Thus, neither the Proposed Project nor the cumulative park plus Project traffic would not generate traffic volumes of more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values."[45]

Project-related emissions fall below the Air District's thresholds of significance and does not result in a CO Hot Spot. The Project, with implementation of fugitive dust measures in accordance with Air District regulation, would not expose the public to naturally occurring asbestos or Valley fever. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations. The Project would have a less than significant impact to this resource

d) Less Than Significant Impact: Operation of the proposed Project would not create odorous emissions. However, proposed Project construction-related activities would include fuels and other odor sources (such as diesel-fueled equipment), could result in the creation of objectionable odors. Since construction-related activities would be short-term, temporary, and spatially dispersed (i.e., intermittent), and occur in a predominantly rural area, these activities would not affect a substantial number of people. Therefore, odors generated by construction-related activities of the Project would result in a less than significant impact.

"In addition, per the SJVAPCD's Guidance to Conduct Detailed Analysis for Assessing Odor Impacts to Sensitive Receptors, this analysis of potential odor impacts contains a review of odor complaints for "similar facilities". Specifically, a records request for odor complaints submitted within the last three years involving the adjacent Comfort Inn and Suites was submitted on October 12, 2020. The SJVAPCD confirmed no odor complaints were found to be on file for the Three Rivers Comfort Inn and Suites within the last three years (SJVAPCD 2020b). As such, it is also expected that substantial odors would not be generated by the proposed hotel Project."[46]

[44] Op. Cit. 28.
[45] Op. Cit. 28-29.
[46] Op. Cit. 30.

Cumulative Impact: As noted earlier, the Air Assessment concluded that the proposed Project would not exceed any air quality thresholds and will not expose sensitive receptors to substantial pollutant concentration site. As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource. Furthermore, the Project would have a net benefit on air quality as it would reduce the overall vehicle miles traveled within the SJVAB.

4. BIOLOGICAL RESOURCES

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

Analysis:

The proposed Project will result in Less Than Significant Impacts to Biological Resources Assessment with mitigation. The "Biological Resources Assessment Hampton Inn and Suites Three Rivers" (BRA or Assessment) was prepared by ECORP Consulting, Inc. (Consultant) in June 2020 which is included as Attachment "C" of this Initial Study. As noted in the BRA, "The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species and their habitats, and sensitive habitats such as wetlands and riparian communities within the Project Study Area. This assessment includes information generated from the reconnaissance-level site assessment and does not include a wetland delineation performed according to U.S. Army Corps of Engineers' (USACE's) standards, nor does it include determinate field surveys for special-status plant and animal

species."[47] This Report is used as the basis for determining that, based on the evidence/documentation (including incorporation of recommendations contained in the Report) and the expertise of qualified consultant ECORP Consulting, Inc. (Consultant), the proposed Project will result in a less than significant impact.

Environmental Setting

As noted in the Biological Resources Assessment (BRA), "The proposed Project is located in the community of Three Rivers, California east of State Highway 198 (Sierra Drive), approximately 1,000 feet north of the Old Three Rivers Road intersection, and immediately south of the Comfort Inn and Suites (Figure 1. Project Location and Vicinity). The site corresponds to a portion of Section 26, Township 17 south, Range 28 (Mount Diablo Base and Meridian) east of the "Kaweah, California" 7.5-minute quadrangles (North American Datum [NAD]27) (U.S. Geological Survey [USGS] 1993). The approximate center of the site is located at latitude 36.424827° (NAD83) and longitude 118.914718° (NAD83) within the Upper Kaweah Watershed (Hydrologic Unit Code #180300007) Watershed (Natural Resources Conservation Service [NRCS] et al. 2019). The proposed Project entails the development of a 105-room hotel to be located off State Route 198 (Sierra Drive), approximately 1,100 feet north of Old Three Rivers Road."[48]

"The Study Area is currently undeveloped and is situated at an elevation range of approximately 750 to 775 feet above mean sea level (MSL) in the southern Sierra Nevada foothills subregion of the Sierra Nevada region of the California floristic province (Baldwin et. al. 2012). The Study Area appears to have been historically disturbed as remnant vehicles tracks are found throughout the site. According to Google Earth aerial photographs, an area of oak woodland was present in the eastern portion of the site through 2005 but had been cut down and removed by 2009. Remnants of the root balls can be found onsite in the form of shallow basins. Representative photographs of the Study Area are provided in Attachment B [of the BRA]. The surrounding lands include undeveloped lands, the Comfort Inn and Suites, and rural residences."[49]

Methods

It is noted, for CEQA purposes, the CEQA Guidelines (at Appendix G) are clear that a proposed project is evaluated on **substantial adverse effect** (emphasis added) on habitat; on any species identified as a candidate, sensitive, or special status specie; on riparian habitat or other sensitive community, state or federally protected wetlands; on the movement, migration, wildlife corridor, or wildlife nursery site; conflict with any local policies or ordinances protecting biological resources; or conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan. As a result of its location, commonly occurring species (such as bears, deer, raccoons, snakes, bobcats, rabbits, fox, etc.) do not qualify nor are they evaluated as special status species.

As noted in the BRA, "For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the ESA;
- are listed or candidates for future 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 an SSC by CDFW;
- are plants considered by the California 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).

Only species that fall into one of the above-listed groups were considered for this assessment. Other species tracked by the CNDDB but having no other special status were not considered to be special status and were not included within this analysis."[50]

[47] *"Biological Resources Assessment Hampton Inn and Suites Three Rivers"* (BRA). Page 1. Prepared by ECORP Consulting, Inc. and is included as Attachment "C" of this Initial Study

[48] Ibid.

[49] Op. Cit. 13.

[50] Op. Cit. 11.

Literature Review

As contained in the BRA, "The following resources were reviewed to determine the special-status species that have been documented within or in the vicinity of the Study Area. Results of the species searches are included as Attachment A.

- CDFW CNDDB data for the "Kaweah, California" 7.5-minute quadrangle as well as the eight surrounding USGS quadrangles (CDFW 2020a);
- USFWS Information, Planning, and Consultation System Resource Report List for the Project site (USFWS 2020a);
- CNPS' electronic Inventory of Rare and Endangered Plants of California was queried for the "Kaweah, California" 7.5-minute quadrangles and the eight surrounding quadrangles (CNPS 2020);
- CDFW Biogeographic Information and Observation System (BIOS) query of range maps for potentially occurring special-status species (CDFW 2020b); and
- USFWS Threatened & Endangered Species Active Critical Habitat Report (USFWS 2020b).

Additional background information was reviewed regarding the documented or potential occurrence of special-status species within or near the Project site from the following sources:

- The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000-2004 (California Department of Fish and Game [CDFG] 2005);
- California Bird SSC (Shuford and Gardali 2008);
- Amphibian and Reptile SSC in California (Thompson et al. 2016);
- Mammalian SSC in California (Williams 1986);
- California's Wildlife, Volumes I-III (Zeiner, et al. 1988, 1990a, 1990b); and
- A Guide to Wildlife Habitats of California (Mayer and Laudenslayer Jr., eds. 1988)."[51]

Site Reconnaissance

As contained in the BRA, a site reconnaissance was conducted by qualified ECORP biologist (Ms. Hannah Stone) on May 15, 2020. Ms. Stone utilized meandering transects while walking the Study Area during her search for aquatic resources, potential Waters of the U.S./State, special-status species or their habitat and included the findings of the site assessment in the BRA.[52] As indicted in the BRA, "During the field survey, biological communities occurring onsite were characterized and the following biological resource information was collected:

- Vegetation communities within the Project site;
- Plant and animal species directly observed;
- Animal evidence (e.g., scat, tracks);
- Existing active raptor nest locations;
- Burrows and any other special habitat features;

In addition, soil types were identified using the NRCS Web Soil Survey (NRCS 2020a)."[53]

Special Status Species Considered for the Project

As noted earlier, for CEQA purposes, the CEQA Guidelines (at Appendix G) are clear that a proposed project is evaluated on substantial adverse effect (emphasis added) on habitat; on any species identified as a candidate, sensitive, or special status specie; on riparian habitat or other sensitive community, state or federally protected wetlands; on the movement, migration, wildlife corridor, or wildlife nursery site; conflict with any local policies or ordinances protecting biological resources; or conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan. As such, the BRA notes, "Special-status plant and animal species that resulted from database searches were evaluated for their potential to occur onsite. Species that are tracked in the CNDDB but do not have any other special status, as defined above, were not included in this assessment. Species' potential to occur within the Project site was assessed based on the following criteria:

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

[51] Op. Cit. 11-12.
[52] Op. Cit. 12.
[53] Op. Cit.

- 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 occur, and/or the species is not known to occur within the vicinity of the Project site based on CNDDB records and other available documentation.
- 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 documentation."[54]

Results

In summary, the BRA includes discussions of Site Characteristics and Land Use; Vegetation Communities and Land Cover Types (annual grassland, oak woodland, ruderal/roadside (see Figure 2. Vegetation Community and Land Cover Types/Preliminary Wetland Assessment, in the BRA); Soils (see (Figure 3. Natural Resources Conservation Service Soil Types, in the BRA); Potential Aquatic Resources (see Figure 4. California Aquatic Resources Inventory, in the BRA); Wildlife, Evaluation of Special-Status Species Identified in the Literature Search (see Table 1 in the BRA which lists all special status plant and wildlife species identified in the literature search as potentially occurring within the Project site); Plants (Kaweah Brodiaea, Springville Clarkia, Streambank Spring Beauty, Recurved Larkspur, Calico Monkeyflower, Mouse Buckwheat, Spiny-Sepaled Button-Celery, Sierra Nevada Monkeyflower, American Manna Grass, Munz's Iris, Madera Leptosiphon, San Joaquin Adobe Sunburst); Reptiles (Norther California Legless Lizard and Blainville's Horned Lizard); Birds (Nuttall's Woodpecker, Oak Titmouse, and Lawrence's Goldfinch); Migratory Bird Treaty Act Protected Birds and Mammals (Townsend's Big-eared Bat and Pallid Bat); Sensitive Natural Communities (which were absent), Wildlife Movement/Corridors; and Critical Habitat (which was absent).[55] These discussions can be found in their entirety in the BRA which is included in Attachment "B" of this Initial Study.

Recommendations

The BRA provides recommendations to ensure the Project will have a less than significant impact on biological resources/species within the proposed Project site. The recommendations are enumerated and summarized in **Table BIO-1**, below. As consultant provided a list of recommendations, RMA staff enumerated and summarized the recommendations in a different format than Consultant as shown in **Table BIO-1**. The full text of the recommendations can be found in the BRA beginning on Page 37 and ending on Page 41.

Federal

Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries. Section 9 of the FESA prohibits the taking of listed wildlife, where taking 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 on federal land and removing, cutting, digging-up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16USC1538). Pursuant to Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed plant or wildlife species or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to another authorized activity, provided the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties, provided a Habitat Conservation Plan (HCP) is developed.

Section 7 Consultation

"Section 7 of the 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

[54] Op. Cit. 13.

[55] Op. Cit. 13-37.

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."[56]

Critical Habitat

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

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."[57]

Migratory Bird Treaty Act (MTBA)

The MBTA implements international treaties devised to protect migratory birds and 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 by the MBTA, the 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 are 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 birds of prey in Sections 3800, 3513, and 3503.5 of the CDFG Code.

Federal Clean Water Act

The Federal Clean Water Act's (CWA's) purpose 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 Corps of Engineers (ACOE). The definition of waters of the United States 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 groundwater 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 USEPA also has authority over wetlands and may override an ACOE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. 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 RWQCB.

State

California Endangered Species Act

[56] BRA page 4.
[57] Ibid. 4-5.

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, the CESA applies the take prohibitions to species proposed for listing (called candidates by the state). Section 2080 of the CDFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the CDFG Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the CDFG to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened, or candidate species or result in destruction or adverse modification of essential habitat. The CDFG administers the act and authorizes take through Section 2081 agreements (except for designated fully protected species).

Fully Protected Species

The State of California first began to designate species as fully protected prior to the creation of the CESA and FESA. 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, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered pursuant to the CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (CDFG Code Section 4700 for mammals; Section 3511 for birds; Section 2020 for reptiles and amphibians; and Section 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFG prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act

Regarding listed rare and endangered plant species, the CESA defers to the California Native Plant Protection Act (NPPA) of 1977 (CDFG Code Sections 1900 to 1913), which prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. The CESA includes an additional listing category for threatened plants that are not protected pursuant to NPPA. In this case, plants listed as rare or endangered pursuant to the NPPA are not protected pursuant to CESA, but can be protected pursuant to the CEQA. In addition, plants that are not state listed, but that meet the standards for listing, are also protected pursuant to CEQA (Guidelines, Section 15380). In practice, this is generally interpreted to mean that all species on lists 1B and 2 of the CNPS Inventory potentially qualify for protection pursuant to CEQA, and some species on lists 3 and 4 of the CNPS Inventory may qualify for protection pursuant to CEQA. List 3 includes plants for which more information is needed on taxonomy or distribution. Some of these are rare and endangered enough to qualify for protection pursuant to CEQA. List 4 includes plants of limited distribution that may qualify for protection if their abundance and distribution characteristics are found to meet the standards for listing.

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 non-native 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."[58]

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."[59]

[58] Op. Cit. 6-7.

[59] Op. Cit. 7

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. 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."[60]

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 the ESA, the California ESA, and the 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 the ESA, the California ESA, or the NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as SSC by CDFW and plants identified by the CNPS as rare, threatened, or endangered may meet the CEQA definition of rare or endangered."[61]

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.
- 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."[62]

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 for the U.S. (USFWS 2008) The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' 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."[63]

[60] Op. Cit.
[61] Op. Cit.
[62] Op. Cit. 8.
[63] Op. Cit.

California Rare Plant Ranks

"The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2020), 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 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 California Natural Diversity Database (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 of occurrences threatened/moderate degree and immediacy of threat).
- Threat Rank 0.3 – Not very threatened in California (less than 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 2018).

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."[64]

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. The reason for this is that 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."[65]

[64] Op. Cit. 8-9.

[65] Op. Cit. 9-10.

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project such as: *ERM-1.1 Protection of Rare and Endangered Species* which protects environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development; *ERM-1.4 Protect Riparian Areas* where the County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls; *ERM-1.6 Management of Wetlands* where the County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats; *ERM-1.7 Planting of Native Vegetation* where the County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained; and *ERM-1.16 Cooperate with Wildlife Agencies* which states that the County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

Three Rivers Community Plan

In addition to Tulare County General Plan policies (summarized below), the Three Rivers Community Plan contains Three Rivers-specific policies applicable to biological resources such as: Vision Statement 7 to "protect and preserve oak, sycamore and cottonwood woodlands." Goal 4 (Protection and Conservation of the Environment) of the Community Plan includes objectives that are pertinent to biological resources, including: 4.1.1 Preserving the Natural Environment; and 4.1.2 CEQA Compliance [66]

Also, as noted in the BRA, "As part of the Community Plan, a Voluntary Oak Woodlands Management Plan (Tulare County 2018b) has been adopted. If the County determines that a project will result in a significant effect to oak woodlands, the County shall require one or more oak woodland mitigation alternatives to mitigate for the significant effect associated with the conservation of oak woodlands."

a) Less Than Significant Impact With Mitigation: As noted earlier, the proposed Project entails the development of a 105-room hotel to be located off State Route 198 in Three Rivers. Also as noted earlier, the BRA indicates that the Study Area is currently undeveloped and is situated at an elevation range of approximately 750 to 775 feet above mean sea level (MSL) in the southern Sierra Nevada foothills subregion of the Sierra Nevada region of the California floristic province. The BRA further notes that the Study Area appears to have been historically disturbed as remnant vehicles tracks are found throughout the site. Consultant utilized Google Earth aerial photographs which previous showed an area of oak woodland was present in the eastern portion of the site through 2005 but had been cut down and removed by 2009. Surrounding lands include undeveloped lands, the Comfort Inn and Suites, and rural residences

The BRA concludes that there is potential suitable habitat for special-status plants, as such **Mitigation Measures BIO-1** through **BIO-3**, are included in this Initial Study. The BRA also concludes that there is potential suitable habitat for special-status reptiles (lizards), as such **Mitigation Measures BIO-4** through **BIO-5**, are included in this Initial Study. **Mitigation Measures BIO-6** through **BIO-9** have been included to mitigate potential of impacts to nesting raptors and migratory birds as recommended in the BRA. The proposed Project will not require removal of any native valley oaks or other trees. However, there is a possibility that migratory birds and raptors may be present within the vicinity of the proposed Project site, or due to the transient nature of some species.

As such, **Mitigation Measures BIO-1** through **BIO 9** would be implemented reduce potential impacts on special status species to less than significant, as applicable. **Table BIO-1 Summary of Mitigation Measures** lists **Mitigation Measures BIO-1** through **BIO-9** which can be found in their entirety in BRA report in Attachment "B" of this Initial Study.

Based on the analysis contained in the BRA, qualified expert consultant ECORP determined that the proposed Project would result in a less than significant impact. Tulare County RMA agrees with and support the assessment and conclusion. Therefore, the proposed Project will not significantly impact any biological plant or animal species. The proposed Project will not have a significant direct or cumulative impact, or create an unusual circumstance that will cause the proposed Project to have a significant effect on the biological resources of the area and environment.

[66] Op. Cit. 10.

b) No Impact: As contained in the BRA, "There are no sensitive natural communities onsite. No measures are recommended."[67] As such, the proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. Based on the analysis contained in the BRA, qualified expert consultant ECORP determined that the proposed Project would result in no impact. Tulare County RMA agrees with and supports the assessment and conclusion.

c) Less Than Significant Impact with Mitigation: Based on the analysis contained in the BRA, qualified expert consultant ECORP determined that the proposed Project would result in less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion. As noted in the BRA, "Approximately 0.011 acre of aquatic resources is located within the Study Area (Figure 2 [in the BRA]). The following mitigation measures [included in this Initial Study as **BIO-10** through **BIO-13**] are recommended to minimize potential impacts to Waters of the U.S./State if the Project proposes to place fill in these features..."[68] Therefore, the proposed Project would not result in a significant impact.

d) Less Than Significant Impact: The proposed Project would not 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. As contained in the BRA, "Wildlife have potential to use the Project site for localized wildlife movement. However, Project development would not constitute a significant loss of the available wildlife habitat in the area. No measures are recommended."[69] Based on the analysis contained in the BRA, qualified expert consultant ECORP determined that the proposed Project would result in less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion.

TABLE BIO-1
SUMMARY OF MITIGATION MEASURES[70]

MITIGATION	TYPE OF MITIGATION	SUMMARIZED DESCRIPTION
Measures for Special Status Plant Species		
BIO-1	Pre-construction Survey	Perform focused plan surveys.
BIO-2	Plants absent	If no special-status plants are found within the Project Area, no further measures pertaining to special-status plants are necessary
BIO-3	Avoidance	If avoidance not possible, seed collection, transplantation, and/or other mitigation measures.
Measures for Special Status Reptiles		
BIO-4	Pre-construction Survey	Qualified biologist conducts pre-construction surveys for special status reptile species.
BIO-5	Presence	Qualified biologist relocates the individuals, with the concurrence of CDFW, to a site with suitable habitat.
Measures for Nesting Raptors and Migratory Birds		
BIO-6	Pre-construction Survey	If Project activities occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys).
BIO-7	Buffers	Upon active nest discovery, the biologist determines appropriate construction setback distances and a behavioral baseline using applicable CDFW guidelines and/or the biology of the affected species.
Measures for Special Status Mammals (Bats)		
BIO-8	Pre-construction Survey: Absence	Qualified biologist will conduct pre-construction surveys; if roosting habitat or bats are not present, no further measures are necessary.
BIO-9	Pre-construction Survey: Presence	Qualified biologist will conduct a bat habitat assessment. If suitable roosting habitat present, a qualified biologist will conduct bat emergence survey to determine whether or not bats are present. If special-status bats are found, consult with CDFW.
Measures for Waters of the United States and State		
BIO-10	Perform Delineation	Perform an aquatic resources delineation according to USACE standards.
BIO-11	Avoidance	Potentially jurisdictional features should be avoided and fenced.
BIO-12	Section 404 Permit	If Waters of the U.S./State cannot be avoided obtain Section 404 Permit.
BIO-13	Section 401 Permit	Obtain Section 401 Permit from the RWQCB.
BIO-14	RWQCB permit	Obtain RWQCB permit for discharge of material as applicable.
Measures for Oak Woodlands		

[67] Op. Cit. 41.
[68] Op. Cit. 37-38.
[69] Op. Cit. 41.
[70] Ibid. 5.0 Recommendations. 37-40.

BIO-15	Avoidance/Conservation	If feasible, avoid/conserve oak woodlands.
BIO-16	Replacement	If oak woodlands are proposed for impact, plant an appropriate number of trees, including maintain planting and replacing dead or diseased trees .
BIO-17	Contribution	Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of the Section 1363 of the California Fish and Game Code.
BIO-18	Other	County determines mitigation; possible implementation of *Three Rivers Voluntary Oak Woodland Plan*

e) Less Than Significant Impact with Mitigation: There are no oak woodland within the proposed Project site; however, there are two oaks adjacent to the site. As described in the BRA, "There are two isolated small oak trees located within the annual grassland. The oaks that make up the oak woodland mapped in the Study Area are located on the adjacent property with only the dripline overlapping into the Study Area. Although direct impacts to the oak woodland is not anticipated, indirect impacts may occur. If impacts are considered significant, one or more of the following measures should be implemented to reduce the impact to oak woodlands (per the Three Rivers Voluntary Oak Woodland Plan)."[71] As such, Mitigation Measures **BIO-15** through **BIO-18** would reduce potential impact to less than significant: Based on the analysis contained in the BRA, qualified expert consultant ECORP determined that the proposed Project would result in less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion.

f) No Impact: The proposed Project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances. Moreover, the proposed Project is not expected to conflict with the goals or policies of the Tulare County General Plan that protect biological resources. Also, as the proposed Project is not within or in the vicinity of any approved habitat conservation plans, natural community conservation plans, or regional or state habitat conservation plans in effect, the proposed Project would result in no impact to these resources within the vicinity of the proposed Project site. Based on the analysis contained in the BRA, qualified expert consultant ECORP determined that the proposed Project would result in less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion.

Cumulative Impact: As noted earlier, the BRA, and supported in this resource analysis, the proposed Project will not have a significant direct or cumulative impact, or create an unusual circumstance that will cause the proposed Project to have a significant effect on the biological resources of the area and environment. As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

5. CULTURAL RESOURCES

		Would the project:	SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	a)	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐
	b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
	c)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Analysis:

The "Cultural Resources Inventory Report Hampton Inn and Suites Three Rivers" (CRIR or Report) was prepared by ECORP Consulting, Inc. (Consultant) in June 2020 which is included as Attachment "C" of this Initial Study. This Report is used as the basis for determining that, based on the evidence/documentation (including incorporation of recommendations contained in the Report) and the expertise of qualified consultant ECORP Consulting, Inc. (Consultant), the proposed Project will result in a less than significant impact. Also, Item 18 Tribal Cultural Resources provides additional historical context more specific to Native American history/resources.

[71] Op. Cit.

Environmental Setting

"Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory."[72]

"California's coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region."[73]

"The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167"[74]

As described in the Report, "The Project Area is located in a rural residential and commercial center in the unincorporated community of Three Rivers along Sierra Drive/Highway 198. This area is in the foothills of the Sierra Nevada at the edge of the San Joaquin Valley. Three Rivers is in the Kaweah River canyon, the gateway to the entrance to Sequoia and Kings Canyon National Parks. The Project Area is along the southern bank of the Kaweah River, which is 200 feet west, and is approximately five miles northeast of Kaweah Lake. Highway [SR] 198 separates the Project Area land from the Kaweah River. Elevations range from 755 to 765 feet above mean sea level"[75]

<u>Project Description and Area of Potential Effects</u>

"The proposed Project entails the construction of a commercial hotel, Hampton Inn and Suites. The Area of Potential Effects (APE) consists of the horizontal and vertical limits of a project and includes the area within which significant impacts or adverse effects to Historical Resources or Historic Properties could occur as a result of the project. The APE is defined for projects subject to regulations implementing Section 106 (federal law and regulations). For projects subject to the California Environmental Quality Act (CEQA), the term Project Area is used rather than APE. For the purpose of this document, the terms Project Area and APE are interchangeable.

The horizontal APE consists of all areas where activities associated with a project are proposed and in the case of the current Project, equals the Project Area subject to environmental review under the National Environmental Policy Act (NEPA) and CEQA. This includes areas proposed for construction, vegetation removal, grading, trenching, stockpiling, staging, paving, and other elements described in the official project description. The horizontal APE is illustrated on Figure 1 [of the CRIR] and also represents the survey coverage area. It measures approximately 550 feet in length by 400 feet in width.

The vertical APE is described as the maximum depth below the surface to which excavations for project foundations and facilities will extend. Therefore, the vertical APE includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the Project, depending on construction activities. This study assumes the depth of ground disturbance will not exceed six feet, and therefore, review of geologic and soils maps was necessary to determine the potential for buried archaeological sites that cannot be seen on the surface.

[72] Tulare County 2012,Goals and Policies Report. Tulare County General Plan Update 2030. Page 8-5. http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

[73] Ibid. 8-5.

[74] Op. Cit. 8-6.

[75] *"Cultural Resources Inventory Report Hampton Inn and Suites Three Rivers"* (CRIR or Report). Page 4. June 2020. Prepared by ECORP Consulting, Inc. and included in Attachment "C" of this Initial Study.

The vertical APE is also described as the maximum height of structures that could impact the physical integrity and the integrity of the setting of cultural resources, including districts and traditional cultural properties. The current study assumes the above-surface vertical APE will not exceed 60 feet above the surface, which is assumed to be the height of the hotel."[76] It is noted that in the zone where the proposed Project is located the maximum height allowed is 75 feet

Environmental Setting as described in the Report

As described in the Report, "The Project Area is located in a rural residential and commercial center in the unincorporated community of Three Rivers along Sierra Drive/Highway [SR] 198. This area is in the foothills of the Sierra Nevada at the edge of the San Joaquin Valley. Three Rivers is in the Kaweah River canyon, the gateway to the entrance to Sequoia and Kings Canyon National Parks. The Project Area is along the southern bank of the Kaweah River, which is 200 feet west, and is approximately five miles northeast of Kaweah Lake. Highway [SR] 198 separates the Project Area land from the Kaweah River. Elevations range from 755 to 765 feet above mean sea level"[77]

The CRIR also describes the geology; soils; vegetation and wildlife; regional pre-contact history (approximately 10,000 before the present); local pre-contact history and ethnology, generally the Native American history of the area; regional history (generally European exploration and settlement, Mexican and, American history) and; proposed Project area history.[78] Additional historical context is provided in Item 18 Tribal Cultural Resources of this Initial Study.

Records Search Results

Consultant undertook at records search with the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS) at California State University, Bakersfield on May 18, 2020 (SSJVIC, included in the Report). As indicated in the Report, "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 location, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area."[79]

"In addition to the official records and maps for archaeological sites and surveys in Tulare County, the following historic references were also reviewed: Historic Property Data File for Tulare County (OHP 2012); The National Register Information System (NPS 2020b); Office of Historic Preservation, California Historical Landmarks (OHP 2020); 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 2019); Caltrans State Bridge Survey (Caltrans 2018); and Historic Spots in California (Kyle 2002). Other references examined include a RealQuest Property Search and historic General Land Office (GLO) land patent records (Bureau of Land Management [BLM] 2020)."[80] Historic maps reviewed include: 1870 BLM GLO Plat map for Township 17 South Range 28 East; 1885 BLM GLO Plat map for Township 17 South Range 28 East; 1892 Tulare County, California Map (published by Thos. H. Thompson, page 046, Sequoia National Park 3, Kaweah); 1957 USGS Kaweah, California topographic quadrangle map (15-minute scale); 1986 USGS Kaweah, California topographic quadrangle map (1:62,500 scale); and 1986 photo revised 1994 USGS Kaweah, California topographic quadrangle map (1:24,000 scale).[81] Historic aerial photos taken in 1955, 1989, 2005, 2009, 2010, and 2012 were also reviewed for any indications of property usage and built environment.[82]

Native American Consultation (See Item 17 Tribal Cultural Resources of this Initial Study)

Lastly, it is noted that due to the sensitive nature of confidential information contained in the Report, it will not be readily available to the public; however, Tulare County will allow access to the Report within legal limitations.

Regulatory Setting

Federal

[76] Ibid. 1. June 2020.
[77] Op. Cit. 4.
[78] Op. Cit. 4-12.
[79] Op. Cit. 12-13.
[80] Op. Cit. 13.
[81] Op. Cit.
[82] Op. Cit.

The National Historic Preservation Act

"The Advisory Council on Historic Preservation (ACHP) is an independent federal agency with the primary mission to encourage historic preservation in the government and across the nation. The National Historic Preservation Act (NHPA), which established the ACHP in 1966, directs federal agencies to act as responsible stewards when their actions affect historic properties. The ACHP is given the legal responsibility to assist federal agencies in their efforts and to ensure they consider preservation during project planning. The ACHP serves as the federal policy advisor to the President and Congress; recommends administrative and legislative improvements for protecting the nation's diverse heritage; and reviews federal programs and policies to promote effectiveness, coordination, and consistency with national preservation policies. A key ACHP function is overseeing the federal historic preservation review process established by Section 106 of the NHPA. Section 106 requires federal agencies to consider the effects of projects, carried out by them or subject to their assistance or approval, on historic properties and provide the ACHP an opportunity to comment on these projects prior to a final decision on them."[83]

Although cultural resources are protected by several federal regulations, the project applicant is not requesting federal funding and does not require any permits from any federal agencies.

State

California State Office of Historic Preservation (OHP)

"The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), a gubernatorial appointee, and the State Historical Resources Commission."[84]

"OHP's responsibilities include: Identifying, evaluating, and registering historic properties; Ensuring compliance with federal and state regulatory obligations; Encouraging the adoption of economic incentives programs designed to benefit property owners; Encouraging economic revitalization by promoting a historic preservation ethic through preservation education and public awareness and, most significantly, by demonstrating leadership and stewardship for historic preservation in California."[85]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- 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
- Has yielded, or may be likely to yield, information important in prehistory or history.[86]

As mentioned in the CRIR, the use of both federal and state regulatory requirements apply to the proposed Project. "To meet the regulatory requirements of this Project, this cultural resources investigation was conducted pursuant to the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA) and in CEQA (Public Resources Code [PRC] § 21000 et seq.) The goal of NHPA and CEQA is to develop and maintain a high-quality environment that serves to identify the significant environmental effects of the actions of a proposed project and to either avoid or mitigate those significant effects where feasible. CEQA pertains to all proposed projects that require State or local government agency approval, including the enactment of zoning ordinances, the issuance of conditional use permits, and the approval of development project maps. The NHPA pertains to projects that entail some degree of federal funding or permit approval.

The NHPA and CEQA (Title 54 U.S. Code [USC] Section 100101 et seq. and Title 14, California Code of Regulations [CCR], Article 5, § 15064.5) apply to cultural resources of the historical and pre-contact periods. Any project with an effect that may cause a substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant effect on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on either the California

[83] Advisory Council on Historic Preservation. https://www.achp.gov/sites/default/files/documents/2019-10/AboutTheACHPFactSheet2019_100319.pdfl

[84] State of California. Office of Historic Preservation. Mission and Responsibilities. http://ohp.parks.ca.gov/?page_id=1066

[85] Ibid.

[86] Office of Historic Preservation. California Register of Historic Places. http://www.ohp.parks.ca.gov/?page_id=21238

Register of Historical Resources (CRHR) (PRC § 5024.1, Title 14 CCR, § 4852) or the National Register of Historic Places (NRHP) (36 Code of Federal Regulations [CFR] 60.4). Cultural resources eligible for listing on the NRHP are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the CRHR. Resources listed on or eligible for inclusion in the CRHR are considered Historical Resources under CEQA.

Tribal Cultural Resources are defined in Section 21074 of the California PRC as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either included in or determined to be eligible for inclusion in the CRHR, or are included in a local register of historical resources as defined in subdivision (k) of Section 5020.1, or are 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 Section 5024.1. Section 1(b)(4) of Assembly Bill (AB) 52 established that only California Native American tribes, as defined in Section 21073 of the California PRC, are experts in the identification of Tribal Cultural Resources and impacts thereto. Because ECORP does not meet the definition of a California Native American tribe, this report only addresses information for which ECORP is qualified to identify and evaluate, and that which is needed to inform the cultural resources section of CEQA documents. This report, therefore, does not identify or evaluate Tribal Cultural Resources. Should California Native American tribes ascribe additional importance to or interpretation of archaeological resources described herein, or provide information about non-archeological Tribal Cultural Resources, that information is documented separately in the AB 52 tribal consultation record between the tribe(s) and lead agency, and summarized in the Tribal Cultural Resources section of the CEQA document, if applicable."[87]

Native American Heritage Commission

"The Native American Heritage Commission (NAHC), created in statute in 1976, is a nine-member body, appointed by the Governor, to identify and catalog cultural resources (i.e., places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands) in California. The Commission is charged with the duty of preserving and ensuring accessibility of sacred sites and burials, the disposition of Native American human remains and burial items, maintain an inventory of Native American sacred sites located on public lands, and review current administrative and statutory protections related to these sacred sites."[88]

Tribal Consultation Requirements: AB 52 (Gatto, 2014)

The Public Resources Code has established that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. (Pub. Resources Code, § 21080.3.1.) If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact.[89]

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below. [90]

(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not

[87] *"Cultural Resources Inventory Report Hampton Inn and Suites Three Rivers*" (CRIR or Report). Page 3. June 2020. Prepared by ECORP Consulting, Inc. and included in Attachment "C" of this Initial Study.
[88] Native American Heritage Commission. Welcome. http://nahc.ca.gov/
[89] Office of Planning and Research. Discussion Draft Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA (May 2015). Page 3. http://opr.ca.gov/docs/DRAFT_AB_52_Technical_Advisory.pdf
[90] California Natural Resources Agency. 15064.5. Determining the Significance of Impacts to Archeological and Historical Resources, Section 15064.5(c). http://resources.ca.gov/ceqa/guidelines/art5.html

apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:[91]

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:
  (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
  (2) The requirements of CEQA and the Coastal Act.

(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
  (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    (A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
    (B) If the coroner determines the remains to be Native American:
      1. The coroner shall contact the Native American Heritage Commission within 24 hours.
      2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
      3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
  (2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
    (A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
    (B) The descendant identified fails to make a recommendation; or
    (C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. 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

Tulare County General Plan 2030 Update

The General Plan has a number of policies that apply to Projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

[91] Ibid.

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *ERM-6.1 Evaluation of Cultural and Archaeological Resources* wherein the County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards; *ERM-6.2 Protection of Resources with Potential State or Federal Designations* wherein the County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources; *ERM-6.3 Alteration of Sites with Identified Cultural Resources* which states that when planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource; *ERM-6.4 Mitigation* which states that if preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records; *ERM-6.8 Solicit Input from Local Native Americans* wherein the County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance; *ERM-6.9 Confidentiality of Archaeological Sites* wherein the County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts; *ERM-6.10 Grading Cultural Resources Sites* wherein the County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq. and; *LU-7.12 Historic Buildings and Areas* wherein the County shall encourage preservation of buildings and areas with special and recognized historic, architectural, or aesthetic value. New development should respect architecturally and historically significant buildings and areas

Three Rivers Community Plan

Other policies also include the Three Rivers Community Plan's objectives/polices at: *Objective 4.6 Historical, Cultural and Archaeological Resources:* To reserve historical, cultural, and archaeological resources including the Kaweah post office, historical bridges, and Native American cultural resources. *Policies: 4.6.2 Preserve Cultural & Historical Value* to limit to the extent feasible and appropriate development on sites with identified significant cultural or historical value; *4.6.4 ERM-6.3 Alteration of Sites with Identified Cultural Resources* wherein when planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource; *4.6.5 ERM-6.4 Mitigation* which states that if preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of record; *4.6.6 ERM-6.8 Solicit Input from Local Native Americans* wherein the County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance; *4.6.7 ERM-6.9 Confidentiality of Archaeological Sites* wherein the County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts and; 4.6.8 *ERM-6.10 Grading Cultural Resources Sites* wherein te County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 14, Chapter 3 § 15064.5 et. seq.

a) - c) Less Than Significant Impact With Mitigation: Consultant used a variety of accepted methodologies to research/investigate the proposed Project's location in determining presence of Tribal Cultural Resources. As noted in the CRIR, Consultant provided evidence of its personnel's qualifications; a search of records by the Southern San Joaquin Valley Information Center of the California Historical Resources Information System; RealQuest Property Search and historic General Land Office (GLO) land patent records (Bureau of Land Management [BLM]; aerial phots taken in 1955, 1989, 2005, 2009, 2010, and 2012 were also reviewed for any indications of property usage and built environment; Sacred Lands File Search (SLF) by the California Native America Heritage commission (NAHC); contacted the Tulare County Historical society and; an intensive pedestrian survey under the guidance of the Secretary of the Interior's Standards for the Identification of Historic Properties (NPS 1983).

To summarize the findings contained in the CRIR, Consultant concluded, "No cultural resources were identified on the property as a result of the records search and field survey. Therefore, no Historic Properties under Section 106 of the NHPA or Historical Resources under CEQA will be affected by the proposed Project." However, the CRIR conclusions do not eliminate the possibility of subsurface cultural resources, to wit; "Due to the presence of alluvium along the Kaweah River, and given the likelihood of pre-contact archaeological sites located along perennial waterways, the potential exists for buried pre-contact archaeological sites in the Project Area. This potential is considered to be high, as the Kaweah River exhibits significant sinuosity that reflects a meandering

channel over time, which has the potential to bury archaeological sites that were once along the river's edge." To that end, consultant provides recommendation in the event of post-review discovery (see item 5 cultural Resources). The proposed Project is not anticipated to impact human remains, including those interred outside of formal cemeteries.

However, as an abundance of caution, in the unlikely event that subsurface resources or if any previously unknown human remains were encountered during ground disturbing activities, **Mitigation Measures CUL-1 subsets (a) – (c)**, as recommended in the CRIR (pages 22-23), would be implemented thereby reducing the potential level of impact to this resource as less than significant for resources 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 to a resource consider significant to a California Native American tribe. Therefore, the Project would result in a less than significant impact to this resource.

Mitigation Measure CUL-1: 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 pre-contact 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:

(a): If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.

(b): 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 a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. 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 a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.

(c): 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 Tulare County Coroner (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 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.

Therefore, implementation of **Mitigation Measure CUL-1 subsets (a)** through **(c)** would result in a less than significant impact to this item.

Cumulative Impact: As noted earlier, the CRIR study concluded that there are no surface resources within the proposed Project site. **Mitigation Measure CUL -1 subsets (a)** through **(c)** is included in the event surface or subsurface cultural resources are encountered. As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

6.	ENERGY					
Would the project:			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
	b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Analysis:

Environmental Setting

Electricity and Natural Gas Services

Natural gas service within Tulare County is provided by the Southern California Gas Company (SoCal Gas). However, the proposed Project is located in a rural foothill community and natural gas service is not available in the area.

Electrical power service in the project area is provided by Southern California Edison (SCE). SCE provides electric power throughout southern and eastern California, from Mono County south to Riverside County. Electricity for proposed Project demands is available from existing transmission and distribution lines. SCE updates demand projections and ensures that adequate power generation is brought on-line when needed. Similarly, transmission and distribution facilities and substations are continuously expanded or added as needed for power delivery. There are no existing or foreseeable supply constraints that would prevent SCE from meeting the proposed Project's average or peak daily or seasonal demands, and local system improvements would be installed as needed to serve the project based on estimated project loads.

In 2019, SCE provided 80,912.73 gigawatt-hours (GWh) of electricity to its customers (residential and non-residential) across its service area. In the same year, Southern California Gas Company (SoCal Gas) provided a total of 5,424.71 million therms of natural gas to customers (residential and non-residential) across its service area. Within the County, total demand for electrical services was 4,162.20 GWh, and total demand for natural gas services was 299.19 million therms in 2019. [92] Total state and countywide energy demands based on 2019 populations, are provided in **Table 6-1**.

Table 6-1
County, State and Project Energy Demands

	Natural Gas Usage (therms)		Electricity Energy Demand (MWh)	
	Total Demand	**Non-Residential Demand**	**Total Demand)**	**Non-Residential Demand**
State (2019)[1]	13,158,207,489	8,365,362,587	558,803,760	188,198,815
Tulare County (2019)[1]	299,193,336	unavailable	4,162,198	2,900,514
Proposed Project[2]	---	---	---	850

1 California Energy Commission. Energy Consumption Database. http://ecdms.energy.ca.gov/. Accessed October 2020.
2 Project natural gas demand provided by CalEEMod estimates and electricity demand provided by applicant based on an existing facility of the same size.

Petroleum-Based Fuels

Overall supplies of transportation fuel in Tulare County are plentiful and reliable. Supplies of imported crude and refined fuels are increasing steadily as in-state petroleum resources decline and refining capacity is maximized. There have been no fuel shortages or vehicles waiting in gas fueling lines in recent years. General tightness of supply (vis-à-vis demand) is reflected in prices at fuel dispensing pumps and there is no evidence at this time to suggest that such shortages will occur in the foreseeable future.

[92] California Energy Commission. Energy Consumption Database. http://ecdms.energy.ca.gov/. Accessed March 2018

Regulatory Setting

Federal

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can obtain federal tax credits for purchasing fuel efficient appliances and products, including buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

State

California Global Warming Solutions Act of 2006 (Assembly Bill 32)

Assembly Bill 32 (Health and Safety Code Sections 38500–38599; AB 32), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 levels by 2020. To achieve these goals, AB 32 tasked the California Public Utilities Commission (PUC) and CEC with providing information, analysis, and recommendations to the California Air Resources Board (ARB) regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

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.[93, 94]

California Energy Commission

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *ERM-4.1 Energy Conservation and Efficiency Measures* wherein the County encourages the use of solar energy, solar hot water panels, and other energy conservation and efficiency features; *ERM-4.2 Streetscape and Parking Area Improvements for Energy Conservation* wherein the County shall promote the planting and maintenance of shade trees along streets and within parking areas of new urban development to reduce radiation heating; *ERM-4.3 Local and State Programs* wherein the County shall participate, to the extent feasible, in local and State programs that strive to reduce the consumption of natural or man-made energy sources; *ERM-4.3 Local and State Programs* wherein the County shall participate, to the extent feasible, in local and State programs that strive to reduce the consumption of natural or man-made energy sources and; *AQ-3.5 Alternative Energy Design* wherein the County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible.

Three Rivers Community Plan Update[95]

The Three Rivers Community Plan Update contains policies that apply to projects within the community of Three Rivers that support the County's GHG reduction efforts: *Policy 4.1.11 Climate Action Plan (CAP)* which requires a 6% reduction of GHG emissions

[93] California Legislative Information. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32. Accessed October 2020.

[94] California Legislative Information. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB197. Accessed October 2020.

[95] Three Rivers Community Plan 2018 Update. http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/007Three%20Rivers/COMMUNITY%20PLAN%20GPA%2014-004%20THREE%20RIVERS.pdf.

for development projects consisting of 50 or more dwelling units or equivalent travel demand for non-residential uses; and *Policy 6.2.2 (Link Commercial Development to Transportation Corridors)* which requires commercial development to locate in areas with adequate access to major transportation corridors.

a) No Impact: The proposed Project will not have a direct or cumulative impact, or create wasteful, inefficient, or unnecessary consumption of energy resources during project construction-related activities or operations.

During construction, the proposed Project would involve the use and consumption of non-renewable building materials such as concrete, metals, and plastics. Nonrenewable resources and energy would also be consumed in the manufacturing and transportation of building materials, as well as grading and construction for the project. Operation of the proposed Project will consume energy in the form of electricity and propane for multiple purposes including building heating and cooling, lighting, appliances, and electronics. Energy in the form of gasoline and diesel fuel will be used for private vehicles and delivery trucks that will travel to the proposed Project. Use of nonrenewable materials and energy sources represents an irretrievable commitment of resources. The proposed Project includes features that would reduce the commitment of nonrenewable resources, including: energy-efficiency and water conservation features and mitigation measures (see measures GHG-1 and GHG-2) in project design. Furthermore, the proposed Project will not result in new traffic as it is intended to provide additional services for visitors to the Project area, thereby capture existing vehicle trips. As visitors will have the opportunity to lodge within the community of Three Rivers, there will be fewer vehicle miles traveled to the nearest communities for lodging. As such, vehicle fuel consumption will be reduced. Therefore, the proposed Project will have a less than significant impact resulting from energy consumption.

b) No Impact: The proposed Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The proposed Project is consistent with the Tulare County General Plan, the Three Rivers Community Plan and the Tulare County Climate Action Plan. These three plans contain policies intended to assist the County in achieving its goals for energy consumption and conservation goals. Therefore, the proposed Project will have no impact regarding this resource.

Cumulative Impact: There are no other hotel (or motel) or other development proposals within the vicinity of the proposed Project or within the community of Three Rivers. The proposed Projects is consistent with the Tulare County General Plan, Three Rivers Community Plan, and the Tulare County CAP. The proposed Project would contribute to adverse impacts on energy resource demand and conservation when considering the cumulative impact of concurrently planned projects; however, like the proposed Project, new development projects are required to comply with local, regional, state, and federal policies designed to reduce wasteful energy consumption, and improve overall energy conservation and sustainability. For instance, all projects involving the development of new buildings must be designed to conform to CALGreen and the 2019 California Energy Code. Furthermore, the proposed Project would reduce the overall VMT thereby having a net positive benefit resulting from reduction in transportation fuel consumption within the County. Therefore, the proposed Project will have a less than significant impact on energy resources.

7. GEOLOGY/SOILS

Would the project:			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication No. 42.	☐	☐	☒	☐
	ii)	Strong seismic ground shaking?	☐	☐	☒	☐
	iii)	Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
	iv)	Landslides?	☐	☐	☐	☒

	b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
	c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
	d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
	e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☒	☐
	f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Analysis:

Environmental Setting

Geology & Seismic Hazards

"Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains and the Central Valley. The Sierra Nevada Physiographic Province, in the eastern portion of the county, is underlain by metamorphic and igneous rock. It consists mainly of homogeneous granitic rocks, with several islands of older metamorphic rock. The central and western parts of the county are part of the Central Valley Province, underlain by marine and non-marine sedimentary rocks. It is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting of the mountains. The foothill area of the county is essentially a transition zone, containing old alluvial soils that have been dissected by the west-flowing rivers and streams that carry runoff from the Sierra Nevada Mountains. This gently rolling topography is punctured in many areas by outcropping soft bedrock. The native mountain soils are generally quite dense and compact.

"Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter Scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building." [96]

"Topography within the Three Rivers area is quite varied - from relatively flat areas immediately adjacent to the north, south and middle fork of the Kaweah River to very rugged, mountainous terrain particularly at the southern end of South Fork Drive. Elevations within the UDB range from approximately 3,500 feet to the South Fork of Kaweah watershed to 900 feet near Lake Kaweah."[97]

Faults

"Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in geologic terms. Geologically recent is defined as having occurred

[96] Tulare County. Three Rivers Community Plan 2018 Update. Pages 116-117. Tulare County Board of Supervisors Resolution Nos. 2018-81 thru -84.
[97] Ibid 73.

within the last two million years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered "potentially active."[98]

"Although a number of faults have been located along the western edge of the Sierra Nevada Mountains, none are known to be active."[99] "There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- San Andreas Fault. The San Andreas Fault is located approximately 40 miles west of the Tulare County boundary. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the county. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west to Tulare County lies the "Central California Active Area," where many earthquakes have originated.
- Owens Valley Fault Group. The Owens Valley Fault Group is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.
- Clovis Fault. The Clovis Fault is considered to be active within the Quaternary Period (within the past two million years), although there is no historic evidence of its activity, is classified as "potentially active." This fault lies approximately six miles south of the Madera County boundary in Fresno County. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts."[100]

Groundshaking

"Groundshaking is the primary seismic hazard in Tulare County because of the county's seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of groundshaking, which is directly related to the magnitude of a quake and the distance from a quake's epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased groundshaking over longer periods of time, thereby affecting a larger area. Groundshaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population.

The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in this area will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake.

In 1973, five counties within the Southern San Joaquin Valley undertook the preparation of the Five County Seismic Safety Element to assess seismic hazards. The Five County Seismic Safety Element projects that with the maximum probable earthquake of a magnitude 8 to 8.5 centered along the San Andreas Fault, "relatively low levels of shaking should be expected in the eastern and central parts of the San Joaquin Valley." The eastern portion of the county is composed of four "Sierran Zones," the boundaries of which are determined by the predicted effects of the maximum probable earthquake on the Owens Valley Fault. Since the mountains are underlain primarily by granitic rock, these zones tend to experience very low levels of groundshaking. However, most of the people residing in these zones do not live on the hard rock. Instead, residences tend to be built in alluvial valleys or the weathered and decomposed zones in the meadows or foothills. These areas will experience stronger groundshaking intensities. Characteristics within the microzones may vary greatly; thus, groundshaking potential in the Sierran zones is more accurately analyzed on a site-by-site basis.

Older buildings constructed before current building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in the current building codes, are most likely to suffer damage in an earthquake. Most of Tulare County's buildings are no more than one or two stories in height and are of wood frame construction, which is considered the most structurally resistant to earthquake damage. Older masonry buildings (without earthquake-resistance reinforcement) are the most susceptible to structural failure, which causes the greatest loss of life. The State of California has identified unreinforced masonry buildings (URMs) as a safety issue during earthquakes. In high risk areas (Bay Area) inventories and programs to mitigate this issue

[98] Op. Cit. 117
[99] Op. Cit.
[100] Op. Cit.

are required. Because Tulare County is not a high risk area, state law only recommends that programs to retrofit URMs are adopted by jurisdictions."[101]

Liquefaction

"Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged groundshaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits. Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the 1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted. No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the San Joaquin Valley portion of the County. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction."[102]

Settlement

"Settlement can occur in poorly consolidated soils during groundshaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to groundshaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County."[103]

Soils

"According to the Central Soils Map of Tulare County, Three Rivers (see Figure 19 of the Three Rivers Community Plan 2018 Update) is comprised of three soil classes: Class VI, Class VII, and Class VIII, all of which are not suitable for cultivation, but are suitable for pasture, rangelands, grazing and wildlife."[104] As noted in the *Biological Resources Assessment for the Hampton Inn and Suite Three River Project*, "According to the Web Soil Survey (NRCS 2020a), there are two soil units mapped within the Study Area: (1-5) Blasingame sandy loam, 9 to 15 percent slopes and (164) Tujunga sand (Figure 3 [in the Assessment]. Natural Resources Conservation Soil Types). Neither of these soil units are considered hydric (NRCS 2020b)"[105]

Landslides

"Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces).

[101] Op. Cit. 118.
[102] Op. Cit. 118.
[103] Op. Cit. 118.
[104] Op. Cit. 121.
[105] *"Biological Resources Assessment for the Hampton Inn and Suite Three River Project".* Page15. August 2020. Prepared by ECORP Consulting Inc.

Tulare County has three geologic environments: the valley, foothills, and mountains. The range in topography between these three areas presents a range of landslide hazards. As of June 2009, the California Geological Survey had not developed landslide hazard identification maps for Tulare County. However, it is reasonable to assume that certain areas in Tulare County are more prone to landslides than others. Such areas can be found in foothill and mountain areas where fractured and steep slopes are present (as in the Sierra Nevada Mountains), where less consolidated or weathered soils overlie bedrock, or where inadequate ground cover accelerates erosion. Erosion and slumping of soils can also occur along bluffs along the Kaweah, Kings, and Tule Rivers."[106]

Wastewater Treatment

Community Service Districts (CSDs) are formed to provide a permanent form of governance that can provide locally adequate levels of public facilities and services to residents and property owners within their jurisdictional boundaries.[107]

According to the Tulare County LAFCO, "The Three Rivers CSD is located approximately 11.7 miles east of the City of Woodlake. The District's jurisdictional boundaries encompass a 5,937 acre area that is spread out along Highway 198. The District was formed in 1973 (LAFCO Resolution 73-036, LAFCO Case 459). The District's Active Powers include:

1. Preparation of project reports for sewer systems
2. Trash pick up
3. Monitoring of potable water sources
4. Monitoring of individual septic systems."[108]

"The services provided by the District are limited to monitoring the water quality of sources throughout district boundaries. The ultimate gauge of efficiency for this service is whether widespread degradation of water quality occurs within district boundaries. LAFCO found no record of water quality degradation in the Three Rivers area. It is determined that there are adequate controls in place for accountability and efficiency of service provision, given the limited scope of district services."[109]

"Currently, there is not a collective community sewage disposal or sewage treatment plant serving Three Rivers; therefore, residential densities will be lower than if a community system were present. The primary method of sewage treatment is by means of individual sewage disposal systems consisting of septic tanks and leach fields. Due to peculiar geology and hydrology, the entire area is not well suited for the installation of conventional septic systems. Management Disposal District was formed on April 25, 1979 by the Community Services District. The purpose of the CSD is to improve water quality by repairing failing septic systems and requiring property owners within the boundaries of the Community Services District to properly maintain their systems"[110]

"During the site evaluation for each new or replacement system, a percolation test and highest anticipated depth to groundwater must be conducted. Based on the determined percolation rate, the minimum depth of groundwater below the bottom of the leaching trench, and the native soil depth immediately below the leaching trench, shall not be less than described in Table 32- Tier 1 Minimum Depths to Groundwater and Minimum Soil Depth from the Bottom of the Dispersal System below [in the Three Rivers Community Plan]. Table 32- Tier 1 Minimum Depths to Groundwater and Minimum Soil Depth from the Bottom of the Dispersal System below [in the Three Rivers Community Plan]."[111] Engineered septic systems in the Three Rivers UDB will be reviewed and [must be] approved by the Tulare County Environmental Health Services prior to installation.[112]

As contained in the Three Rivers Community Plan 2018 Update, "New onsite wastewater treatment systems in the Three River Community will be subject to Tier 1- Low Risk New or Replacement [Onsite Wastewater Treatment Systems] OWTS requirements. The Three Rivers Community is not located near any bodies of water deemed "impaired" by the SWRCB, therefore Tier 3 regulations will not apply. New and Replacement OWTS sites require a qualified professional to perform site evaluations for soil depth, highest anticipated groundwater levels within the dispersal field, percolation tests, and proper permits through the respective permitting agencies. A licensed General Engineering Contractor (Class A), General Building Contractor (Class B), Sanitation System Contractor (Specialty Class C-42), or Plumbing Contractor (Specialty Class C-36) shall install all new and replacement systems in

[106] Tulare County General Plan 2030 Update. Background Report. Page 8-10. Accessed October 2020 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf

[107] Tulare County LAFCO. 2011. Page 1-1. Group 4 Municipal Service Reviews. http://lafco.co.tulare.ca.us/lafco/index.cfm/msr/group-4-msrs/

[108] Ibid. 9-1

[109] Op. Cit. 9-5

[110] Tulare County. Three Rivers Community Plan 2018 Update. Pages 139-140.

[111] Ibid. 148.

[112] Tulare County Health and Human Services Agency, 2017. Requirements for Submission of Engineered Sewage Disposal Systems.

accordance with California Business and Professions Code Sections 7056, 7057, and 7058 and Article 3, Division 8, Title 16 of the California Code of Regulations."[113]

Tier 1 Low Risk New or Replacement OWTS also requires the following:

- 5 feet minimum setback from parcel property lines and structures;
- 100 feet minimum setback from water wells and monitoring wells;
- 100 feet minimum setback from any unstable land mass or areas subject to earth slides;
- 100 feet minimum setback from springs and flowing surface water bodies;
- 200 feet minimum setback from vernal pools, wetlands, and the high water mark of lakes and reservoirs;
- 150 feet minimum setback from public water wells where the depth of effluent dispersal system does not exceed 10 feet;
- Percolation test results shall not exhibit a flow rate greater than one minute per inch (1 MPI) or slower than one hundred twenty minutes per inch (120 MPI) in the effluent disposal area
- Natural ground slope in all areas used for effluent disposal shall not exceed 25 percent;
- Expected influent flow not to exceed 3,500 gallons per day;
- Minimum twelve inches (12") soil cover on all gravity dispersal systems;
- Minimum six inches (6") soil cover on all pressure distribution systems;
- 100% replacement area available for future use;
- Dispersal systems shall not exceed 10 feet as measured from the ground surface to the bottom of the trench.

Paleontological Resources

Paleontological resources comprise of fossils – the remains or traces of once living organisms preserved in sedimentary deposits – together with the geologic context in which they occur. Sedimentary deposits include unconsolidated or semi consolidated "soils" or sedimentary rocks. Most fossil remains are the preserved hard parts of plants or animals, and include bones and/or teeth of once living vertebrate animals, shells or body impressions of invertebrate animals, and impressions or carbonized or mineralized parts of plants (e.g. "petrified wood"). Trace fossils include preserved footprints, trackways, and burrows of prehistoric animals and root marks created by plants.

Fossils are scientifically important as they provide the only available direct evidence of the anatomy, geographic distribution, and paleoecology of organisms of the past. Scientific studies based on fossils and comparisons between them continue to refine details of the basic history of life. In conjunction with physical geologic investigations, the use of fossils as indicators of geologic time and ancient environments also contributes to understanding of the physical history of the earth, the distribution of mineral resources, dynamics of earth processes, and past climatic changes.

REGULATORY SETTING

Federal

None that apply to the Project.

State

California Building Code

"The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable."[114]

Alquist-Priolo Earthquake Fault Zoning Act

"The Alquist- Priolo Earthquake Fault Zoning Act (formerly the Alquist- Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate

[113] Tulare County. Three Rivers Community Plan 2018 Update. Pages 147-148.

[114] Tulare County. Three Rivers Community Plan 2018 Update. Draft Environmental Impact Report. Page. 3.6-11.

development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces."[115]

California Department of Transportation (Caltrans)

"Caltrans has developed roadway design standards including those for seismic safety. Consideration of earthquake hazards in roadway design is detailed in the Highway Design Manual published by Caltrans (2006). Modifications to local highways and roads would be required to adhere to Caltrans engineering standards to minimize settlement."[116]

State Water Resources Control Board and Regional Water Quality Control Board

National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity- Water Quality Order 99-08 DWQ.

Typically, General Construction Storm Water NPDES permits are issued by the RWQCB for grading and earth-moving activities. The General Permit is required for construction activities that disturb one or more acres. The General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which specifies practices that include prevention of all construction pollutants from contacting stormwater with the intent of keeping all products of erosion form moving off site into receiving waters. The NPDES permits are issued for a five-year term. NPDES general permits require adherence to the Best Management Practices (BMPs) including:

- Site Planning Consideration- such as preservation of existing vegetation.
- Vegetation Stabilization- through methods such as seeding and planting.
- Physical Stabilization- through use of dust control and stabilization measures.
- Diversion of Runoff – by utilizing earth dikes and temporary drains and swales.
- Velocity Reduction – through measures such as slope roughening/terracing.
- Sediment Trapping/Filtering – through use of silt fences, straw bale and sand bag filters, and sediment traps and basins.

Local

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project include: *HS-1.2 Development Constraints* wherein the County shall permit development only in areas where the potential danger to the health and safety of people and property can be mitigated to an acceptable level*; HS-1.3 Hazardous Lands* wherein the County shall designate areas with a potential for significant hazardous conditions for open space, agriculture, and other appropriate low intensity uses; *HS-1.5 Hazard Awareness and Public Education* wherein the County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures; *HS-1.11 Site Investigations* wherein the County shall conduct site investigations in areas planned for new development to determine susceptibility to landslides, subsidence/settlement, contamination, and/or flooding; *HS-2.1 Continued Evaluation of Earthquake Risks* wherein the County shall continue to evaluate areas to determine levels of earthquake risk; *HS-2.4 Structure Siting* The wherein the County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity; *HS-2.7 Subsidence* wherein the County shall confirm that development is not located in any known areas of active subsidence; *HS-2.8 Alquist-Priolo Act Compliance* wherein The County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones; *WR-2.2 NPDES Enforcement* wherein the County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board; *WR-2.3 Best Management Practices* wherein the County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board; and *WR-2.4 Construction Site Sediment Control* wherein the County shall continue to enforce provisions to control erosion and sediment from construction sites.

[115] Ibid.

[116] Tulare County. Tulare County General Plan 2030 Update. Background Report. Page. 8-4; California DOT, 2017. Highway Design Manual. http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm

Three Rivers Community Plan

In addition to the above-noted General Plan Policies, the Three Rivers Community Plan includes policy 5.3.4 wherein a development project provide adequate wastewater collection and treatment capacity for existing and planned development in Three Rivers that is within the boundaries of the UDB. New development is subject to Onsite Wastewater Treatments Systems (OWTS) Ordinance Code of Tulare County as follows: sections 7-01-1320 through 7-01-1740 regarding minimum lot size, set back, and testing requirements for onsite wastewater treatment systems under the local agency management program (LAMP).

Five County Seismic Safety Element (FCSSE)

The FCSSE report represents a cooperative effort between the governmental entities within Fresno, Kings, Madera, Mariposa and Tulare Counties to develop an adoptable Seismic Safety Element as required by State law. Part I, the Technical Report, is designed to be used when necessary to provide background for the Summary document. Part II, the Summary Report, establishes the framework and rationale for evaluation of seismic risks and hazards in the region. Part II of the Seismic Safety Element, the Policy Report, has been prepared as a "model" report designed to address seismic hazards as delineated in the Technical Report. The intent has been to develop a planning tool for use by county and city governments in implementing their seismic safety elements. The planning process utilized to develop the Element was developed through the efforts of Technical and Policy Committees, composed of both staff and elected representatives from Cities, Counties, and Special Districts or Areawide Planning Organizations in cooperation with the consulting firms of Envicom Corporation and Quinton-Redgate.[117]

a) Less Than Significant Impact: According to the Tulare County General Plan, the planning area lies in the S-1 seismic study area, characterized by a relatively thin section of sedimentary rock overlying a granitic basement.

The S-1 seismic zone, which is characterized by hard to moderately hard granite or metamorphic rock. The distance to either of the faults expected to be a should of shaking is sufficiently great that shaking should be minimal and the requirements of the Uniform Building Code Zone II should be adequate for normal activities.[118]

The distance to area faults i.e. the Clovis Group, Pond-Poso, and San Andreas, expected sources of significant shaking, is sufficiently great that shaking effects should be minimal.

i) *Fault Rupture:* No substantial faults are known to occupy Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation. The nearest known faults likely to affect the Project site are the San Andreas Fault (approximately 40 miles to the Tulare County's western border). As noted above, the Five County Seismic Safety Element (FCSSE), the proposed Project site is located in the S-1 zone, which is characterized by hard to moderately hard granite or metamorphic a rock. The distance to either of the faults is sufficiently great that shaking should be minimal and the requirements of the Uniform Building Code Zone II should be adequate for normal activities.

Therefore, as noted earlier, no Alquist-Priolo Earthquake Fault Zones or known active faults are in or near the Project area. As such, the risk of rupture of a known earthquake fault will be less than significant.

ii) *Ground Shaking:* The Project area is located in a seismic zone which is sufficiently far from known faults and consists primarily of a stable geological formation. Any impacts regarding strong seismic ground shaking have been discussed in Impact VI-a-i. As such, the impact due to ground shaking would be less than significant.

iii) *Ground Failure and Liquefaction:* The proposed Project site is located in the Five County Seismic Safety Element's S-1 zone, and therefore has a low risk of liquefaction. No subsidence-prone soils or oil or gas production is involved with the proposed Project. The any impacts will be less than significant.

iv) *Landslides:* The proposed Project is located in the Five County Seismic Safety Element's S-1 zone and therefore will have a minimal risk of landslides. As the proposed Project is located on an S-1 zone it likely consists of hard rock, alluvium on a valley floor, with thick sections of weathered bedrock[119], is situated on relatively flat topography, and there are no geologic landforms on or near the site that could result in a landslide event. Therefore, there is no risk of landslides within or near

[117] *Five County Seismic Safety Element. Fresno, Kings, Madera, Mariposa, & Tulare Counties.* 1974. Pages 4-7. Prepared by Envicom Corporation.

[118] *Five County Seismic Safety Element - Fresno, Kings, Madera, Mariposa & Tulare Counties. Summary of Seismic Hazards & Safety Recommendations.* 1974. Page 16 Prepared by Envicom Corporation. Available upon request at the Tulare County RMA office.

[119] Ibid. 3.

the Project area.

b) Less Than Significant Impact: Site construction-related activities will include trenching, earthmoving, pouring concrete, grading, building construction typical of a hotel structure. These activities could expose soils to erosion processes. The extent of erosion will vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. The site has very little slope (i.e., a slight grade from west to east) and will have a flat topography after grading. As stated earlier, the relatively flat nature of the site reduces the need for grading which would be generally limited to access roads, parking, and the hotel structure itself. Any soils removed from these areas would likely be redistributed around and retained elsewhere on the proposed Project site. Beyond grading, soil disturbance would occur in association with trenching for emplacement of plumbing, electrical, and storm water drainage conduits.

To prevent water and wind erosion during the construction period, a Storm Water Pollution Prevention Plan (SWPPP) will be developed for the proposed Project as required for all projects which disturb more than one acre. As part of the SWPPP, the applicant will be required to provide erosion control measures to protect the topsoil. Any stockpiled soils will be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction. In addition, depending upon activity, the Project would be subject to Air District Rules Rule 8021 (construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities) for construction and earthmoving activities; 8031 (Bulk Materials) which limits fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials (such a topsoil); 8041 (Carryout and Trackout) which requires prevention and/or cleanup of soil that is tracked out by vehicle tires exiting the site or carried out by vehicles exiting the site; 8051 (Open Areas) requiring stabilization of areas cleared of vegetation in anticipation of construction-related activities; and 8071 (Unpaved Vehicle/Equipment Traffic Areas) to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas within the Project's construction-related areas. As a result of these efforts, loss of topsoil and substantial soil erosion during the construction period are not anticipated.

As such, the proposed Project would not result in substantial soil erosion or loss of thereby the impact by the proposed Project would result in a less than significant impact.

c) No Impact: Substantial grade change will not occur in the topography to the point where the proposed Project will expose people or structures to potential substantial adverse effects on, or offsite, such as landslides, lateral spreading, liquefaction or collapse. As noted earlier, the proposed Project is located in the Five County Seismic Safety Element's S-1 zone, as such, the proposed Project site has a low to no risk of subsidence or liquefaction. Therefore, the proposed Project would result in no impact.

d) No Impact: According to the USDA, NRCS, and the Soil Survey of Tulare County, the proposed Project site contains The Project site itself consists of Blasingame sandy loam and Tujunda soils. The Blasingame series soils consists of moderately deep, well drained, medium to very rapid runoff, moderately slow permeability soils that formed in material weathered from basic igneous rocks. Blasingame soils are on foothills and uplands at elevations of 400 to 5,000 feet and have slopes of 2 to 75 percent. The mean annual precipitation is about 18 inches.[120] Therefore, the native soils identified on the site do not contain the characteristics of an expansive soil. The Tujunga series consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains, including urban areas, above 1,500 feet in elevation. Slopes range from 0 to 12 percent. The mean annual precipitation is about 17.75 inches.[121] As such, based upon the soil types where the proposed Project would be located, the Project would result in no impact and would not create substantial direct or indirect risks to life or property.

e) Less Than Significant Impact: The proposed Project would include the installation or use of septic tanks or other alternative waste water disposal systems. The applicant will be required to comply with Tulare County General Plan policies, Three Rivers Community Plan policies, Regional Water Quality Control Board requirements, and must also receive approval by the Tulare County Health and Human Services Agency. As such, the proposed Project would result in a less than significant impact

f) Less Than Significant Impact: There are no known paleontological resources within the proposed Project area, nor are there any known geologic features in the proposed Project area. Project construction will not be anticipated to disturb any paleontological resources not previously disturbed; however, **Mitigation Measure CUL-1 subsets (a)** through **(c)**, as specified in Item 5 Cultural Resources (as applicable), will ensure that any impact will be less than significant.

[120] USDA. Official Series Description - Blasingame Series. Accessed October 2020 at: https://soilseries.sc.egov.usda.gov/OSD_Docs/B/BLASINGAME.html

[121] Ibid. Official Series Description - Tujunda Series. Accessed October 2020 at: https://soilseries.sc.egov.usda.gov/OSD_Docs/T/TUJUNGA.html#:~:text=The%20Tujunga%20series%20consists%20of%20very%20deep%2C%20somewhat,mean%20annual%20temperature%20is%20about%2018%20degrees%20C.

Cumulative Impact: As noted earlier, the CRIC study concluded that there are no surface resources within the proposed Project site. Mitigation Measures **CUL-1 subsets (a)** through **(c)** are included in the event surface or subsurface cultural resources are encountered. As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

8.	**GREENHOUSE GAS EMISSIONS**					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
	b)	Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Analysis:

The proposed Project will result in Less Than Significant Impacts to Greenhouse Gases (GHG). The "Air Quality & Greenhouse Gas Assessment Three Rivers Hampton Inn and Suites Project" (GHG Report) was prepared by ECORP Consulting, Inc. (Consultant) in July 2020 (updated October 2020) which is included as Attachment "A" of this Initial Study. The GHG Report is used as the basis for determining that, based on the evidence/documentation and the expertise of qualified Consultant, the proposed Project will result in a less than significant impact.

Environmental Setting

"An increase in the near surface temperature of the earth. Global warming has occurred in the distant past as the result of natural influences, but the term is most often used to refer to the warming predicted to occur as a result of increased emissions of greenhouse gases. Scientists generally agree that the earth′s surface has warmed by about 1 degree Fahrenheit in the past 140 years, but warming is not predicted evenly around the globe. Due to predicted changes in the ocean currents, some places that are currently moderated by warm ocean currents are predicted to fall into deep freeze as the pattern changes." "The warming of the earth′s atmosphere attributed to a buildup of CO2 or other gases; some scientists think that this build-up allows the sun′s rays to heat the earth, while making the infra-red radiation atmosphere opaque to infrared radiation, thereby preventing a counterbalancing loss of heat. Ibid. Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern is that increases in GHGs are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. The gases believed to be most responsible for global warming are water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6)." "Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO2 and methane are emitted in the greatest quantities from human activities. Emissions of CO2 are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF6 is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming." "Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas; o Increase of heat index over land areas; and

- More intense precipitation events."[122]

"Snowpack and snowmelt may also be affected by climate change. Much of California's precipitation falls as snow in the Sierra Nevada and southern Cascades Mountain ranges, and snowpack represents approximately 35 percent of the state's useable annual water supply."[123] "The snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended."[124] As air temperatures increase due to climate change, the water stored in California's snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt."[125]

"In 2007, Tulare County generated approximately 5.2 million tonnes of Carbon Dioxide Equivalent (CO_2e). The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources, the third largest portion (11%) is from electricity sources."[126] "Table 6-7 [of the Background Report, **Table GHG-1** in this Initial Study] identifies Tulare County's emissions by sector in 2007."[127]

In 2030, Tulare County is forecast to generate approximately 6.1 million tonnes of CO_2e. The largest portion of these emissions (59%) is attributed to dairies/feedlots, while the second largest portion (20%) is from mobile sources, and third largest portion (11%) is from electricity as shown on Table 6-8 [of the Background Report, **Table GHG-2** in this Initial Study]. Per capita emissions in 2030 are projected to be approximately 27 tonnes of CO_2e per resident."[128]

The Tulare County General Plan contains the following: Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO_2 and methane are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF6 is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.[129]

Table GHG-1
GHG Emissions by Sector in 2007

Sector	C02e (tons/year)	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
Total	5,208,060	100%
Per Capita	*36.1*	

Source: Tulare County General Plan 2030 Update Background Report. Page 6-31

[122] Op. Cit.
[123] Op. Cit. 8-85.
[124] Op. Cit.
[125] Op. Cit.
[126] Op. Cit. 6-36.
[127] Op. Cit. 6-38.
[128] Op. Cit.
[129] Op. Cit. 6-31.

Table GHG-2 GHG Emissions by Sector in 2030		
Sector	$C0_{2e}$ (tons/year)	% of Total
Electricity	660,560	11%
Natural Gas	384,410	6%
Mobile Sources	1,212,370	20%
Dairy/Feedlots	3,601,390	59%
Solid Waste	246,750	4%
Total	6,105,480	100%
Per Capita	*27.4*	
Source: Tulare County General Plan 2030 Update Background Report. Page 6-31		

Regulatory Setting

Federal

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years.

The United States Environmental Protection Agency (USEPA) Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO2-equivalent per year beginning in 2010, report their emissions on an annual basis. On May 13, 2010, the USEPA issued a final rule that established an approach to addressing GHG emissions from stationary sources under the CAA permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in Massachusetts v. EPA (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of GHGs under the CAA. On April 17, 2009, the USEPA found that CO2, CH4, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not proposed regulations based on this finding.

State

<u>California Environmental Quality Act (CEQA) Requirements</u>

Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions

"(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Quantify greenhouse gas emissions resulting from a project; and/or

(2) Rely on a qualitative analysis or performance based standards.

(b) In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, e.g., section 151835(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

(c) A lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use."[130]

Executive Order S-3-05

"In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger issued Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order additionally ordered that the Secretary of the California Environmental Protection Agency (Cal EPA) would coordinate oversight of the efforts among state agencies made to meet the targets and report to the Governor and the State Legislature biannually on progress made toward meeting the GHG emission targets. Cal EPA was also directed to report biannually on the impacts to California of global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry, and prepare and report on mitigation and adaptation plans to combat these impacts.

In response to the Executive Order, the Secretary of Cal EPA created the Climate Action Team (CAT), composed of representatives from the Air Resources Board; Business, Transportation, & Housing; Department of Food and Agriculture; Energy Commission; California Integrated Waste Management Board (CIWMB); Resources Agency; and the Public Utilities Commission (PUC). The CAT prepared a recommended list of strategies for the state to pursue to reduce climate change emission in the state (Climate Action Team, 2006)."[131]

Assembly Bill 32: California Global Warming Solutions Act of 2006

"In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020.

The bill also requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The bill authorizes CARB to adopt market-based compliance mechanisms. The bill additionally requires the state board to monitor compliance with and enforce any rule, regulation, order, emission limitation,

[130] California Environmental Quality Act (CEQA). Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions.

[131] Tulare County General Plan 2030 Update Background Report (at Climate Action Team Report to Governor Schwarzenegger and the Legislature). 6-21 to 6-22.

emissions reduction measure, or market-based compliance mechanism adopted by the state board, pursuant to specified provisions of existing law. The bill also authorizes CARB to adopt a schedule of fees to be paid by regulated sources of GHG emissions. Because the bill requires CARB to establish emissions limits and other requirements, the violation of which would be a crime, this bill would create a state-mandated local program.

Under AB 32, by June 30, 2007, CARB was to identify a list of discrete early action GHG reductions that will be legally enforceable by 2010. By January 1, 2008, CARB was also to adopt regulations that will identify and require selected sectors to report their statewide GHG emissions. By January 1, 2011, CARB must adopt rules and regulations to achieve the maximum technologically feasible and cost-effective reductions in GHG reductions. CARB is authorized to enforce compliance with the program that it develops."[132]

Senate Bill 97

"Governor Schwarzenegger signed Senate Bill (SB) 97 (Sutton), a CEQA and GHG emission bill, into law on August 24, 2007. SB 97 requires the Governor's Office of Planning and Research (OPR) to prepare CEQA guidelines for the mitigation of GHG emissions, including, but not limited to, effects associated with transportation or energy consumption. OPR must prepare these guidelines and transmit them to the Resources Agency by July 1, 2009. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for greenhouse gas emissions. The Resources Agency must then certify and adopt the guidelines by January 1, 2010. OPR and the Resources Agency are required to periodically review the guidelines to incorporate new information or criteria adopted by CARB pursuant to the Global Warming Solutions Act, scheduled for 2012.

The OPR published a Technical Advisory in June of 2008 that is an "informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents" to serve in the interim until guidelines are established pursuant to SB 97 (OPR, 2008). This Advisory recommends that CEQA documents include quantification of estimated GHG emissions associated with a proposed project and that a determination of significance be made. With regard to significance the Advisory states that "lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a "significant impact", individual lead agencies may undertake a project-by-project analysis, consistent with the available guidance and current CEQA practice".[133]

The amendments required by SB 97 were adopted by the California Natural Resources Agency (CNRA) and became effective on March 18, 2010. In late 2018, the CNRA finalized amendments to the CEQA Guidelines, including changes to CEQA Guidelines Section 15064.4 (cited above), which addresses greenhouse gas analysis. These amendments became effective on December 28, 2018.[134]

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG emission reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.[135]

Executive Order B-30-15

On April 20, 2015 Governor Edmund (Jerry) Brown, Jr., 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

[132] Ibid. 6-22 to 6-23.

[133] Op. Cit. (at Technical Advisory – CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review). 6-26 to 6-27.

[134] Governor's Office of Planning and Research. CEQA and Climate Change. https://opr.ca.gov/ceqa/climate-change.html#:~:text=Those%20amendments%20became%20effective%20on,analysis%20of%20greenhouse%20gas%20emissions. Accessed October 2020.

[135] Senate Bill 375 (Steinberg). https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375. Accessed October 2020.

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˚C, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.[136]

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.[137, 138]

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 (Clean Energy and Pollution Reduction Act of 2015) 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 (The 100 Percent Clean Energy Act of 2018) was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.[139, 140, 141]

2019 Building Energy Efficiency Standards

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence, and climate change issues. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 standards are a major step toward meeting Zero Net Energy. Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards and nonresidential buildings will use about 30 percent less energy (due mainly to lighting upgrades). The most significant efficiency improvement to the residential Standards include the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. These new standards apply only to certain nonresidential building types, as specified in the requirements.[142]

California Air Resources Board Scoping Plan

"The CARB published a *Climate Change Scoping Plan* in December 2008 (CARB, 2008c) that outlines reduction measures to lower the state's GHG emissions to meet the 2020 limit. The *Scoping Plan* "proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save

[136] Office of Governor Edmun G. Brown Jr. https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html. Accessed October 2020.
[137] California Legislative Information. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32. Accessed October 2020.
[138] California Legislative Information. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB197. Accessed October 2020.
[139] California Legislative Information. http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110412_chaptered.html. Accessed October 2020.
[140] California Legislative Information. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed October 2020.
[141] California Legislative Information. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB100. Accessed October 2020.
[142] California Energy Commission. https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf. Accessed October 2020.

energy, create new jobs, and enhance public health". Key elements for reducing California's GHG emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation."[143]

California Air Pollution Control Officers Association

The California Association of Air Pollution Control Officers (CAPCOA) represents all thirty-five local air quality agencies throughout California. CAPCOA, which has been in existence since 1975, is dedicated to protecting the public health and providing clean air for all our residents and visitors to breathe, and initiated the Greenhouse Gas Reduction Exchange.[144]

"In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating GHG emissions under CEQA (CAPCOA, 2008). The CAPCOA white paper strategies are not guidelines and have not been adopted by any regulatory agency; rather, the paper is offered as a resource to assist lead agencies in considering climate change in environmental documents."[145, 146] In August 2010, CAPCOA issued a report as a tool to support local governments in the quantification of GHG emission reductions achieved through implementation of various GHG mitigation strategies. This paper was intended as a resource, not a guidance.[147]

"The Greenhouse Gas Reduction Exchange (GHG Rx) is a registry and information exchange for greenhouse gas emissions reduction credits designed specifically to benefit the state of California. The GHG Rx is a trusted source of locally generated credits from projects within California, and facilitates communication between those who create the credits, potential buyers, and funding organizations."[148] "[CAPCOA's GHG Rx] mission is to provide a trusted source of high quality California-based greenhouse gas credits to keep investments, jobs, and benefits in-state, through an Exchange with integrity, transparency, low transaction costs and exceptional customer service.[149]

Local

San Joaquin Valley Unified Air Pollution Control District (Air District or SJVAPCD)

"The San Joaquin Valley Air District is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies."[150] "The San Joaquin Valley Air Pollution Control District is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the San Joaquin Valley Air Basin portion of Kern."[151] The Air District has prepared its guidance document, "*Guidance for Assessing and Mitigating Air Quality Impacts*" (GAMAQI), to assist Lead Agencies in assessing project specific impact

[143] Tulare County General Plan 2030 Update Background Report (at Climate Change Scoping Plan). Pages 6-27 to 6-28.

[144] California Air Pollution Control Officers Association. Home page. http://www.capcoa.org/. Accessed October 2020.

[145] Tulare County General Plan 2030 Update Background Report (at California Air Pollution Control Officers Association) Page 6-28.

[146] CAPCOA'S white paper, "CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act", is available online at http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf.

[147] CAPCOA'S report, Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures", is available online at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

[148] California Air Pollution Control Officers Association. CAPCOA GHG Rx. http://www.capcoa.org/ghg-rx/. Accessed October 2020.

[149] CAPCOA. Greenhouse Gas Reduction Exchange (GHG Rx). http://www.ghgrx.org/. Accessed October 2020.

[150] San Joaquin Valley Air Pollution Control District. About the District. http://www.valleyair.org/General_info/aboutdist.htm#Mission. Accessed October 2020.

[151] Ibid.

on air quality and resulting from greenhouse gases.[152] The Air District's significance thresholds and guidance for evaluation are provided below.

"As presented in Figure 6 (Process of Determining Significance of Greenhouse Gas Emissions) [of the GAMAQI], the policy provides for a tiered approach in assessing significance of project specific GHG emission increases.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the Lead Agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the Lead Agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).
- Projects implementing BPS would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPS would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

The District guidance for development projects also relies on the use of BPS. For development projects, BPS includes project design elements, land use decisions, and technologies that reduce GHG emissions. Projects implementing any combination of BPS, and/or demonstrating a total 29 percent reduction in GHG emissions from business-as-usual (BAU), would be determined to have a less than cumulatively significant impact on global climate change." [153]

"On December 17, 2009, the District's Governing Board adopted the District Policy: *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* [GHG Policy]. The District's Governing Board also approved the guidance document: *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA* [GHG Guidance]. In support of the policy and guidance document, District staff prepared a staff report: *Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act*. These documents adopted in December of 2009 continue to be the relevant policies to address GHG emissions under CEQA. As these documents may be modified under a separate process, the latest versions should be referenced to determine the District's current guidance at the time of analyzing a particular project."[154, 155, 156]

The Air District's GHG Guidance states, "Projects implementing Best Performance Standards in accordance with this guidance would be determined to have a less than significant individual and cumulative impact on global climate change and would not require project specific quantification of GHG emissions. Projects exempt from the requirements of CEQA, and projects complying with an approved GHG emission reduction plan or mitigation program would also be determined to have a less than significant individual or cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and have a certified final CEQA document. Projects not implementing BPS would require quantification of project specific GHG emissions. To be determined to have a less than significant individual and cumulative impact on global climate changes, such projects must be determined to have reduced or mitigated GHG emissions by 29%, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Furthermore, quantification of GHG emissions would be expected for all projects for which the lead agency has determined that an Environmental Impact Report is required, regardless of whether the project incorporates Best Performance Standards." [157]

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[152] San Joaquin Valley Air Pollution Control District. GAMAQI. March 2015. Website: http://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf. Accessed October 2020.

[153] Ibid. GAMAQI. Section 8.9.1. Page 112.

[154] Ibid. Section 8.9. Page 110.

[155] San Joaquin Valley Air Pollution Control District. GHG Policy available at https://www.valleyair.org/Programs/CCAP/12-17-09/2%20CCAP%20-%20FINAL%20District%20Policy%20CEQA%20GHG%20-%20Dec%2017%202009.pdf. .

[156] Ibid.

[157] Ibid. Section 2. Page 4.

The Tulare County General Plan 2030 Update: Part I, Chapter 9 – Air Quality contains a number of policies that apply to projects within Tulare County that support GHG reduction efforts and which have potential relevance to the Project's CEQA review: *AQ-1.3 Cumulative Air Quality Impacts* wherein the County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts; *AQ-1.5 California Environmental Quality Act (CEQA) Compliance* wherein the County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible; *AQ-1.7 Support Statewide Climate Change Solutions* wherein the County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies, as appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies; and *AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan* wherein the County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions;

The Tulare County General Plan 2030 Update: Part I, Chapter 8 – Environmental Resources Management contains a number of policies that apply to projects within Tulare County that encourage energy conservation and thereby support the County's GHG reduction efforts and which have potential relevance to the Project's CEQA review: *ERM-4.1 Energy Conservation and Efficiency Measures* wherein the County shall encourage the use of solar and other energy conservation and efficiency features in new construction in accordance with State law; *ERM-4.2 Streetscape and Parking Area Improvements for Energy Conservation* wherein the County shall promote the planting and maintenance of shade trees along streets and within parking areas of new urban development to reduce radiation heating; *ERM-4.8 Energy Efficiency Standards* wherein the County shall encourage new development to incorporate energy efficiency and conservation measures that exceed State Title 24 standards.

The Tulare County General Plan 2030 Update: Part II, Chapter 3 – Foothill Growth Management Plan contains a number of policies that apply to projects within foothill communities in Tulare County that direct development to selected areas and thereby support GHG reduction efforts and which have potential relevance to the Project's CEQA review: *FGMP-8.16 Proximity to Transportation* whereby the County shall encourage the concentration of development along major travel routes to allow for future public transportation services and minimize travel distances to frequently used facilities; and *FGMP-8.17 Reduce Vehicle Emissions* whereby the County shall discourage the scattering of development throughout the foothills to reduce vehicular emissions by decreasing home to destination distances.

Three Rivers Community Plan Update[158]

The Three Rivers Community Plan Update contains policies that apply to projects within the community of Three Rivers that support the County's GHG reduction efforts: *Policy 4.1.11 Climate Action Plan (CAP)* which requires a 6% reduction of GHG emissions for development projects consisting of 50 or more dwelling units or equivalent travel demand for non-residential uses; and *Policy 6.2.2 (Link Commercial Development to Transportation Corridors)* which requires commercial development to locate in areas with adequate access to major transportation corridors.

Tulare County Climate Action Plan

"The County of Tulare (County) adopted the Tulare County Climate Action Plan (CAP) in August 2012. The CAP includes provisions for an update when the State of California Air Resources Board (CARB) adopts a Scoping Plan Update that provides post-2020 targets for the State and an updated strategy for achieving a 2030 target. Governor Brown signed Senate Bill (SB) 32 on September 8, 2016 which contains the new 2030 target. The CARB 2017 Scoping Plan Update for the Senate Bill (SB) 32 2030 targets was adopted by the CARB on December 14, 2017 which provided new emission inventories and a comprehensive strategy for achieving the 2030 target (CARB 2017a). With the adoption of the 2017 Scoping Plan, the County proceeded with the 2018 CAP Update that is provided in this document. The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The 2030 target requires the State to reduce emissions by 40 percent below 1990 levels from the 2017 Scoping Plan and County data. The CAP identifies the County's fair share of reductions required to maintain consistency with the State target."[159]

The CAP was updated in 2018 to include "… emission reduction targets for the years 2020 and 2030 to match AB 32 and SB 32 targets and General Plan buildout. The CAP addresses sources under the jurisdiction and influence of Tulare County. The target is

[158] Three Rivers Community Plan 2018 Update. http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/007Three%20Rivers/COMMUNITY%20PLAN%20GPA%2014-004%20THREE%20RIVERS.pdf.

[159] Ibid. 1.

based on forecasts of development activity from California DOF population projections. The mobile source reductions are based on the development being consistent with the goals, policies, and implementation measures in the General Plan, and the TCAG Blueprint Vision. The 2030 target uses the same approach as was used for the 2020 target."[160] The CAP states, "The 2018 CAP Update includes an additional method of determining project consistency with the CAP and 2030 targets. Projects subject to CEQA review could use a checklist containing design features and measures that are needed to determine consistency. Large projects (500-unit subdivisions and 100,000 square feet of retail or equivalent intensity for other uses) and new specific plans should provide a greenhouse gas analysis report quantifying GHG emissions to demonstrate that the project emissions are at least 31 percent below 2015 levels by 2030 or 9 percent below BAU emissions in 2030. These are the amounts currently required from development related sources to demonstrate consistency with SB 32 2030 targets. Smaller projects may also prepare a GHG analysis report if the checklist is not appropriate for a particular project or is deemed necessary by the project proponent or County staff. The GHG analysis should incorporate as many measures as possible from the CalEEMod mitigation component as described in Table 15 [of the 2018 CAP Update] and can take credit for 2017 Scoping Plan measures that have not been incorporated into CalEEMod but that will be adopted prior to 2030 such as 50 percent RPS."[161]

a) Less Than Significant Impact: The Air District's GHG Guidance for Land Use Agencies states that projects exempt from the requirements of CEQA and projects complying with an approved GHG emission reduction plan or mitigation program would also be determined to have a less than significant individual or cumulative impact. The GHG Guidance also states that GHG emission quantification is required for any project requiring the preparation of an Environmental Impact Report (EIR). The proposed Project is an allowed use by right under the Tulare County General Plan and the emissions associated with the proposed development has been adequately addressed in the EIR prepared for the Three Rivers Community Plan Update. As such, the proposed Project is not subject to further CEQA requirements; however, the County has determined that an EIR will be prepared. Therefore, the GHG emissions resulting from the proposed Project have been quantified for disclosure purposes consistent with Air District guidance.

"Project GHG emissions were quantified using CalEEMod, version 2016.3.2. Project construction generated GHG emissions were primarily calculated using CalEEMod model defaults for Tulare County and the Project site plans. Operational GHG emissions were calculated based on the Project site plans, the estimated weekend traffic trip generation rates from VRPA Technologies, Inc. (2020), and the CalEEMod default traffic trips for Tulare County for weekday traffic trips. The Project is anticipated to generate 860 additional one-way vehicle trips per day on Saturdays, 625 additional one-way vehicle trips per day on Sundays, and 858 additional one-way vehicle trips per day on weekdays. The traffic fleet mix defaults contained in the CalEEMod model are based on the average fleet mix of Tulare County."[162]

"Project GHG emissions were quantified for disclosure purposes. The Tulare County CAP does not require quantification of emissions for projects less intense than a 500-unit subdivision or 100,000 square feet of retail or equivalent intensity for other uses. The Proposed Project would include approximately 72,000 square feet of commercial hotel space, and this is less intense than the threshold requiring GHG emissions quantification. However, [pursuant to Air District guidance] the anticipated GHG emissions for the Project are quantified for disclosure purposes. The GHG emissions represent Project emissions prior to implementation of mitigation measures GHG-1 and GHG-2 (explained below), as the specific energy use offset from these measures cannot be determined until the scale and specifications of the renewable energy generation and electric vehicle (EV) charging are known.**"**[163]

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 3.2 [in the GHG Report, **Table GHG-3** in this Initial Study] illustrates the specific construction generated GHG emissions that would result from construction of the Project."[164]

Table GHG-3. Construction-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/Year)**
Year One Construction (2021)	420

[160] Op. Cit.
[161] Op. Cit. 73.
[162] ECORP. GHG Report. Page 37.
[163] Ibid.
[164] Op. Cit. 38.

Year Two Construction (2022)	126
Total Emissions	**546**
Source: GHG Report, Table 3-2, Page 38 (see Attachment "A") of this Initial Study.	

"As shown in Table 3.2 [in the GHG Report, **Table GHG-3** in this Initial Study], Project construction would result in the generation of approximately 546 metric tons of CO_2e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. The amortized construction emissions are added to the annual average operational emissions."[165]

Operations

"Operation 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 3-3 [in the GHG Report, **Table GHG-4** in this Initial Study]."[166]

Table GHG-4 Operational-Related GHG Emissions	
Emissions Source	**CO_2e (Metric Tons/Year)**
Construction Emissions (amortized over the 30-year life of the Project)	18
Area Source Emissions	0
Energy Source Emissions	295
Mobile Source Emissions	842
Solid Waste Emissions	31
Water Emissions	6
Total Emissions	1,175
Source: GHG Report, Table 3-3, Page 38 (see Attachment "A") of this document	

"As shown in Table 3.3 [in the GHG Report, **Table GHG-4** in this Initial Study], Project operations would result in the generation of approximately 1,175 metric tons of CO_2e annually."[167]

The proposed Project is an allowed use by right under the Tulare County General Plan and the emissions associated with the proposed development has been adequately addressed in the EIR Furthermore, as discussed in Item b) the proposed Project is consistent with the Tulare County CAP. Therefore, the proposed Project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. As such, the proposed Project would result in a less than significant impact to this resource.

b) Less Than Significant Impact: The Air District's GHG Guidance for Land Use Agencies states that projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions would be determined to have a less than significant individual and cumulative impact for GHG emissions. The proposed Project is consistent with the Tulare County General Plan and as discussed below, the proposed Project is consistent with Tulare County CAP.

"The Tulare County CAP (2018) is a strategic planning document that identifies sources of GHG emissions within the County, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic policies and actions to reduce emissions from the development project subject to CEQA. The GHG-reduction strategies in the Plan build key opportunities prioritized by County staff and members of the public.

To be consistent with the CAP, development projects less intense than a 500-unit subdivision or 100,000 square feet of retail or equivalent intensity for other uses can use the CAP consistency checklist. The checklist contains design features and measures that are used to determine consistency. The overarching CAP consistency requirements for all projects are outlined in Table 3-4 [in the GHG Report, **Table GHG-5** of this Initial Study]."[168]

[165] Op. Cit.
[166] Op. Cit.
[167] Op. Cit.
[168] Op. Cit. 38-39.

Table GHG-5. CEQA Project Requirements for Consistency with CAP	
Item	**Project Compliance?**
Project helps to meet the density goals from the Tulare Blueprint	Yes
Consistency with General Plan policies	Yes
Consistency with Rural Valley Land Plans or Foothill Growth Management Plan development criteria	Yes
Consistency with Urban Growth Boundary expansion criteria	Yes
Consistency for development within Rural Community Urban Development Boundaries (UDB) and Hamlet Development Boundaries HDB, and Legacy Development Boundaries (LDB)	Yes
Source: GHG Report, Table 3-4, Page 39 (see Attachment "A") of this document	

"The Project would comply with all applicable General Plan policies intended to reduce GHG emissions. The Project site in the community of Three Rivers and is covered by the Foothill Growth Management Plan of the 2030 General Plan (County of Tulare 2012). The Project would not conflict with the applicable policies of the Foothill Growth Management Plan. Furthermore, the Project would comply with the Land Use and Urban Policies of the 2030 General Plan. Finally, for the Project to be approved for development by the County of Tulare they would require the Project to meet the development requirements as they pertain to Rural Community Urban Development Boundaries and/or Hamlet Development Boundaries. The Project site is located within the Three Rivers Urban Development Boundary depicted within the 2030 General Plan. In addition, the Project is consistent with the 2009 Tulare County Regional Blueprint goals and objectives.

Furthermore, both the existing and the projected GHG inventories in the CAP were derived based on the land use designations and associated densities defined in the County's General Plan. The Proposed Project is consistent with the land use designation and development density presented in the General Plan. As previously stated, the Project site is designated by the 2030 General Plan as Urban Development Boundaries (zoned for commercial use). Since the Project is consistent with the General Plan, it is consistent with the urban development types, intensity, and patterns of land use envisioned for the site vicinity in the General Plan. As a result, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by the County to develop the CAP.

A more detailed review for compliance with CAP measures is required to ensure that a project is doing its part in reducing emissions. Table 3-5 [in the GHG Report, **Table GHG-6** of this Initial Study] provides a checklist containing all applicable measures that will provide reductions necessary to achieve CAP consistency."[169]

Table GHG-6. CAP Consistency Checklist (Applicable to the Project)		
CAP Measure	**Compliance**	**Project Compliant Prior to Mitigation**
Land Use: Project is consistent with the Tulare County General Plan policies listed in the CAP applicable to GHG emissions and sustainability.	Review for compliance during project review process.	Yes
Energy Efficiency: Project complies with current version of Title 24	Provide copy of the Title 24 Report demonstrating compliance with the applicable standards with Building Permit application.	Yes
Renewable Energy: Project includes solar panels or other alternative energy source meeting County Solar Ordinance or new Title 24 standards whichever is more stringent.	Include solar on building plans and provide Title 24 compliance reports with Building Permit applications.	No
EV Charging: Project meets charging installation/charging ready requirements of the CalGreen Code.	Include charging in building plans.	No
CalGreen Building Code Water: Project complies with indoor and outdoor water conservation measures.	Provide copy of report showing code compliance.	Yes
Water Conservation Landscaping:	Project complies with County water conservation ordinance requirements for landscaping.	Yes
Source: GHG Report, Table 3-5, Page 40 (see Attachment "A") of this document		

"As shown in Table 3-4 [in the GHG Report, **Table GHG-5** of this Initial Study], the Project is consistent with the applicable General Plan Policies. In addition, the Project is required by California state law to meet the Title 24 energy efficiency requirements, comply with the CALGreen Building Water Code (California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations), and meet the California Model Water Efficient Landscape Ordinance (MWELO) requirements. Furthermore, the County mandates that applicable codified County standards are met by the Project and will

[169] Op. Cit. 39

enforce the implementation of these standards as a condition of approval. During the design review process, the County will mandate that the Project not only meets state MWELO standards, but complies with the specific requirements of the County water conservation ordinance requirements for landscaping. The County will also review the trash enclosure design to ensure solid waste pick-up is feasible and will ensure the Project meets the CalRecycle requirements. Further, the County must verify the Project is consistent with the General Plan policies, and the County requires all feasible GHG-reducing strategies of the CAP are incorporated into projects and their permits through development review and application of conditions of approval as applicable.

As shown in Table 3-5 [in the GHG Report, **Table GHG-6** of this Initial Study], the Project Preliminary Concept Design does not specify that the Project design includes EV charging and a renewable energy source. As such, mitigation measures GHG-1 and GHG-2 are required to for the Project to be consistent with the CAP. "[170]

"Mitigation Measures

GHG-1 The Project must provide an onsite renewable energy system(s). The Project shall include solar panels or other alternative energy source meeting the County Solar Ordinance or new Title 24 standards, whichever is more stringent. The onsite renewable energy system(s) must be installed as part of the construction process and be functional upon commencement of Project operation. The Project Proponent must include solar on building plans and provide Title 24 compliance reports with Building Permit applications to the County.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of Tulare Planning and Building Department*

GHG-2 The Project shall meet the charging installation/charging ready requirements of the CALGreen Code. The Project Proponent shall include EV charging accommodations as specified in the CALGreen Code in building plans for review and approval by the County, prior to commencement of Project construction.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of Tulare Planning and Building Department*

Following implementation of mitigation measures GHG-1 and GHG-2, the Project would be consistent with the Tulare County CAP for the purpose of meeting 2030 GHG emission reduction targets in compliance with SB 32."[171]

The proposed Project is consistent with the Tulare County General Plan and the Three Rivers Community Plan. With the implementation of mitigation measures GHG-1 and GHG-2 the proposed is consistent with the requirements of the Tulare County CAP. Therefore, the proposed Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. As such, the proposed Project would result in a less than significant impact to this resource.

Cumulative Impact: Project-related GHG emissions would be considered to have a significant cumulative impact if project-specific impacts are determined to be significant. As previously noted, the proposed Project is required to comply with the Tulare County General Plan, Three Rivers Community Plan, and Tulare County CAP and is therefore, consistent with the reduction targets for years 2020 and 2030. As the proposed Project would result in Less Than Significant Project-specific Impacts, Less Than Significant Cumulative Impacts would also occur.

9.	**HAZARDS AND HAZARDOUS MATERIALS:**					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

[170] Op. Cit. 40.

[171] Op. Cit. 40-41.

	b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
	c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
	d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
	e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
	f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evaluation plan?	☐	☐	☐	☒
	g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Analysis:

Environmental Setting

The proposed Project is a 3-story hotel which will consist of 105 guest rooms with an elevator, managers office, meeting room, in-house food preparation and breakfast area, and other typical hotel facilities (such as in-house and guest laundry, fitness center, various storage closets, etc.) and outdoor swimming pool/cabana building. Consistent with Tulare County parking requirements, the proposed Project includes 108 standard parking stalls (6 of which will be handicap stalls). Utilities include a septic tank with filter and dripline system and new domestic well, and storm drainage will be retained on-site (with an option for biofiltration). The proposed Project is anticipated to have 12 employees, 70 customers, 1 delivery, and 1 shipment per day, for a total of 168 daily vehicle trips.

The proposed Project site is located in unincorporated community of Three Rivers in Tulare County (County), California, approximately thirty miles east of Visalia, the County Seat. The nearest city is Woodlake located approximately 15 miles west of the Project site. The community is approximately five miles south of the entrance of Sequoia National Park. It lies in a natural valley area created by the convergence of the North, Middle, and South Forks of the Kaweah River near the western edge of the Sierra Nevada Mountains.[172] "The Project area is located in the Sierra foothills on the western slope of the Sierra Nevada range at elevations between 700 and 3,000 feet. Geophysical factors including elevation, slope, hydrogeology and climate… This area is typified by undulating terrain that varies from relatively flat riparian valleys immediately adjacent to the North, South, and Middle Forks of the Kaweah River…Elevations along the State Highway 198 corridor range from approximately 772 feet at Lake Kaweah to a high elevation of 2400 feet east of the entrance to the Sequoia National Park."[173]

"The mild climate in Three Rivers is generally characterized as Mediterranean. The area tends to be clear, sunny, warm, dry and free of fog. The mean temperatures range from a low of 35° F in January to a high of 95° F in July. The average yearly rainfall for

[172] Tulare County. Three Rivers Community Plan 2018 Update. Draft Environmental Impact Report. Page. 3.8-2.
[173] Ibid.

the area is approximately 18 inches with 90 percent of the precipitation falling between the months of November and April. The winds in the area are considered light, moving up the canyons in the mornings and down the canyons in the evening."[174]

The nearest airport, Woodlake Airport (City of Woodlake) is approximately 16 miles west of the proposed Project site. Solid waste collection in the Three Rivers area is provided by Mid Valley Disposal (the current solid waste hauler) which has a license with the County of Tulare. Solid waste generated in Three Rivers is disposed of at Visalia Landfill (which is operated by the Tulare County Solid Waste Department and is located at 22466 Road 80, near Visalia).

Hazardous Waste Shipments Originating Within Tulare County

"A hazardous material is defined by the California Code of Regulations (CCR) as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10)."[175]

Similarly, hazardous wastes are defined as "[m]aterials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. According to Title 22 of the CCR, hazardous materials and hazardous wastes are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3)."[176]

In 2017 (most recent year of data), the California Department of Toxic Substances Control (DTSC) Hazardous Waste Tracking System (HWTS) manifest data reports that approximately 1.494 tons of hazardous waste was transported from all categories of generators in Three Rivers; versus 2,314.42 tons in 2016 (an anomalous year where 2,309.58 tons of the total tonnage were attributed to clean-up of a contaminated soils site).[177]

The nearest elementary (Three Rivers Elementary School) is located in Three Rivers approximately 1.5 miles north of the Project site; while the nearest high school (Woodlake High School) is approximately 17 miles west of the Project site in the City of Woodlake.

Regulatory Setting

Federal

"The Hazardous Material Transportation Act (HMTA) was published in 1975. Its primary objective is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous material in commerce by improving the regulatory and enforcement authority of the Secretary of Transportation. A hazardous material, as defined by the Secretary of Transportation is, any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property."[178]

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

"CERCLA, commonly referred to as Superfund, was enacted on December 11, 1980. The purpose of CERCLA was to provide authorities with the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no responsible party could be identified. Additionally, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases

[174] Tulare County. Three Rivers Community Plan 2018 Update. Page 73.

[175] Tulare County. Tulare County General Plan 2030 Update. Background Report 2010/ Page 8-26. Accessed October 2020 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf.

[176] Ibid.

[177] DTSC, 2017 and 2016; accessed October 2020 at: https://hwts.dtsc.ca.gov/hwts_Reports/ReportPages/Report07.aspx?year=2017&NbrRecs=All&sort=WASTE_STATE_CODE&city=THREE%20RIVERS&county=NULL&cupa=NULL and http://hwts.dtsc.ca.gov/hwts_Reports/ReportPages/Report07.aspx?year=2016&NbrRecs=All&sort=TOTAL_TONS&city=THREE%20RIVERS&county=NULL&cupa=NULL; respectively.

[178] U.S. EPA. Hazardous Materials Transportation Act. Accessed October 2020 at: https://archive.epa.gov/emergencies/content/lawsregs/web/html/hmtaover.html#overview.

and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action."[179]

Superfund Amendments and Reauthorization Act (SARA)

"SARA amended CERCLA on October 17, 1986. This amendment increased the size of the Hazardous Response Trust Fund to $8.5 billion, expanded EPA's response authority, strengthened enforcement activities at Superfund sites; and broadened the application of the law to include federal facilities. In addition, new provisions were added to the law that dealt with emergency planning and community right to know. SARA also required EPA to revise the Hazard Ranking System to ensure that the system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review for listing on the National Priorities List (NPL)."[180]

State

Hazardous Substance Account Act (1984), California Health and Safety Code Section 25300 et seq. (HSAA)

"This act, known as the California Superfund, has three purposes: 1) to respond to releases of hazardous substances; 2) to compensate for damages caused by such releases; and 3) to pay the states 10 percent share in CERCLA cleanups. Contaminated sites that fail to score above a certain threshold level in the EPA's ranking system may be placed on the California Superfund list of hazardous wastes requiring cleanup."[181]

California Environmental Protection Agency (CalEPA), Department of Toxic Substance Control (DTSC)

"Cal/EPA has regulatory responsibility under Title 22 of the California Code of Regulations (CCR) for administration of the state and federal Superfund programs for the management and cleanup of hazardous materials. The DTSC is responsible for regulating hazardous waste facilities and overseeing the cleanup of hazardous waste sites in California. The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement and Unified Program activities. HWMP maintains the EPA authorization to implement the [Resource Conservation and Recovery Act] RCRA program in California, and develops regulations, policies, guidance and technical assistance/ training to assure the safe storage, treatment, transportation and disposal of hazardous wastes. The State Regulatory Programs Division of DTSC oversees the technical implementation of the state's Unified Program, which is a consolidation of six environmental programs at the local level, and conducts triennial reviews of Unified Program agencies to ensure that their programs are consistent statewide and conform to standards."[182]

California Building Code

CCR Title 24 Chapter 7 (et al) Fire and Smoke Protection "…applies to building materials, systems and/or assemblies used in the exterior design and construction of new buildings located within a Wildland-Urban Interface Fire Area as defined in Section 702A. The purpose of this chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area to resist the intrusion of flames or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses."[183]

Local

Tulare County General Plan 2030 Update

[179] Tulare County. Tulare County General 2030 Update. Background Report. 2010. Page 8-27. http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf

[180] Ibid.

[181] Tulare County. 2010. General Plan Background Report. Pages 8-28 – 8-29. Accessed at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf

[182] Op. Cit. 8-29.

[183] California Code of Regulations. Title 24 Chapter 7 (et al) Fire and Smoke Protection accessed October 2020 at: https://up.codes/viewer/california/ca-building-code-2016/chapter/7A/sfm-materials-and-construction-methods-for-exterior-wildfire-exposure#:~:text=WILDLAND-URBAN%20INTERFACE%20FIRE%20AREA%20is%20a%20geographical%20area,to%20be%20at%20a%20significant%20risk%20from%20wildfires

The Tulare County General Plan 2030 Update (at Chapter 10 – Health and Safety)[184] contains the following goals and policies that relate to hazards and hazardous materials, and which have potential relevance to the Project's CEQA review: *HS-4.1 Hazardous Materials* wherein the County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan; *HS-4.2 Establishment of Procedures to Transport Hazardous Wastes* wherein the County shall continue to cooperate with the California Highway Patrol (CHP) to establish procedures for the movement of hazardous wastes and explosives within the County; *HS-4.3 Incompatible Land Uses* wherein the County shall prevent incompatible land uses near properties that produce or store hazardous waste; *HS-4.4 Contamination Prevention* wherein the County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination; *HS-6.1 New Building Fire Hazards* wherein the County shall ensure that all building permits in urban areas, as well as areas with potential for wildland fires, are reviewed by the County Fire Chief. The following minimum requirements should be met to review developments or uses within areas of varying fire hazards; *HS-6.2 Development in Fire Hazard Zones* wherein the County shall ensure that development in very high or high fire hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable State and County fire standards. *HS-6.4 Encourage Cluster Development* wherein the County shall encourage cluster developments in areas identified as subject to high or very high fire hazard, to provide for more localized and effective fire protection measures such as consolidations of fuel build-up abatement, firebreak maintenance, firefighting equipment access, and water service provision; *HS-6.6 Wildland Fire Management Plans* wherein the County shall require the development of wildland fire management plans for projects adjoining significant areas of open space that may have high fuel loads; and *HS-6.7 Water Supply Syste*m wherein the County shall require that water supply systems be adequate to serve the size and configuration of land developments, including satisfying fire flow requirements.

a) and b) Less Than Significant Impact: The proposed 3-story hotel which will consist of 105 guest rooms with an elevator, managers office, meeting room, in-house food preparation and breakfast area, and other typical hotel facilities (such as in-house and guest laundry, fitness center, various storage closets, etc.), 108 standard parking stalls (6 of which will be handicap stalls) and utilities including a septic tank with filter and dripline system and new domestic well. Storm water drainage will be retained on-site (with an option for biofiltration). Proposed Project construction will not likely require the transport and use of small quantities of hazardous materials in the form of gasoline, diesel, and oil. Although there is the potential for small leaks due to refueling of the construction equipment if refueling were to occur on -site, standard construction Best Management Practices (BMPs) included in the SWPPP will reduce the potential for accidental release of construction-related fuels and other hazardous materials. These BMPs will prevent, minimize, or remedy storm water contamination from spills or leaks, control the amount of runoff from the site, and require proper disposal or recycling of hazardous materials.

Proposed Project operations will not require the storage of hazardous materials, such as fuel and lubricants. It is likely the proposed Project will use and store typical housekeeping products such as drain cleaners, spot remover, disinfectants, etc. The storage, transport, and use of these materials will comply with Local, State, and Federal regulatory requirements.

Therefore, the proposed Project will not result in a significant hazard to the public or the environment and impacts will be less than significant.

c) No Impact: The nearest school, Three Rivers Elementary School, is approximately 1.5 miles north of the proposed Project site. As described earlier, the Project involves construction of hotel as the main structure, parking, access/egress driveway, etc. and will not emit hazardous emissions, involve hazardous materials, or create a hazard to the school. There will be no impact.

d) No Impact: According to the State of California Department of Toxic Substances Control (DTSC) – Envirostor Search, no hazardous materials sites exist within an approximate two-mile radius of the proposed Project site.[185] The proposed Project site is not listed as hazardous materials sites pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control per a review of "Identified Hazardous Waste Sites" (conducted October 2020), by RMA staff. Therefore, as the proposed Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 it would not create a significant hazard to the public or the environment

e) No Impact: The nearest airport, Woodlake Airport, is approximately sixteen miles west of the proposed Project site; The non-operational Three Rivers airport is located approximately two miles north of the proposed Project site. There are no private airports within the Project vicinity. The proposed Project will not conflict with Tulare County Airport Land Use Plan (ALUP)

[184] Tulare County. Tulare County General Plan 2030 Update. Chapter 10 Health and Safety Element (which can be found on PDF page 251). Accessed October 2020 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf.

[185] California Dept. of Toxic and Substances Control Accessed October 2020 at: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Tulare+County%2C+CA.

policy and it is not within any airport's safety zone. The proposed Project will not result in a safety hazard for people working in the area. As such, the Project would result in no impact to this resource.

f) **No Impact:** The proposed Project includes an access/egress driveway to SR 198, it does not have direct access/egress to SR 198. As such, it would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evaluation plan. Therefore, the proposed Project will not interfere with implementation of an emergency response plan or evacuation.

g) **Less Than Significant Impact:** The proposed Project is located in an active area of wildland fire occurrence. Expansion of the proposed Project area may result in exposure of people or structures to an increased risk of loss, injury or death due to wildland fire events. The Tulare County 2030 General Plan Update includes Three Rivers within a "very high" fire threat area containing fire hazards based on fuels, terrain, weather, and other relevant factors.[186] As noted in the environmental impact report prepared for the Three Rivers Community Plan, "The County of Tulare and the State of California maintain policies and regulations that seek to minimize the exposure of foothill communities and mountain service centers to wildfire events. In geographical terms, the Three Rivers UDB largely falls into CalFire's State Responsibility Area (SRA). CalFire oversight of at-risk locales, such as foothill communities, includes programs and regimens of wildland fire engineering, vegetation management programs, risk analysis, education, enforcement, and land use planning to the end of diminishing and ameliorating the risk posed by wildland fire."[187] The proposed Project will not contain any housing or buildings where workers will reside or be stationed that will be at risk of fire. As a hotel, the primary occupants will be employees and transient visitors/guests. In the event of fire threat, because of its proximity to SR 198, these persons can readily access SR 198 to evacuate if necessary. Also, complying with Calfire and Tulare County fire code standards (e.g., fire resistant materials, sprinkler system, fireflow, fire hydrants, access (for firefighting or other first responder apparatus), etc.) would ensure that the proposed Project will be constructed to maximize protection from wildfire. As such, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires and would result in a less than significant impact to this resource.

Cumulative Impact: As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

10.	**HYDROLOGY AND WATER QUALITY**					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
	b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
	c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☐	☒
	i)	Result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒

[186] Tulare County General Plan 2030 Update.2012. Figure 10-2 http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

[187] Three Rivers Community Plan Draft Environmental Impact Report. Page 3.8-19.

	ii)	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☐	☐	☒
	iii)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
	iv)	Impede or redirect flood flows?	☐	☐	☐	☒
	d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
	e)	Conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Analysis:

The proposed Project will result in Less Than Significant Impacts to the Hydrology and Water Quality Resource. *The "Hampton Inn & Suites Report of Waste Discharge Technical Report Wastewater Treatment System for the Proposed Hampton Inn & Suites 40758 Sierra Drive, Three Rivers, California."* (Waste Discharge Technical Report) prepared by qualified experts Ald General Engineering, Inc. and the *"Abbreviated Water Supply Evaluation to support the Three Rivers Community Plan EIR Memorandum"* (contained in the Three Rivers Community Plan 2018 Draft EIR. Appendix "G".) prepared by qualified experts Tully & Young, Inc., which are included in Attachment "D" of this Initial Study. The Waste Discharge Technical Report and Water Supply Evaluation Memorandum are used as the basis for determining that, based on the evidence/documentation and the expertise of qualified consultants, the proposed Project will result in a less than significant impact.

Environmental Setting

The Three Rivers study area is located in the Southern Sierra Nevada Mountains within the Southern Sierra Integrated Regional Water Management Plan (SSIRWMP) area (Please see figure 3.9-1 [of the Draft EIR]). A 2014 SSIRWMP Final Report summarizes the regional hydrological picture by stating:

"The Southern Sierra Region covers approximately 6,195 square miles (3,964,800 acres) and includes the foothills and mountain regions of the Kern, Poso, White, Tule, Kaweah, Kings and San Joaquin River watersheds. These watersheds cover the Sierra Nevada portion of Fresno and Tulare counties and a portion of Madera County. The Region is considered appropriate as a RWMG since it has a strong hydrologic basis with borders based on watershed boundaries and the Sierra Nevada crest. The area covered by the Southern Sierra RWMG is coterminous with the area covered by [the] IRWMP."[188] However, as noted in the SSIRWMP, "Most of the local water users rely on hard rock (typically granitic) wells that have limited ability to hold and transmit groundwater, and typically have low yields. The water budget is not well understood in most of the region."[189]

"Nine watersheds have been identified within the Kaweah River watershed, and these are designated as local watersheds… Land ownership in the local watersheds is 54 percent government owned and 46 percent privately owned. There are 2,118 private parcels within the study area, with 80 percent being less than 10 acres. Most of the smaller parcels are located next to the Kaweah River and its tributaries."[190]

"Two types of aquifers are present: a small, shallow alluvial aquifer along the river bottom and a fractured bedrock aquifer. The rock fracture aquifer consists of an intersecting network of planar breaks in the rock, which in some cases extend for miles and cross watershed boundaries. In the Three Rivers area, the fractures cut across differing geologic units of granitic and metamorphic rock, resulting in a sporadic adverse effect on water quality. Water wells provide nearly all of the drinking water, with surface water and springs providing the remainder. Well yields varied from a low of less than 2 gallons per minute (8 percent of the wells) to more

[188] Tulare County. Three Rivers Community Plan 2018 Update. Draft Environmental Impact Report (Draft EIR) *Southern Sierra Integrated Regional Water Management Plan.* 2014. Page ES-2. Prepared by Provost and Pritchard. Included in Appendix "G" of the Draft EIR.

[189] Ibid.

[190] California Department of Water Resources. *Geology, Hydrology, Quality of Water, and Water Supply of the Three Rivers Area, California.* 2016. Page 1. Included in Appendix "G" of the Draft EIR.

than 100 gallons per minute; 50 percent of the wells had yields greater than 15 gallons per minute. One-third of the wells are less than 100 feet deep. Shallow, low-yielding wells have a greater potential for failure in a drought."[191]

"Groundwater in wells is a blend of high-quality surface water and variable-quality groundwater flowing through rock fractures. Water quality varies from high-quality water with a very low mineral content to a few wells containing notably elevated dissolved minerals, such as sulfur or hydrogen sulfide. Groundwater with high levels of these dissolved minerals is related to the underlying bedrock type of the well, typically metamorphic rock."[192]

Watershed (Surface Water)

As summarized in the Draft EIR for the Three Rivers Community Plan 2018 Update for surface water, " The study area is located within the watershed of the Upper Kaweah River which consists of 359,000 acres or 561 square miles of land. The Kaweah River watershed study area consists of two parts: the upper Kaweah River watershed, and the smaller local watersheds of the Kaweah River which surround Three Rivers (Figure 4). For the upper Kaweah River watershed, information collected for this report consisted of available data regarding water systems which provide public drinking water supplies for various parts of Sequoia National Park. The data included: number of water systems and their locations, sources of water to the various systems, types of water sources, and water quality and water chemistry data. For the smaller, local watersheds, the information collected included water system and water quality information; climate data, climate change, river hydrology, geologic setting, population and demographics, land use, land ownership, parcel size, and information contained on well logs. The smaller, local watersheds consist of those which provide drinking water supplies to the Three Rivers community, referred to as the nine local watersheds of the Three Rivers area. Together, the nine watersheds comprise the area within which most residential areas occur in the Kaweah River watershed and which provide most of the drinking water supplies for residences, motels and trailer parks, businesses, and public entities such as schools. The watersheds range in size from 6,000 to nearly 13,000 acres and in elevation from 700 feet to 9,250 feet mean sea level (msl)."[193]

Included in the Draft EIR are Table 3.9-1[194] which identifies the nine local watersheds of the Kaweah River tributaries, and Figure 3.9-1[195] [in the Draft EIR, **Figure HYD-1** in this Initial Study] showing the respective watersheds' locations. As shown in **Figure HYD-1**, the proposed Project site is within the Lake Kaweah watershed which receives waters from North, Middle, and East Forks of the Kaweah River; the North Fork Kaweah River is within the North Fork Kaweah River, Lower North Fork Kaweah River watersheds; the Middle Fork Kaweah River is within the Marble Fork Kaweah River, North Side Lake Kaweah, and Lake Kaweah watersheds and; East Fork Kaweah River is within the East Fork Kaweah River and Lower East Fork Kaweah River watersheds. As such, the proposed Project's potential water usage would be supplied by 7 of the 9 watersheds shown in **Figure HYD-1** and all but the South Fork Kaweah River tributary to the Kaweah River. Combined, these tributaries consist of 67,789 acres of the estimated 82,636 acres within nine local watershed of the Three Rivers planning area.[196]

Surface Water Quality

As summarized in the Draft EIR for the Three Rivers Community Plan 2018 Update for surface water quality, "Streams flowing through the upper Kaweah River watershed drain the western slopes of the Sierra Nevada. The dominance of granitic rock and the undeveloped and protected portions of the watershed in the Sequoia National Park results in good quality surface water. Information collected regarding surface water quality of the Kaweah River comes from water sampling from public drinking water supplies. The SWRCB, Drinking Water Program has required the periodic sampling and analytical testing of water from public drinking water supplies. This has included: groundwater from wells, groundwater from springs, groundwater under the influence of surface water from radial wells with radials extending underneath the river, and surface water from intakes on the river."[197]

[191] Ibid.

[192] Ibid.

[193] Tulare County. Three Rivers Community Plan 2018 Update Draft EIR. Page 3.9-4.

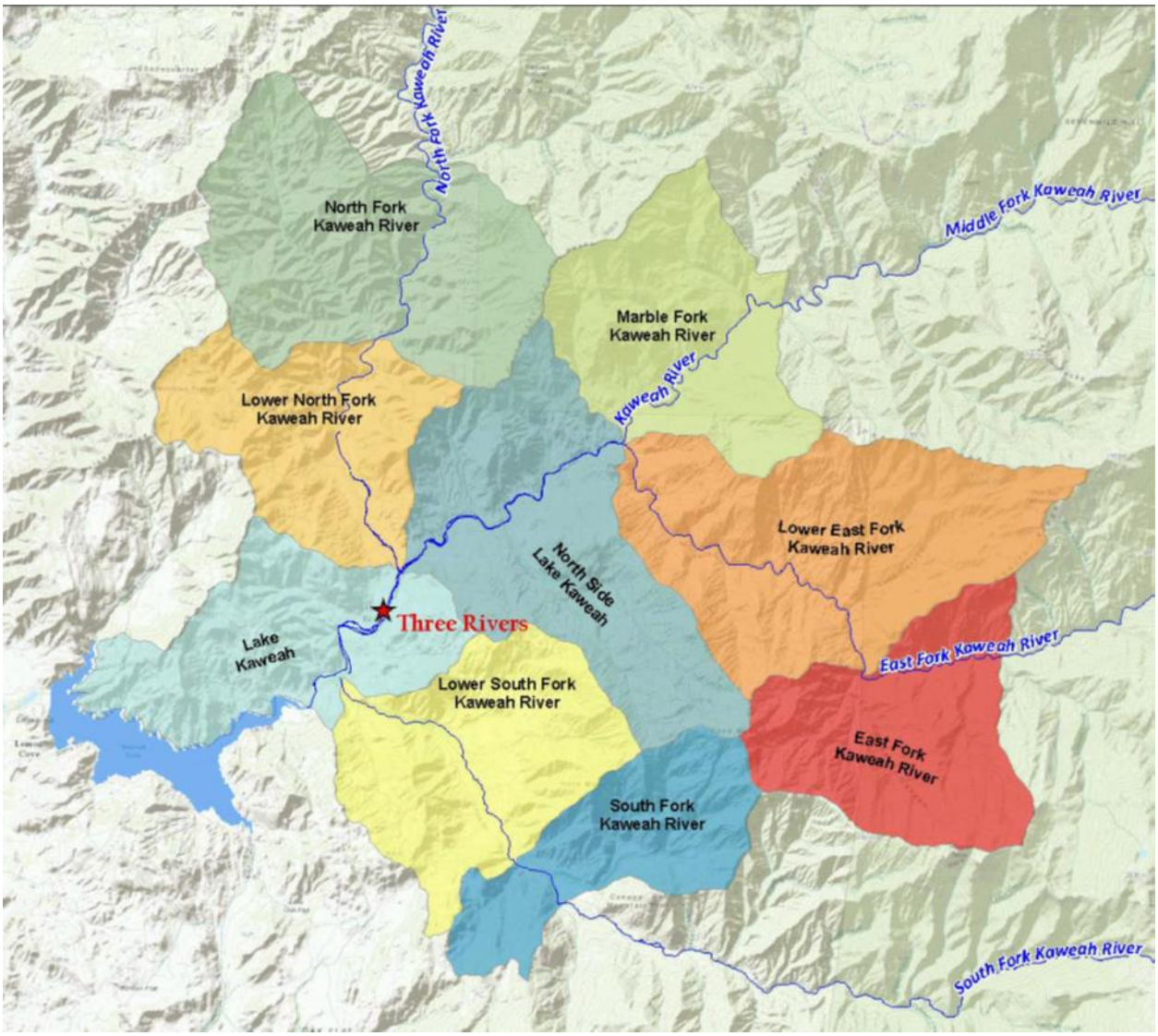
[194] Ibid.

[195] Op. Cit. 3.9-5.

[196] Op. Cit. 3.9-4. Table 3.9-4 Nine Local Watersheds. The 67,789 acres results from subtracting the 14,847 acres of the South Fork tributary from the total 82,636 acres shown in Table 3.9- of the Draft EIR.

[197] Op. Cit. 3.9-5. – 3.9-6.

Figure HYD 1
Nine Local Watersheds[198]



Surface Water Supply

"There are 23 public drinking water systems in the watersheds of the Three Rivers area. Five of these systems utilize surface water. The State Water Resources Control Board (SWRCB) required sampling of the public water supplies includes analytical tests from 1974 through 2014, the last date for which data was searched. The number and type of tests that were performed varied significantly from system to system and from year to year. The possible analyses included Title 22 organics, general mineral, general physical, nitrate, and, radiological constituents such as uranium, radium, and gross alpha. Test results are provided in Appendix A of the 2016 DWR Preliminary Report on Geology, Hydrology, Quality of Water, and Water Supply of the Three Rivers Area, California. A review of the results show that no sample tests exceeded primary drinking water standards. A single sample exceeded the secondary drinking water standard for manganese. The standard is 50 mg/L and test results showed 81 mg/L. Manganese may cause staining in clothing and other materials. As might be expected, the Kaweah River through Three Rivers provides high quality surface." [199]

[198] Op. Cit. 3.9-4.
[199] Op. Cit. 3.9-6.

Watershed (Groundwater)

As summarized in the Draft EIR for the Three Rivers Community Plan 2018 Update for groundwater, "Precipitation from Pacific storms or from summer orographic storms in the watershed either evaporates, occurs as runoff to the Kaweah River as described above, or infiltrates the ground surface into an underlying network of rock fractures. Groundwater occurs both in the fractured bedrock and in unconsolidated river bottom sediments of the Kaweah River. Groundwater flow is generally to the southwest, from areas of recharge in the mountains and along the Kaweah River to areas of discharge."[200]

Alluvial Aquifer

"Riverbed sediments and shallow decomposed granite have formed an alluvial aquifer in a narrow band along the Kaweah River. It has an observable width of a few tens of feet to a few hundred feet. It also has a variable thickness. It is thinnest where the river is steep and cascading down resistant bedrock. It is thickest where the stream gradient gentles and widens along straight stretches between river bends. There are one or more radial (wagon wheel) wells located adjacent to the river with shallow radials that extend under the river bed, capturing poorly filtered water."[201]

Bedrock Aquifer

"Crystalline bedrock is nearly impermeable; movement of water through the rocks is completely dependent on the presence of fractures in the rock. Groundwater percolates downward through soil and weathered rock into the fractured bedrock. The thin soil mantle which overlies the bedrock is large or extensive, and by itself, the soil layer does not yield significant quantities of water to wells. But the layer does aid in recharge by providing temporary storage of precipitation. Moisture in seasonally saturated soil migrates into rock fractures and then into the bedrock aquifer."[202]

Groundwater Quality

"The primary source of water for both individual systems and for private water systems classified as public drinking water supplies is groundwater from water wells drilled in fractured bedrock. For public drinking water systems, water from wells comprise 81% of the sources, springs comprise 3% of the sources, and surface water sources comprise 16% of the total. Stated another way, the sampled sources for the 23 water systems consist of 30 active and inactive wells, one spring, and six surface water intakes from the Kaweah River or treatment units for the surface water intakes...Test results of these 23 private water systems are provided in Appendix A of the 2016 DWR Preliminary Report on Geology, Hydrology, Quality of Water, and Water Supply of the Three Rivers Area, California. A review of the results show that two of the water systems had primary drinking water standard exceedances for arsenic and three water systems had exceedances for uranium and gross alpha. These exceedances may be due to the wells drawing water from fractured granitic bedrock. It is not uncommon for wells completed in granite to experience problems from these constituents. In addition, two water systems had periodic exceedances for nitrate. There were very few secondary drinking water standards exceedances. Three water systems had samples with exceedances for manganese, two with color standard exceedances, and a single water system with exceedances for iron." [203]

Groundwater Quality Information from Well Logs

"The well log review of the 486 well logs identified in the Three Rivers area showed that for ten of the well logs the well driller noted an issue with water quality. The comments made note of either high salt, "water very salty", hydrogen sulfide, sulfur water, or "considerable hydrogen sulfide and salt". The ten wells represent 2% of the well logs. The actual number of wells impacted by salt or sulfur is unknown but probably higher than that represented by notations on well logs. The wells are present at locations along the main branch of the Kaweah River. There does not appear to be a pattern as to their occurrence. Plotting salt and/or sulfur well locations on the geologic map suggests that some of the wells may be correlated with an underlying bedrock of limestone or metamorphic rock. Other wells do not appear to have a correlation with rock type. In other regions of the Sierra Nevada, salt, sulfur, and high temperature wells have been identified adjacent to ancient and inactive faults. The faults appear to act as conduits and source of origin of the poor quality water. It is not known if the wells are located on or adjacent to such a feature, but there are no known mapped faults present."[204]

[200] Op. Cit.3.9-6.
[201] Op. Cit.
[202] Op. Cit. 3.9-6 – 3.9-7.
[203] Op. Cit. 3.9-7.
[204] Op. Cit. 3.9-7 – 3.9-8.

Water Supply Evaluation, Three Rivers Community Plan EIR

The *"Abbreviated Water Supply Evaluation to support the Three Rivers Community Plan EIR Memorandum"* (Water Supply Memorandum or Memorandum)**,** prepared by qualified experts consultant Tully & Young, Inc., is a memorandum to support the CEQA analysis regarding the availability and sufficiency of water supplies to meet the forecast water demands allowed by the Three Rivers Community Plan. The Memorandum contains an analysis that estimate future water demands, water demands of existing users, factors affecting future water use, water conservation objectives, indoor infrastructure requirements, California Model Water Efficient Landscape Ordinance and County Ordinances, and importantly, a future water use forecast.[205] Further, the Memorandum also discusses water supply and reliability, groundwater and surface water supply characteristics, water supply availability, sufficiency of water supplies, and also provided Consultants determination of potential impacts as a result of the ultimate growth contemplated by the Three Rivers Community Plan.[206]

In summary, the Memorandum concludes that there is sufficient water supply to meet the approximately 940 acre-feet annually of future water demand at full build-out of the Three Rivers Community Plan, including residential, commercial, and industrial demand based on the estimated 50,000 acre-feet of annual average groundwater recharge in the watershed. As indicated in the Memorandum, "As presented in Section 2 [of the Memorandum], the future demand is anticipated to be approximately 940 acre-feet annually, which represents less than two percent of the over 50,000 acre-feet of average groundwater recharge in the watershed. On a watershed basis, there is and will continue to be sufficient water supplies recharging the fractured rock and alluvial aquifers to meet the forecast future demands. For purposes of this memo, all new water demands will be met by groundwater resources rather than surface rights."[207] The Memorandum also cautions, "However, the placement of individual wells could have an adverse impact on other local wells if not properly spaced or otherwise constructed to protect existing well operations. The County's General Plan includes specific policies to provide adequate protections so as to cause this potential impact to be less than significant, if any. Specific policies are discussed under Section 4.2. The County also maintains a well permitting process, allowing an assessment of the unique circumstances for each potential new well to assure setbacks from other wells and from septic systems are appropriate. The combination of the policies and permitting/approval procedures will assure that new wells will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level."[208]

Further, the Memorandum concludes that the Three Rivers Community Plan (that is, the ultimate full build-out as contemplated in the Plan), would result in less that significant impacts to water resources[209] and contains a listing of selected General Plan policies that will provide the assurances necessary to render the impacts to local water resources as less than significant.[210] It is noted that the listing provide in the Memorandum does not necessarily apply to a commercial project (for example, a residential development, connection to community water system, connection to a wastewater system, etc.). As discussed below, this Initial Study provides a listing of General Plan policies that may apply to the proposed Project that differs from the listing provided in the Memorandum.

Regulatory Framework

Federal

Clean Water Act

The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

[205] Tulare County. Three Rivers Community Plan 2018 Draft EIR. December 2017. *"Abbreviated Water Supply Evaluation to support the Three Rivers Community Plan EIR Memorandum"* Pages 4-10. Prepared by Tully & Young, Inc. (included in Appendix "G" of the Draft EIR) and included in Appendix "D" of this Initial Study.

[206] Ibid. 10-17.

[207] Op. Cit. 12.

[208] Op. Cit. 12.

[209] Op. Cit. 12-13.

[210] Op. Cit. 14-17.

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes.

State

State Water Resources Control Board

The State Water Resources Control Board (SWRCB), located in Sacramento, CA, is the agency with jurisdiction over water quality issues in the State of California. The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code) which establishes the legal framework for water quality control activities by the SWRCB. The intent of the Porter-Cologne Act is to regulate factors which may affect the quality of waters of the State to attain the highest quality which is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The proposed Project site is located within the Central Valley Region.

Regional Water Quality Board

The Central Valley Regional Water Quality Control Board (RWQCB) administers the NPDES storm water-permitting program in the Central Valley region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The plan will include specifications for Best Management Practices (BMPs) that will be implemented during proposed Project construction to control degradation of surface water by preventing the potential erosion of sediments or discharge of pollutants from the construction area. The General Construction Permit program was established by the RWQCB for the specific purpose of reducing impacts to surface waters that may occur due to construction activities. BMPs have been established by the RWQCB in the California Storm Water Best Management Practice Handbook (2003), and are recognized as effectively reducing degradation of surface waters to an acceptable level. Additionally, the SWPPP will describe measures to prevent or control runoff degradation after construction is complete, and identify a plan to inspect and maintain these facilities or project elements.

Local

Tulare County Land Development Regulations

The Tulare County Resource Management Agency (RMA) is responsible for review, approval, and enforcement of planning and land development throughout the unincorporated portions of Tulare County. County of Tulare regulations that direct planning and land development (and related water and wastewater utilities) include the Tulare County General Plan, Zoning Ordinance, Subdivision Ordinance, and CEQA procedures. These responsibilities are divided between Planning Branch, Public Works Branch, and other divisions or departments of RMA, and in coordination with the Environmental Health Division of the Tulare County Health and Human Services Agency, and the Tulare County Fire Department.

The County's flood damage prevention code is intended to promote public health, safety, and general welfare in addition to minimizing public and private losses due to flood conditions. The County code provisions to protect against flooding include requiring uses vulnerable to floods be protected against flood damage at the time of initial construction; controlling the alteration of natural flood plains; and preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. The County flood damage prevention code, most recently amended by Ord. No. 3212 and effective October 29, 1998, is modeled based upon FEMA guidance.

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: (Chapter 10 – Health and Safety and Chapter 11 – Water Resources) contains the following goals and policies that relate to hydrology and water quality and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review: *AG-1.17 Agricultural Water Resources* wherein the County shall seek to protect and enhance surface water and groundwater resources critical to agriculture; *HS-4.4 Contamination Prevention* wherein the County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination; *PFS-2.3 Well Testing* wherein the County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs; *PFS-2.5 New Systems or Individual Wells* where connection to a community water system is not feasible per PFS-

2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity; *PFS-3.1 Private Sewage Disposal Standards*: wherein the County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health; *PFS-3.5 Wastewater System Failures* wherein the County shall require landowners to repair failing septic tanks, leach field, and package systems that constitute a threat to water quality and public health or connect to an existing community system through applicable County and/or Regional Water Quality Control Board standards and requirements; *WR-1.1 Groundwater Withdrawal* wherein the County shall cooperate with water agencies and management agencies during land development processes to help promote an adequate, safe, and economically viable groundwater supply for existing and future development within the County. These actions shall be intended to help the County mitigate the potential impact on ground water resources identified during planning and approval processes; *WR-2.1 Protect Water Quality* wherein all major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. This policy requires the County to confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site; *WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement* wherein the County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board; *WR-2.3 Best Management Practices (BMPs)* wherein the County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board; *WR-2.4 Construction Site Sediment Control* wherein the County shall continue to enforce provisions to control erosion and sediment from construction sites and; *WR-3.5 Use of Native and Drought Tolerant Landscaping* wherein the County shall encourage the use of low water consuming, drought-tolerant and native landscaping and emphasize the importance of utilizing water conserving techniques, such as night watering, mulching, and drip irrigation.

a) Less Than Significant Impact: The State Water Resources Control Board requires any new construction project greater than one acre to complete a Stormwater Pollution Prevention Plan (SWPPP). A SWPPP would be prepared for the proposed Project by a qualified engineer or erosion control specialist as a condition of approval and would be submitted to the County for review and approval before being implemented during construction. The SWPPP would be designed to reduce potential impacts related to erosion and surface water quality during construction activities and throughout the life of the proposed Project. It would include proposed Project information and best management practices (BMP). The BMPs would include dewatering procedures, stormwater runoff quality control measures, concrete waste management, watering for dust control, and construction of perimeter silt fences, as needed. Implementation of the SWPPP will minimize the potential for the proposed Project to substantially alter the existing drainage pattern in a manner that will result in substantial erosion or siltation onsite or offsite. There will be no discharge to any surface or groundwater sources which may impact water quality standards. As such, the proposed Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, the proposed Project would result in a less than significant impact to this resource.

b) Less Than Significant Impact: The proposed Project site is located in the Kaweah Watershed. The Department of Water Resources (DWR) has estimated that the nine (9) watersheds within the Kaweah Watershed cover 82,636 acres. As noted earlier, combined, the tributaries supplying the Kaweah Watershed consists of 67,789 acres of the estimated 82,636 acres of the nine local watershed of the Three Rivers planning area. As noted earlier, the *"Abbreviated Water Supply Evaluation to support the Three Rivers Community Plan EIR Memorandum"* (Memorandum) concludes that there is sufficient water supply to meet the approximately 940 acre-feet annually of future water demand at full build-out of the Three Rivers Community Plan, including residential, commercial, and industrial demand of the estimated 50,000 acre-feet of annual average groundwater recharge in the watershed. The proposed Project applicant's engineer (Ald General Engineering) estimates that it will use approximately 15.37 acre feet of water per year (or approximately 5,009,625 gallons per year or 13,725 gallons per day[211]). Of the 940 acre-feet annual future water demand estimated in the Memorandum, the proposed Project would consume approximately 0.0163% of the 940 acre-feet (or about 0.0003%) of the estimated annual 50,000 acre-feet of the groundwater recharge in the watershed. It is noted that Ald General Engineering also provided as estimate for a parcel directly west of the proposed Project site of 3,450 gallons per day of water usage (or 1,259,250 gallons per year or 3.86 acre-feet per year). Combined, this would result in approximately 19.23 acre-feet per year (or approximately 0.0204%) of the estimate 940 acre-feet of annual future demand of the entire Three Rivers Community Plan planning area. As such, the proposed Project (including the potential project north of

[211] *"Hampton Inn & Suites Report of Waste Discharge Technical Report Wastewater Treatment System for the Proposed Hampton Inn & Suites 40758 Sierra Drive, Three Rivers, California*." (Waste Discharge Technical Report) September 2020. Page 4. Prepared by Ald General Engineering, Inc. and included in Attachment "D" of this Initial Study.

the proposed Project site) would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

c) Less Than Significant Impact: Overall, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces.

i) Erosion and Siltation; Less Than Significant Impact: The extent of potential erosion will vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. As noted in the Project Description (Attachment "D") the relatively flat nature of the site reduces the need for grading which would be limited to access roads, substation, inverter pads, and switchyard. Any soils removed from these areas would be redistributed around and retained elsewhere on the Project site (i.e., along solar panel support rack alignments).[212] The site is and will continue to have a relatively-flat topography after site construction. Also, as noted earlier, a SWPPP will be in place during construction, as described in Impact 10-a. Therefore, construction-related activities will minimally disturb the ground surface resulting in a less than significant impact from erosion and siltation.

ii) Runoff resulting in Flooding On- or Off-site; Less Than Significant Impact: The site will not resulting in waters capable of flooding either on- or off-site. The site is not subject to flooding and lies within Flood Zone X (area of minimal flooding) per the Federal Emergency Management Agency FIRM map.[213] Also, the site will not generate substantial amounts of runoff that would result in on- or off-site flooding due to the nature of the Project as a renewable energy producer (i.e., solar energy). The Project will avoid runoff type water from dust suppression activities and PV panel washing through implementation of conditions of approval and project design features. As such, the Project would result in a less than significant impact to or from this resource Item.

iii) Runoff affecting Drainage Systems and Polluted Runoff; No Impact. See Items 10 c) i) and ii) .Also, the Project will not connect to any existing or planned stormwater drainage system, as such it will not provide any additional sources of polluted runoff. As noted earlier, the very nature of the Project (as a renewable energy producer) does not lend itself as a contributor of polluted runoff. Therefore, the Project would result in no impact to this resource. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and as such, would result in no impact.

d) No Impact: The Project is not located on or near any areas that would result in or be impact by a flood hazard, tsunami, or seiche zones, that would result in a risk release of pollutants due to project inundation. As noted in Item 10 c) ii), the Project does not lie within an area nor is it subject not subject to flooding within Flood Zone X (area of minimal flooding) per the Federal Emergency Management Agency FIRM map; it is not exposed to or near any river, reservoirs, pond, or lake subject to seiches from earthquake activity; and it is greater than 100 miles east of the nearest coastline that would be subject to tsunami. Therefore, there would be no impact from potential inundation by the flood hazard, tsunami, or seiches.

e) No Impact: these Item 10 b); as such, the proposed Project would not conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan.

Cumulative Impact: As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

11.	**LAND USE AND PLANNING**					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Physically divide an established community?	☐	☐	☐	☒
	b)	Cause a significant environmental impact due to a conflict with any land use plan,	☐	☐	☐	☒

[212] Ibid.

[213] Federal Emergency Management Agency FIRM Panel 06107CL300E June 16, 2009. Accessed May 2019 at: maphttps://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-119.24027126756349,36.137670866489145,-119.15718716111826,36.17232174266695

		policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				

Analysis:

Environmental Setting

Tulare County is located in a geographically diverse region with the majestic peaks of the Sierra Nevada framing its eastern region, while its western portion includes the San Joaquin valley floor, a fertile area that is extensively cultivated. In addition to its agricultural production, the county's economic base also includes agricultural packing and shipping operations. Small and medium size manufacturing plants are located in the western part of the county and are increasing in number. Tulare County contains portions of Sequoia National Forest, Sequoia National Monument, Inyo National Forest, and Kings Canyon National Park. Sequoia National Park is entirely contained within the county.[214]

The County encompasses approximately 4,840 square miles of classified lands (lands with identified uses) and can be divided into three general topographical zones: valley region; foothill region east of the valley area; and mountain region just east of the foothills. The eastern half of the county is generally comprised of public lands, including the Mountain Home State Forest, Golden Trout Wilderness area, and portions of the Dome Land and south Sierra Wilderness areas.[215] Federal lands, which include wilderness, national forests, monuments and parks, and County parks, account for 52 percent of the County land. Agricultural uses, which include row crops, orchards, dairies, and grazing lands on the Valley floor and foothills account for 43 percent of the County land. Urban uses including incorporated cities, communities, hamlets, unincorporated urban uses, and infrastructure rights-of-way account for the remaining land in the County.[216]

Land use in Tulare County is predominately agriculture, and the County is committed to retaining the rich agricultural land. The foothill and mountain regions are controlled predominantly by the State and federal governments. However, as population increases, so does the demand for public services, including solid waste disposal. Agricultural land around the cities is being converted into urban uses. Housing, land, employment and economics are balanced to minimize the amount of agricultural land utilized for urban development. Economic principles tend to take precedence over the conservation of land.

As indicated in the 2018 Regional Transportation Plan & Sustainable Communities Strategy (RTP/SCS), Draft Environmental Impact Report (SCH #2012081070); "A vital input to the SCS development process was a credible forecast of population, housing and jobs. TCAG developed a new forecast for this RTP/SCS based on the most comprehensive and up-to-date regional forecasts and projections available. The growth forecast for the 2018 RTP/SCS incorporates substantial new data available from the 2010 Census and new projections published by the California Department of Finance, Demographic Research Office (DOF) in 2017. The growth forecast, based on the DOF projection, is much more restrained than in the previous 2014 RTP/SCS (see RTP Appendix F). The new demographic forecast is summarized in Table 3.0-5 [of the RTP/SCS], Tulare County Demographic Forecast The new 2017 DOF population projection for the year 2040 (594,348) is significantly lower than that of the 2013 DOF projection for the year 2040 (722,838) used for the 2014 RTP/SCS, a difference of 128,490 persons. This is due to lower birthrates consistent with the state as a whole and the fact that Tulare County is still experiencing negative net migration (-150 persons in 2015) as opposed to the peak (+4,473 persons in 2004), as a result of the Great Recession."[217]

Approximately 189,400 people were employed in Tulare County in September 2020. The unemployment rate in the Tulare County was 13.1 percent in August 2020, down from a revised 16.1 percent in July 2020, and above the year-ago estimate of 9.2 percent. This compares with an unadjusted unemployment rate of 11.6 percent for California and 8.5 percent for the nation during the same period.[218] The current COVID-19 crisis (2020) has resulted in fluctuating employment; however, this fluctuation is anomalous and anticipated to self-adjust over time.

[214] Tulare County. 2010. Tulare County General Plan 2030 Update Background Report. Page 1-2.

[215] Ibid. 1-4.

[216] Tulare County, 2012, page 4-3. Tulare County General Plan 2030 Update. http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

[217] RTP/SCS PEIR 2018. Pages 3.0-47 and -48. April 2018. Accessed October 2020 at: https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/rtp-20181/environmental-impact-report/

[218] California Employment Development Department. Labor Market Information 2019. Accessed October 2020 at: https://www.labormarketinfo.edd.ca.gov/file/lfmonth/visa$pds.pdf

As of January 1, 2020, population estimates produced annually by the Department of Finance calculated Tulare County with a population estimate of 479,977 residents[219]. The State Controller's Office uses Finance's estimates to update their population figures for distribution of state subventions to cities and counties, and to comply with various state codes. Additionally, estimates are used for research and planning purposes by federal, state, and local agencies, the academic community, and the private sector.

Community of Three Rivers

"Three Rivers is a diverse, rural community located in the western foothills of the Sierra Nevada Mountain Range in the unincorporated portion of Tulare County. It is situated approximately 52 miles southeast of Fresno in the north central area of Tulare County. Three Rivers is positioned adjacent to State Route 198, which connects it with Visalia, the County Seat, located 30 miles southwest of Three Rivers. The community is five miles south of the entrance to Sequoia National Park. It lies in a natural valley area created by the convergence of the North, Middle, East, and South Forks of the Kaweah River near the eastern edge of the Lake Kaweah "[220]

Three Rivers Urban Development Boundary

"The Urban Boundaries Element, first adopted in 1974, identified two types of boundaries: Urban Area Boundaries (UABs) and Urban Improvement Areas (UIAs). At the time of the Urban Boundaries Element adoption, the UIAs were defined as the twenty-year growth boundaries and the UABs were defined as the ultimate growth boundary for each city and community. In 1983, the Urban Boundaries Element was amended to replace the UIAs with UDBs, and to modify the UAB model to include a "comment" area around incorporated cities, keeping UABs as the next logical area for urban expansion. In addition, UABs were no longer established around unincorporated communities."[221]

"The UDB lines established a twenty-year growth boundary for unincorporated communities for which services will likely be extended to allow new urban growth. The County used population, existing County policies, and a development suitability analysis to determine the location and size of the community UDBs."[222]

"The Urban Boundaries Element directed that community plans be adopted for 22 unincorporated communities to guide future development within their community boundaries. Community Plans supplement County-wide General Plan policies. These plans have their own Land Use Diagrams and circulation plans, and include land use designations and development standards to guide area growth."[223] Three Rivers is among the communities with adopted community plans as of 2009.

The Three Rivers Community Plan (General Plan Amendment GPA 14-004) was adopted on June 26, 2018 via Tulare County Board of Supervisors Resolution No's. 2018-0481, 2018-0482, 2018-0483, and 2018-0484; Tulare County Planning Commission Recommendations: Resolution No's .9457, 9458, 9459, 9460, 9461, 9462, and 9463; Zoning District Map: PZC 17-048; and Section 18.9 Zoning Ordinance (Mixed Use): PZC 17-047. "All community plans, including this one, must address a range of diverse, sometimes divergent, public interests. They must do so within a consistent, well-integrated policy framework. A county utilizes broad discretion to weigh and balance competing interests in formulating community plan policies. In implementing those policies, it is the task of the Board of Supervisors, or its delegates, to make determinations in a manner that promotes the objectives and policies of all aspects of the community plan, and does not obstruct their attainment. Policy implementation may require reasonable and thoughtful consideration of a number of community plan policies. Such implementation decisions will be made on a case-by-case basis as the Board of Supervisors, Planning Commission, County staff, and others work to implement the entire community plan. When implementing the Community plan or reviewing projects or approvals for consistency with the Community plan, the County will need to balance numerous planning, environmental and policy considerations."[224]

[219] California Department of Finance. 2019 E-1 Population Estimates for Cities, Counties, and the State–January 1, 2018 and 2019. Accessed October 2020 at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/.

[220] Tulare County. Three Rivers Community Plan 2018 Update. Pages 23. Accessed October 2020 at: https://tularecounty.ca.gov/rma/index.cfm/planning-building/community-plans/updated-community-plans/three-rivers-community-plan-adopted-pdf/

[221] Tulare County. Tulare County General Plan 2030 Update. 2012. Page 2-4. http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

[222] Ibid.

[223] Op. Cit.

[224] Tulare County. Three Rivers Community Plan 2018 Update. Pages 44-45. Accessed October 2020 at: https://tularecounty.ca.gov/rma/index.cfm/planning-building/community-plans/updated-community-plans/three-rivers-community-plan-adopted-pdf/

Existing Land Uses

Project site is located in the unincorporated community of Three Rivers and is adjacent to an existing hotel along and east of SR 198/Sierra Drive. The County requires development within existing eligible State Scenic Highway corridors to adhere to land use and design standards and guidelines required by the State Scenic Highway Program. The immediate area surrounding the Project site is generally level; there are two nearby hills northeast and east of the site and numerous hills north and west the site (north and west of the Kaweah River). The Comfort Inn and Suites is located to the northeast, the Kaweah River is west of site (west of SR 198) and scattered development (i.e., two rural residences), undeveloped land to the southeast and, a rural residence and two large compressed natural gas tanks to the south.

Zoning and Land Use

The site is located within the Three Rivers Community planning area which designates the existing proposed Project area as C-2-MU-SC (General Commercial-Mixed Use-Scenic Corridor Combining Zone); as such, the proposed Project is an allowed use.

Regulatory Setting

Federal

Federal regulations for land use are not relevant to the Project because it is not a federal undertaking (the Project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State

The Project is being evaluated pursuant to CEQA; however, there are no state regulations, plans, programs, or guidelines associated with land use and planning that are applicable to the proposed Project.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update (Chapter 4 – Land Use, Chapter 8 – Environmental Resources Management and Part II Chapter 1 - Rural Valley Lands Plan) contains the following goals and policies that relate to land use and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review: *ED-3.1 Diverse Economic Base* wherein the County shall actively promote the development of a diversified economic base by continuing to promote agriculture, recreation services, and commerce, and by expanding its efforts to encourage industrial development including the development of energy resources; *ED-5.7 Foothills* wherein the County shall encourage additional recreational and visitor-serving development in the Sierra and foothills in areas such as Three Rivers and Springville; *ED-5.14 Interagency Cooperation* wherein the County shall cooperate with federal land management agencies to develop and promote Three Rivers and Springville as gateway communities; *ERM-2.9 Compatibility* wherein the County will encourage the development of mineral deposits in a manner compatible with surrounding land uses; *PF-1.1 Maintain Urban Edges* wherein the County shall strive to maintain distinct urban edges for all unincorporated communities within the valley region or foothill region, while creating a transition between urban uses and agriculture and open space; *PF-1.2 Location of Urban Development* wherein the County shall ensure that urban development only takes place in the following areas:

1. Within incorporated cities and CACUDBs;
2. Within the UDBs of adjacent cities in other counties, unincorporated communities, planned community areas, and HDBs of hamlets;
3. Within foothill development corridors as determined by procedures set forth in Foothill Growth Management Plan;
4. Within areas set aside for urban use in the Mountain Framework Plan and the mountain sub-area plans; and
5. Within other areas suited for non-agricultural development, as determined by the procedures set forth in the Rural Valley Lands Plan.

PF-1.3 Land Uses in UDBs/HDBs wherein the County shall encourage those types of urban land uses that benefit from urban services to develop within UDBs and HDBs. Permanent uses which do not benefit from urban services shall be discouraged within these areas. This shall not apply to agricultural or agricultural support uses, including the cultivation of land or other uses accessory to the cultivation of land provided that such accessory uses are time-limited through Special Use Permit procedures; *PF-1.4* Available Infrastructure wherein the County shall encourage urban development to locate in existing UDBs and HDBs where infrastructure is available or may be established in conjunction with development. The County shall ensure that development does not occur unless

adequate infrastructure is available, that sufficient water supplies are available or can be made available and that there are adequate provisions for long term management and maintenance of infrastructure and identified water supplies; *PF-2.1 Urban Development Boundaries – Communities* wherein the County shall limit urban development to the area within the designated UDB for each community; *PF-2.4 Community Plans* wherein the County shall ensure that community plans are prepared, updated, and maintained for each of the communities. These plans shall include the entire area within the community's UDB and shall address the community's short and long term ability to provide necessary urban services; *PF-2.7 Improvement Standards in Communities* wherein the County shall require development within the designated UDBs to meet an urban standard for improvements. Typical improvements shall include curbs, gutters, sidewalks, and community sewer and water systems; *PF-2.8 Inappropriate Land Use* wherein areas within UDBs are hereby set aside for those types of urban land uses which benefit from urban services. Permanent uses which do not benefit from such urban services shall be discouraged within the UDBs; *PF-3.4 Mixed Use Opportunities* wherein unless or until a traditional plan approach is requested by the hamlet and such a plan is adopted, land use designations within the HDB shall be the mixed use land use designations as provided in Chapter 4-Land Use that promotes the integration of a compatible mix of residential types and densities, commercial uses, public facilities and services, and employment opportunities; *LU-4.4 Travel-Oriented Tourist Commercial Uses* wherein the County shall require travel-oriented tourist commercial uses (for example, entertainment, commercial recreation, lodging, fuel) to be used in areas where traffic patterns are oriented to major arterials and highways. Exceptions may be granted for resort or retreat related developments that are sited based on unique natural features; *LU-7.15 Energy Conservation* wherein the County shall encourage the use of solar power and energy conservation building techniques in all new development AND; *LU-7.16 Water Conservation* wherein the County shall encourage the inclusion of "extra-ordinary" water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development.

Policy Relationship to the General Plan

"The Three Rivers Community Plan is a component in Part III of the Tulare County General Plan and, as such, has the same force and effect as any other adopted element of the General Plan. Structurally, the Three Rivers Community Plan is part of the Land Use and Circulation Element of the overall General Plan. The principal emphasis of the community plan is on establishing local land use and circulation system patterns and prescribing associated standards and policies. In addition to the specific prescriptions of the community plan, the broader policies and standards of the overall Land Use and Circulation Element apply to Three Rivers. Also applicable to Three Rivers, and governing all future development in the community, are the other elements (e.g. Planning Framework, Environmental Resources Management, Air Quality, Health and Safety, Transportation and Circulation, etc.) of the Tulare County General Plan. In instances where the policies and/or standards of the Three Rivers Community Plan are more specific or more restrictive than those in other elements of the General Plan, the community plan shall take precedence and prevail."[225]

"Another overall principle to guide the reading and interpreting of the Community plan and its policies is that none of its provisions will be interpreted by the County in a manner that violates State or Federal law. For example, PFS-1.3: Impact Mitigation (Tulare County General Plan Chapter 14), requires new development to pay for its proportionate share of the costs of infrastructure required to serve the project. This policy will be implemented subject to applicable legal standards, including but not limited to the U.S. Constitution's "Takings" clause. In reading every provision of the Community plan, one should infer that it is limited by the principle: "to the extent legally permitted."[226]

Three Rivers Community Plan

Following are goals, objective, policies within the Three Rivers Community Plan 2018 Update that apply to the proposed Project: Goal 1: Compatible Development: Maintain the Rural Gateway Character of Three Rivers through land uses and new development that are compatible and consistent with the existing development in Three Rivers, preserve the unique visual and community character and natural environment and create a distinct sense of place. *Objective 1.1 Development Compatibility*: Ensure compliance with the Community Plan to ensure compatibility between and within new and existing development. *Policies: 1.1.1 New Residential Development Compatibility* to ensure that new residential development is compatible with the character of the community through the enforcement of rural standards and guidelines; *1.1.2 Mixed Uses* to ensure that development to accommodate growth includes a balanced mix of residential, commercial and public uses that enhance the community's economic vitality while maintaining its rural character and quality of life; *1.1.3 Commercial Uses- Limiting Negative Impacts* to limit commercial or recreational uses that generate negative impacts, such as noise, lighting, traffic, odors and emissions in residential and rural residential neighborhoods; *1.1.4 Compatible Commercial Establishments* to encourage compatible commercial establishments necessary to serve residents and tourists that are commensurate with the scale and intensity of the community, preserve the environment, and which do not have to the extent feasible,

[225] Ibid. 209.
[226] Op. Cit.

significant traffic, light, noise or visual impacts to the community; *1.1.5 Cluster Commercial Uses* to cluster commercial uses in compact areas and development patterns to discourage strip development and encourage the development of a Town Center or Centers; *1.1.6 Land Use Protections* to protect land uses adjacent to SR 198 from noise impacts by requiring adequate landscape screening and buffering; *1.1.7 Buffers* to require adequate buffers (setback, side and rear yards, landscaping and screening) between commercial and/or industrial development and residential areas; *1.1.8 Increase Public Input* to increase the opportunities for public involvement and participation for planning and development processes in Three Rivers; *1.1.9 LU-1.3 Prevent Incompatible Uses* wherein the County shall discourage the intrusion into existing residential and rural residential areas of new incompatible land uses that produce significant noise, odors, or fumes; *1.1.12 LU-4.5 Commercial Building Design* wherein the County shall encourage that new commercial development is consistent with the existing design of the surrounding community or neighborhood by encouraging similar façades, proportionate scale, parking, landscaping, and lighting that provides for night sky conservation and protection and; *1.1.15 LU-7.14 Contextual and Compatible Design* wherein the County shall ensure that new development respects Three Rivers' long heritage by requiring that development respond to its context, be compatible with the traditions and character of the community, and develop in an orderly fashion which is compatible with the scale of surrounding structures. *Objective 1.2 Rural Gateway Character:* Maintain and balance the existing natural environment with the rural gateway character of Three Rivers. *Policies: 1.2.1 New Development Compatibility* to ensure that the size, type, and scale of new development in Three Rivers is compatible with the rural character of the community and; *1.2.13 SL-3.3 Highway Commercial* wherein the County shall require highway commercial uses to be located and designed to reduce their visual impact on the travel experience along State scenic highways and County scenic routes. *Objective 1.3 Rural Development Standards:* Establish and implement standards for rural development which incorporate the rural standards of the community. *Policies: 1.3.1 County Project Review Committee* wherein new development proposals may be subject to County Project Review Committee for all new development in Three Rivers; *1.3.2 Development Standards* to ensure that development proposals conform to all development standards and guidelines to the extent feasible as determined to be reasonable and appropriate by the affected decision makers; *1.3.3 Noise Standards* to apply the noise standards found in the Tulare County Health and Safety Element (Part 1 Section 10.8). Utilize recommendations included in the community plan EIR to address and develop feasible noise standards to the extent feasible reflective of a foothill canyon environment; *1.3.4 Setbacks* to require adequate setbacks for residential, commercial and industrial uses, including, side and rear yards, landscaping and screening, as determined by the County Project Review Committee; *1.3.5 Signage Standards* to require standards for signage in Three Rivers, including regulations for: size, height, scale, color, lighting, and material. Incorporate Caltrans signage standards with community standards, as they apply to SR 198; *1.3.6 Lighting Standards* to establish lighting standards and guidelines as feasible and appropriate to minimize light pollution, glare, and light trespass and to protect the dark skies in Three Rivers and; *1.3.7 Vegetation Standards* to establish vegetation standards for residential and commercial development, and encourage the use of native vegetation in landscaping, when visible to common roadways. *Objective 1.4 Quality Office, Commercial and Light Industrial Development:* Establish and apply development and design standards to ensure quality professional office, commercial, and light, non-polluting industrial development. *Policies:* 1.4.1 *Professional Office Design Standards* to design professional office, commercial and light, non-polluting, industrial developments to minimize adverse traffic impacts to residential areas; *1.4.2 Buffer Strips* to require office, commercial, and light industrial development to provide a naturally planted buffer strip, including shade trees, to separate the structures and the parking areas from SR 198; *1.4.3 Visual Standards* to establish landscaping, screening, and visual standards for commercial and industrial uses along SR 198 and; *1.4.4 Visual Screening* to require automobile storage yards and commercial and multi-family trash bins to be screened from view. *Goal 2: Economic Vitality*: A strong, diversified economic environment within Three Rivers which is consistent with the rural and visual atmosphere of the community. *Policies: 2.1.3 Concentrate Commercial Development* to promote a concentration of industrial, professional office, and commercial activities and high density residential development within selected areas to allow for cost efficient provision of necessary services and to protect residential neighborhoods from negative impacts; *2.1.4 Highway-Oriented Commercial Development* to maintain existing commercial areas along SR 198 to the extent feasible for highway-oriented commercial development; *2.1.5 ED-5.4 Recreational Accommodations* wherein the County shall support the development of visitor-serving attractions and accommodations in unincorporated areas near natural amenities and resources that would not be diminished by tourist activities; *2.1.6 ED-5.5 Rivers* wherein the County shall encourage the development of recreational activities and promote tourism along the Kaweah River; *2.1.7 ED-5.6 Lakes* wherein the County shall promote Lake Kaweah as a major recreational area that includes camping, water sports, hiking, golf, conference/hotel facilities, and historic attractions; *2.1.8 ED-5.7 Foothills* wherein the County shall encourage additional recreational and visitor-serving development in the Sierra and foothills in areas such as Three Rivers; *2.1.11 ED-5.10 Visitor-Serving Business* wherein the County shall encourage visitor-serving businesses to coordinate their advertising; *2.1.13 ED-5.13 National Parks Tourism* wherein the County shall work with Sequoia and Kings Canyon National Parks, Giant Sequoia National Monument, Sequoia National Forest, and others to market these areas of the County as tourist destinations and; *2.1.14 ED-5.14 Interagency Cooperation* wherein the County shall cooperate with federal land management agencies to develop and promote Three Rivers as a gateway community. *Objective 2.2 Business Attraction, Expansion, and Retention:* To promote business growth and industry diversification and maintain a favorable business climate and a supportive economic foundation. *Policies: 2.2.1 ED-2.1 Business Retention* wherein the County shall participate in regional business retention and expansion programs, such as the Rapid Response program to ensure that County services are accessible to businesses. *2.2.2 ED-2.5 Small Business* by recognizing the powerful job creation potential of small businesses, the County shall support entrepreneurial development and small business expansion and; *2.2.3 ED-2.6 Agency Support for Small Businesses* wherein the County

shall coordinate with other agencies to provide well-tailored services and job creation resources for small businesses, such as incubator zones. *Goal 4: Protection And Conservation Of The Environment:* Land use patterns and design solutions which protect and conserve the environmental quality and natural beauty in Three Rivers. *Objective 4.1 Protection of the Natural Environment:* Protect the natural environment by prohibiting land uses, activities, and development patterns that will have an adverse effect on the environmental quality of Three Rivers. *Policies: 4.1.1 Preserving the Natural Environment* to maintain a serene and attractive natural environment by prohibiting land use activities that create excessive and unwanted noise and/or light in the community; *4.1.2 CEQA Compliance* to be consistent with CEQA, protect water quality and wildlife including sensitive and critical habitat in Three Rivers by prohibiting, to the extent feasible and appropriate, land use activities that endanger water quality and/or wildlife as a result of pollution and/or sedimentation and; *4.1.3 Mitigating Traffic Impacts* to ensure that new development does not excessively increase traffic flow through existing or planned residential areas. The County shall require an analysis of traffic impacts for land development projects that may generate increased traffic on County roads. Typically, applicants of projects generating over 100 peak hour trips per day or where LOS "D" or worse occurs, will be required to prepare and submit this study. The traffic impact study will evaluate impacts from all vehicles, including truck traffic.

a) and b) No Impact: The proposed Project is located within the Three Rivers Community Plan Urban Area Boundary and is properly zoned to accommodate the proposed Project. Further, the proposed Project is consistent with Tulare County General Plan policies and Three Rivers Community Plan goals, objectives, and policies noted above. The Project will not physically divide any established community or cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the Project would result in no impact to these resources.

Cumulative Impact: As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

12. MINERAL RESOURCES

Would the project:			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
	b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Analysis:

Environmental Setting

Per the Tulare County General Plan Background Report, Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains and the Central Valley. The Sierra Nevada Physiographic Province, in the eastern portion of the Tulare County, is underlain by metamorphic and igneous rock. It consists mainly of homogeneous granitic rocks, with several islands of older metamorphic rock. The central and western parts of the County are part of the Central Valley Province, underlain by marine and non-marine sedimentary rocks. It is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting of the mountains.

Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock, and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur.

Aggregate resources are the most valuable mineral resource in Tulare County because it is a major component of the Portland cement concrete (PCC) and asphaltic concrete (AC). PCC and AC are essential to constructing roads, buildings, and providing for other infrastructure needs. There are four streams that have provided the main source of high quality sand and gravel in Tulare County:

Kaweah River, Lewis Creek, Deer Creek and the Tule River. The highest quality deposits are located at the Kaweah and Tule Rivers. Lewis Creek deposits are considerably inferior to those of the other two rivers.

Regulatory Setting

Federal

There are no federal or local regulations pertaining to mineral resources relevant to the proposed project.

State

California Surface Mining and Reclamation Act of 1975

Enacted by the State Legislature in 1975, the Surface Mining and Reclamation Act (SMARA), Public Resources Code Section 2710 et seq., insures a continuing supply of mineral resources for the State. The act also creates surface mining and reclamation policy to assure that:

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future are eliminated.

Areas in the State (city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation, Division of Mines and Geology, Office of Mine Reclamation to enforce this law. SMARA contains provisions for the inventory of mineral lands in the State of California. The State Geologist, in accordance with the State Board's Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones (MRZ) as designated below:

- MRZ-1. Areas where available geologic information indicates that there is minimal likelihood of significant resources.
- MRZ-2. Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.
- MRZ-3. Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.
- MRZ-4. Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production is not covered by SMARA.

The Division of Mine Reclamation (DMR)

"In 1991, the Division of Mine Reclamation (DMR) was created to provide a measure of oversight for local governments as they administer the Surface Mining and Reclamation Act (SMARA) within their respective jurisdictions. While the primary focus is on existing mining operations and the return of those mined lands to a usable and safe condition, issues relating to abandoned legacy mines are addressed through the Abandoned Mine Lands Unit."[227]

In April 2016 following significant revisions to the Surface Mining and Reclamation Act of 1975 (SMARA), the Division of Mine Reclamation (DMR) was created, effective January 1, 2017. DMR replaces the Office of Mine Reclamation that was established in 1991 to provide a measure of oversight for local governments as they administer SMARA within their respective jurisdictions.[228]

Local

Tulare County General Plan 2030 Update

[227] California Department of Conservation. Accessed October 2020 at: https://www.conservation.ca.gov/dmr

[228] Ibid. Accessed October 2020 at: https://www.conservation.ca.gov/index/Documents/DMR-fact-sheet-2017.pdf

The Tulare County General Plan 2030 Update: Chapter 8 – Environmental Resources Management contains the following goals and policies that relate to mineral resources and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review: *ERM-2.1 Conserve Mineral Deposits* wherein the County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate; *ERM-2.2 Recognize Mineral Deposits* wherein the County will recognize as a part of the General Plan those areas of identified and/or potential mineral deposits and; *ERM-2.9 Compatibility* wherein the County will encourage the development of mineral deposits in a manner compatible with surrounding land uses.

a) **No Impact:** Mineral resources located within Tulare County are predominately sand and gravel resources primarily provided by four streams: Kaweah River, Lewis Creek, Deer Creek, and the Tule River. The Kaweah River is the nearest of these four streams to the proposed Project site and is located west of the proposed Project site. Although very near the Kaweah River, the Project will not result in the loss of an available known mineral resource. The Tulare County General Plan Update (see Figure 8.1 Mineral Resource Zone in the General Plan) shows the locations of State-designated Mineral Resource Zones. According to the map, the proposed Project site is not located in or near a Mineral Resource Zone. The California Department of Conservation indicates that the nearest, active mining operation (Britten Granite, decomposed granite) is located approximately 0.5 miles east of the Project site.[229] As such, the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

b) **No Impact:** The proposed Project site is not delineated on a local land use plan as a locally important mineral resource recovery site. Therefore, the proposed Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Cumulative Impact: As there are no known mineral resources on the proposed Project site, and the nearest operation is an active decomposed granite operation, the proposed Project would not contribute to a cumulative impact.

13.	**NOISE**					
	Would the project result in:					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
	b)	Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☐	☒
	c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Analysis:

The proposed Project will result in Less Than Significant Impacts to the Noise Resources. The *"Noise Impact Assessment for the Three Rivers Hampton Inn & Suites Project August"* (NIA) prepared by ECORP Consulting, Inc. (Consultant) is included as Attachment "E" of this Initial Study. This NIA is used as the basis for determining that, based on the evidence/documentation

[229] State of California Department Of Conservation Division of Mine Reclamation, Maps: Mines and Mineral Resources accessed May 2019 at: https://maps.conservation.ca.gov/mol/index.html.

(including incorporation of recommendations contained in the Report) and the expertise of qualified consultant ECORP Consulting, Inc. (Consultant), the proposed Project will result in a less than significant impact.

Environmental Setting

The Health and Safety section of Tulare County's 2030 General Plan serves as the primary policy statement for the County for implementing policies to maintain and improve the noise environment in Tulare County. The Health and Safety section presents Goals and Objectives relative to planning for the noise environment within the County. Future noise/land use incompatibilities can be avoided or reduced with implementation of Tulare County's noise criteria and standards. Tulare County realizes that it may not always be possible to avoid constructing noise sensitive developments in existing noisy areas and therefore provides noise reduction strategies to be implemented in situations with potential noise/land use conflicts.

Within the Tulare County General Plan Background Report, existing noise levels were recorded within unincorporated areas of County. Noise level data collected during continuous monitoring included the hourly Leq and Lmax and the statistical distribution of noise levels over each hour of the sample period. The community noise survey results indicate that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. As would be anticipated, the quietest areas are those that are removed from major transportation-related noise sources and industrial or stationary noise sources.[230]

Existing Environmental Noise Setting

Noise Sensitive Land Uses

As indicated in the Noise Impact Assessment (NIA) for the proposed Project, "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 considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The Project site is generally surrounded by farmland and rural residential development, with commercial development concentrated along State Route (SR) 198. The nearest noise-sensitive receptors to the Project site are the Comfort Inn and Suites hotel building, located approximately 113 feet north of the Project site, a vacant commercial building located approximately 96 feet west of the Project site at the nearest point, and a residence located across State Highway [SR] 198 from the site at approximately 270 feet to the west. The distances to the Comfort Inn and Suites and the vacant commercial building were measured from the property line of the Proposed Project to the physical building. The parking lot and outdoor area associated with hotels and commercial uses are not considered sensitive receptors. Noise-sensitive hotel activities, such as sleeping and resting, would be performed indoors."[231]

Existing Ambient Noise Environment

In addition to describing noise sensitive land uses within the vicinity of the proposed Project, the NIA also includes a description of the existing ambient noise environment as follows; "The primary noise source in the Project vicinity is traffic. Existing roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) (see Attachment B [of the NIA]) and traffic volumes from the Project's Traffic Impact Study (VRPA Technologies, Inc. 2020). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along these roadway segments are presented in Table 2-3.

[230] County of Tulare General Plan 2030 Background Report. Page 8-77.

[231] "*Noise Impact Assessment for the Three Rivers Hampton Inn & Suites Project August*." 2020. Page 10. Prepared by ECORP Consulting, Inc.

Table 2-3. Existing (Baseline) Traffic Noise Levels		
Roadway Segment	**Surrounding Uses**	**CNEL at 100 feet from Centerline of Roadway**
SR 198		
South of Old Three Rivers Road	Residential and Commercial	58.4
Between Old Three River Road & Project Driveway	Residential and Commercial	58.4
North of Project Driveway	Residential and Commercial	58.4
Old Three Rivers Road		
East of SR 198	Residential	48.7

Source: Traffic noise levels were calculated by ECORP using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by VRPA Technologies, Inc. (2020). Refer to Attachment B for traffic noise modeling assumptions and results.
Note: A total of two intersections were analyzed in the Traffic Impact Study; roadway segments that impact sensitive receptors were included.

As shown, the existing traffic-generated noise level on Project-vicinity roadways currently ranges from 48.7 to 58.4 dBA CNEL. As previously described, CNEL is 24-hour average noise level 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 community of Three Rivers in the County of Tulare, which encompasses the Project site, is impacted by various noise sources. It is subject to both typical urban and rural noise, such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities as well as noise generated from the various land uses (i.e., residential, commercial, and agricultural) throughout Three Rivers that generate stationary source noise. Mobile sources of noise, especially cars and trucks, are the most common source of noise in the community. The ambient noise environment in the County of Tulare is largely influenced by roadway noise. The Project site is located directly off SR 198, identified by the Tulare General Plan as one of two major regional state highways which traverse the County. The General Plan states that SR 198 connects from U.S. Highway 101 on the west and continues eastward to the County of Tulare, passing through the City of Visalia and into Sequoia National Park (Tulare 2012)."[232]

Regulatory Setting

Federal

Federal Highways Administration (FHWA) Highway Traffic Noise Prediction methodology

"In March 1998, the Federal Highway Administration (FHWA) released the Traffic Noise Model, Version 1.0 (FHWA TNM®). It was developed as a means for aiding compliance with policies and procedures under FHWA regulations. Since its release in March 1998, Version 1.0a was released in March 1999, Version 1.0b in August 1999, Version 1.1 in September 2000, Version 2.0 in June 2002, Version 2.1 in March 2003 and the current version, Version 2.5 in April 2004. The FHWA TNM is an entirely new, state-of-the-art computer program used for predicting noise impacts in the vicinity of highways. It uses advances in personal computer hardware and software to improve upon the accuracy and ease of modeling highway noise, including the design of effective, cost-efficient highway noise barriers."[233]

Federal Aviation Administration (FAA)

"Aircraft operated in the U.S. are subject to certain federal requirements regarding noise emissions levels. These requirements are set forth in Title 14 CFR, Part 36. Part 36 establishes maximum acceptable noise levels for specific aircraft types, taking into account the model year, aircraft weight, and number of engines."[234]

[232] Ibid. 10-11.

[233] U.S. Department of Transportation. Federal Highway Administration. Traffic Noise Model. Accessed October 2020 at: http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/. Accessed October 2020.

[234] Tulare County Association of Governments 2018 Regional Transportation Plan/Sustainable Communities Draft EIR. Page 4.8-17. https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/rtp-20181/environmental-impact-report/

Federal Transit Administration

The Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, engineered concrete and masonry buildings can be exposed to groundborne vibration levels of 0.3 inch per second without experiencing structural damage. Buildings extremely susceptible to vibration damage can be exposed to groundborne vibration levels of 0.12 inch per second without experiencing structural damage.[235]

Federal Vibration Policies

The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 0.5 PPV without experiencing structural damage. The FTA has identified the human annoyance response to vibration levels as 80 RMS (Root Mean Square = The square root of the arithmetic average of the squared amplitude of the signal).[236]

State

The California Noise Control Act was enacted in 1973 (Health and Safety Code § 46010 et seq.), and states that the Office of Noise Control (ONC) should provide assistance to local communities in developing local noise control programs. It also indicates that ONC staff will work with the OPR to provide guidance for the preparation of the required noise elements in city and county General Plans, pursuant to Government Code § 65302(f). California Government Code § 65302(f) requires city and county general plans to include a noise element. The purpose of a noise element is to guide future development to enhance future land use compatibility.

The State of California General Plan Guidelines, published by the Office of Planning and Research (OPR 2017), provides guidance In implementing Government Code 65302 (f) relating to a noise element of a general plan. In addition to the required noise element contents, OPR also provide its Noise Element Guidance in Appendix D of the General Plan Guidelines.[237] Government Code 62302(f) requires:

"(1) A noise element that shall identify and appraise noise problems in the community. The noise element shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:
(A) Highways and freeways.
(B) Primary arterials and major local streets.
(C) Passenger and freight online railroad operations and ground rapid transit systems.
(D) Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
(E) Local industrial plants, including, but not limited to, railroad classification yards.
(F) Other ground stationary noise sources, including, but not limited to, military installations, identified by local agencies as contributing to the community noise environment
(2) Noise contours shall be shown for all of these sources and stated in terms of community noise equivalent level (CNEL) or day-night average level (Ldn). The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified in paragraphs (1) to (6), inclusive.
(3) The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise.
(4) The noise element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. The adopted noise element shall serve as a guideline for compliance with the state's noise insulation standard for the acceptability of projects within specific CNEL/Ldn contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution."[238]

Noise Compatibility Guidelines

[235] Ibid. 118.

[236] U.S. Department of Transportation, "The Noise and Vibration Impact Assessment Manual". September 2018. FTA Report No. 0123 Federal Transit Administration Page 113. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

[237] Office of Planning and Research Chapter 4: Required Elements. Noise. Page 131. Accessed October 2020 at: https://www.opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf

[238] Ibid. 131-132.

"The state has published guidance for locating land uses in areas compatible with the existing noise environment. These guidelines are shown in Table 4.8-7, Land Use Compatibility for Community Noise Environments [in the 2018 TCAG RTP/SCS. Program EIR]. For example, it would normally be acceptable for a single-family residence to be located in an area with an existing noise level of 60 dBA CNEL or less."[239]

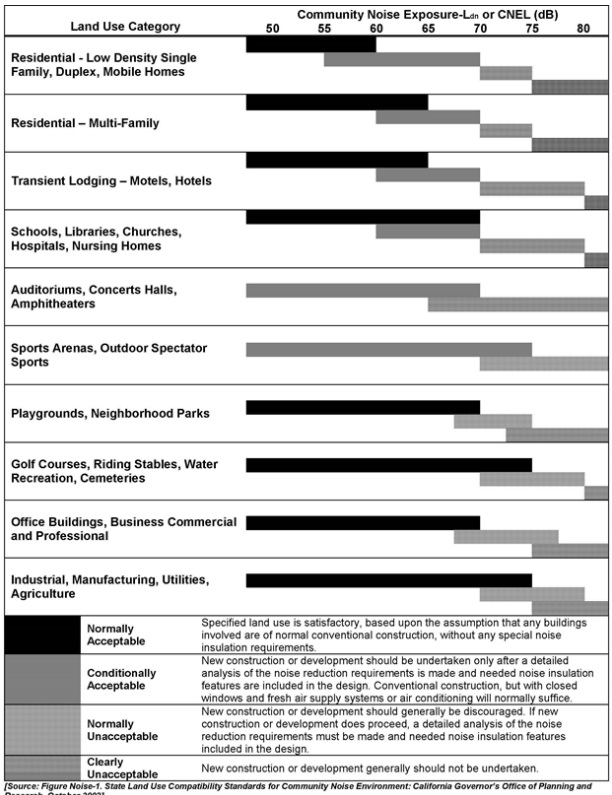
California Department of Transportation (Caltrans)

"The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state passby standard is consistent with the federal limit of 80 dBA at 15 meters from the centerline. The state passby standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dBA at 15 meters from the centerline."[240] Caltrans also has standards for new roadway, new proposed freeways, aeronautics, and aviation; however; these standards would not apply to this proposed Project.

Local

Analytical noise modeling techniques, in conjunction with actual field noise level measurements, were used to develop generalized Ldn or Community Noise Equivalent Level (CNEL) contours for traffic noise sources within Tulare County for existing conditions. Traffic data representing annual average daily traffic volumes, truck mix, and the day/night distribution of traffic for existing conditions (1986) and future were obtained from the Tulare County Public Works Department and used in the Tulare County Noise Element. The Tulare County General Plan 2030 Update Health & Safety Element (2012) includes noise and land use compatibility standards for various land uses. These are shown in **Table NOI-1** Land Use Compatibility for Community Noise Environments[241],:

Table NOI-1



[Source: Figure Noise-1. State Land Use Compatibility Standards for Community Noise Environment: California Governor's Office of Planning and Research, October 2003]

Tulare County General Plan 2030 Update/Health and Safety Element

[239] Tulare County Association of Governments 2018 Regional Transportation Plan/Sustainable Communities Draft EIR. Page 4.8-19. https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/rtp-20181/environmental-impact-report/

[240] Ibid. 4.8-20.

[241] Tulare County General Plan 2030 Update. Goals and Policies Report. Page 10-25.

"The Health and Safety Element of the General Plan provides policy direction for minimizing noise impacts in the County and for establishing noise control measures for construction and operation of land use projects. By identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noise, noise considerations will influence the general distribution, location, and intensity of future land use. The result is that effective land use planning and mitigation can alleviate the majority of noise problems.

The most basic planning strategy to minimize adverse impacts on new land uses due to noise is to avoid designating certain land uses at locations within the County that would negatively affect noise sensitive land uses. Uses such as schools, hospitals, childcare, senior care, congregate care, churches, and all types of residential use should be located outside of any area anticipated to exceed acceptable noise levels as defined by the Land Use Compatibility for Community Noise Environments table and pertinent goals and policies. Additionally, these uses should be protected from excess noise through sound attenuation measures such as site and architectural design and sound walls.

The County of Tulare has adopted these guidelines as a basis for planning decisions based on noise considerations. The land use compatibility guidelines are shown in Table 2-4 [of the NIA, **Table NOI-2** herein]. In the case that the noise levels identified at a proposed project site fall within levels considered normally acceptable, the project is considered compatible with the existing noise environment. The General Plan also identifies noise goals and policies set to minimize noise impacts within the County.[242]

Table NOI-2. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (Ldn or CNEL, dB)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density Single Family, Duplex, Mobile Homes	≤ 60	55 - 70	70 -75	≥ 75
Residential – Multi-Family	≤ 65	60 - 70	70 -75	≥ 75
Transient Lodging – Motels, Hotels	≤ 65	60 - 70	70 - 80	≥ 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	≤ 70	60 - 70	70 - 80	≥ 80
Auditoriums, Concerts Halls, Amphitheaters	NA	≤ 70	NA	≥ 65
Sports Arenas, Outdoor Spectator Sports	NA	≤ 75	NA	≥ 70
Playgrounds, Neighborhood Parks	≤ 70	NA	68-75	≥ 73
Golf Courses, Riding Stables, Water Recreation, Cemeteries	≤ 75	NA	70 – 80	≥ 80
Office Buildings, Business Commercial and Professional	≤ 70	68 – 78	≥ 75	NA
Industrial, Manufacturing, Utilities, Agriculture	≤ 75	70 - 80	≥ 75	NA

Source: County of Tulare General Plan Health and Safety Element
Notes:
NA: Not Applicable; CNEL: Community Noise Equivalent Level
Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.
Clearly Unacceptable – New construction or development should generally not be undertaken

The Tulare County General Plan 2030 Update: Chapter 10 – Health and Safety contains the following goals and policies that relate to noise and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review: *HS-8.1 Economic*

[242] *"Noise Impact Assessment for the Three Rivers Hampton Inn & Suites Project"* August. 2020. Page 10. Prepared by ECORP Consulting, Inc. Pages 11-12.

Base Protection wherein the County shall protect its economic base by preventing the encroachment of incompatible land uses on known noise-producing industries, railroads, airports, and other sources; *HS-8.2 Noise Impacted Areas* wherein the County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB Ldn (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.; *HS-8.3 Noise Sensitive Land Uses* wherein the County shall not approve new noise sensitive uses unless effective mitigation measures are incorporated into the design of such projects to reduce noise levels to 60 dB Ldn (or CNEL) or less within outdoor activity areas and 45 dB Ldn (or CNEL) or less within interior living spaces; HS-8.5; *HS-8.6 Noise Level Criteria* wherein the County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC); *HS-8.8 Adjacent Uses* wherein the County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County; *HS-8.11 Peak Noise Generators* wherein the County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval; *HS-8.13 Noise Analysis* wherein the County shall require a detailed noise impact analysis in areas where current or future exterior noise levels from transportation or stationary sources have the potential to exceed the adopted noise policies of the Health and Safety Element, where there is development of new noise sensitive land uses or the development of potential noise generating land uses near existing sensitive land uses; *HS-8.14 Sound Attenuation Features* wherein the County shall require sound attenuation features such as walls, berming, heavy landscaping, between commercial, industrial, and residential uses to reduce noise and vibration impacts; *HS-8.15 Noise Buffering* wherein the County shall require noise buffering or insulation in new development along major streets, highways, and railroad tracks; *HS-8.16 State Noise Insulation* wherein the County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code; *HS-8.17 Coordinate with Caltrans* wherein the County shall work with Caltrans to mitigate noise impacts on sensitive receptors near State roadways, by requiring noise buffering or insulation in new construction; *HS-8.18 Construction Noise* wherein the County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 a.m. to 7 p.m., Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors and; *HS-8.19 Construction Noise Control* wherein the County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

a) Less Than Significant Impact: As detailed in the NIA, "The nearest noise receptors to the Project site are the Comfort Inn and Suites located approximately 113 feet north of the Project site, a vacant commercial building located approximately 96 feet west of the Project parking lot at the nearest point, and a residence located across State Highway [SR 198] from the site at approximately 270 feet to the west. As previously described, per General Plan Safety Element policy *HS-8.18*, construction activity is exempted provided that noise generating activity does not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday. As mandated by General Plan policy *HS-8.11*, no peak noise generating activities shall be allowed to occur outside of normal business hours without County approval. In addition, General Plan Policy *HS-8.19* requires construction noise control best practices to be implemented to minimize construction noise impacts.

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 onsite construction activities as well as construction vehicle traffic on area roadways. To estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, the construction equipment noise levels were calculated using the Roadway Noise Construction Model for the site preparation, grading and building construction, paving and architectural coating. The anticipated short-term construction noise levels generated for the necessary equipment is presented in Table 2-5 [in the NIA, Table NOI-32 herein].

The nearest noise-sensitive receptor is located approximately 190 feet from the center of the Project site. As shown in Table 2-5 [in the NIA, **Table NOI-3** herein], the predicted maximum eight-hour noise levels at the vacant commercial building to the west could potentially reach approximately 74.4 dBA Leq, which is below the NIOSH threshold of 85 dBA. Thus, construction noise would reach even lower levels at the Comfort Inn and Suites and the nearest residence.

Table NOI-3. Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level @ Nearest Residence (dBA L_{eq})	NIOSH Construction Noise Standards (dBA L_{eq})	Exceeds Standard at Nearest Sensitive Receptor?

Site Preparation			
Grader	69.4	*85*	**No**
Scraper	68.0	*85*	**No**
Tractor/ Loader/ Backhoe	62.0	*85*	
Combined Site Preparation Equipment	**72.2**	*85*	**No**
Grading			
Rubber Tired Dozers	66.1	*85*	**No**
Graders	69.4	*85*	**No**
Tractors/Loaders/Backhoes (2)	62.0 (each)	*85*	**No**
Combined Grading Equipment	**72.0**	*85*	**No**
Building Construction/ Paving/ Architectural Coating			
Crane	61.0	*85*	**No**
Forklifts (2)	63.5 (each)	*85*	**No**
Generator Set	66.0	*85*	**No**
Tractors/Loaders/Backhoes (2)	62.0 (each)	*85*	**No**
Welders (3)	58.4	*85*	**No**
Cement and Mortar Mixer	63.2	*85*	
Paver	62.6	*85*	**No**
Rollers (2)	61.4 (each)	*85*	**No**
Paving Equipment	62.6	*85*	**No**
Air Compressors	66.3	*85*	**No**
Combined Building Equipment	**74.4**	*85*	**No**

Source: Construction noise levels were calculated by ECORP Consulting, Inc. using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment A for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters. The distance to the nearest sensitive receptor was calculated from the center of the Project site consistent with FTA (2018) recommendations (approximately 190 feet). Building construction, paving and architectural coating are assumed to occur simultaneously.

As shown [in **Table NOI-2**], no individual piece of construction equipment or cumulative construction equipment would exceed the NOISH threshold of 85 dBA at the closest residence. Therefore, Project construction activities would not expose persons to and generate noise levels in excess of NOISH standards and all construction activities would occur during the times permitted by the County.[243]

The Tulare County Resource Management Agency (RMA) agrees with the conclusions contained within and supported in the NIA prepared by qualified expert consultant ECORP Consulting, Inc., that the proposed Project would not expose persons to and generate noise levels in excess of NOISH standards and would comply with County noise limitation periods.

Project Operational Offsite Traffic Noise

The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the operational noise standards in the County General Plan (Policy HS-8.3). In the case that the existing ambient noise levels already exceed the applicable numeric noise threshold, an increase of more than 5 dBA over the existing ambient noise level is considered significant. As previously described, a change in level of at least 5 dBA is required before any noticeable change in community response would be expected.

[243] Ibid. 18-19.

Table NOI-4. Existing Plus Project Conditions - Predicted Traffic Noise Levels					
Roadway Segment	**Surrounding Uses**	**CNEL at 100 feet from Centerline of Roadway**		**Noise Standard (dBA CNEL)**	**Exceed Standard/ Significant Impact?**
		Existing Conditions	**Existing + Project Conditions**		
SR 198					
South of Old 3 Rivers Road	Residential and Commercial	58.4	58.6	60	**No**
Between Old 3 Rivers Road and Project Driveway	Residential and Commercial	58.4	58.5	60	**No**
North of Project Driveway	Residential and Commercial	58.4	58.4	60	**No**
Old Three River Road					
East of SR 198	Residential	48.7	48.7	60	**No**

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels in conjunction with the trip generation rate identified by VRPA Technologies, Inc. 2020. Refer to Attachment B for traffic noise modeling assumptions and results.

Notes: A total of 2 intersections were analyzed in the Traffic Impact Study; however, all roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown in Table 2-6 [in the NIA, **Table NOI-4** herein], predicted increase in traffic noise levels associated with the Project would be less than the County noise standards." The RMA agrees with the conclusions contained within and supported in the NIA prepared by qualified expert consultant ECORP Consulting, Inc., that the proposed Project would result in noise level below the County noise standards.

Operational Stationary Noise

The loudest source of noise associated with the proposed hotel would be parking lot noise. Previous measurements were taken by ECORP staff during a weekday in the middle of a parking lot serving a large grocery store identified noise levels reaching 61.1 dBA at approximately 5 feet distant. These measurements were taken with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute 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. The proposed hotel would not be expected to generate noise levels at the same intensity as a large grocery store and therefore this reference noise applied to the Project is conservative.

The Project is proposing the development of a 105-room hotel. As stated previously, the parking lot would be the main source of stationary noise. Based on prior parking lot noise measurements taken by ECORP staff, the Project parking lot is conservatively estimated to reach a maximum noise level of 61.1 dBA, as explained above.

Considering the conservative parking lot noise measurement of 61.1 dBA at approximately five feet distant, the nearest noise-sensitive receptor, the vacant commercial building located 96 feet away from the Proposed Project Parking lot, would experience operational stationary noise levels of below 35.5 dBA. This falls below the County of Tulare operational noise threshold of 60 dBA (Policy HS-8.8).

Thus, the Proposed Project would not result in noise levels in excess of County noise standards. The Project would have a less than significant impact in this area.

The RMA agrees with the conclusions contained within and supported in the NIA prepared by qualified expert consultant ECORP Consulting, Inc., that the proposed Project would not exceed County noise standards.

Land Use Compatibility

The County of Tulare provides a Land Use Compatibility Table to gauge the compatibility of new land uses (the Proposed Project) relative to existing noise levels. As shown in Table 2-4 [in the NIA, **Table NOI-2** herein], a clearly compatible noise level for locating hotel uses is anything 65 dBA and under.

The predominate noise source in the Project vicinity is generated by traffic on SR 198. As shown in Table 2-6 above [in the NIA, **Table NOI-4** herein], traffic noise would not exceed 60 dBA under existing plus Project conditions.

Considering the attenuation of sound with distance and the reduction of exterior-to-interior noise levels provided by building walls, the noise experienced inside the proposed new hotel would be significantly less than 61.1 dBA. Thus, noise emitted from the adjacent hotel and commercial building would not exceed 65 dBA.

Therefore, the Project is considered a compatible land use with the adjacent hotel and vacant commercial building, both in terms of commercial land use class and in terms of noise falling in the normally compatible range for hotels and motels. Thus, the proposed and existing land uses are considered compatible.[244]

The RMA agrees with the conclusions contained within and supported by qualified expertise in the NIA prepared by consultant ECORP Consulting, Inc., that the proposed Project would result in a less than significant impact.

b) Less Than Significant Impact: A vibration analysis is also included in the NIA prepared by ECORP Consulting, Inc. As such, the NIA presents substantial and expert evidence that the proposed Project would not adversely impact the vibration component of the Noise resource. 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 typical construction equipment are summarized in Table 2-7 [in the NIA, **Table NOI-5** herein].

The County of Tulare does not regulate construction vibration. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020) recommended standard of 0.2 inch per second PPV with respect to the prevention of structural damage for normal buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

Table NOI-5. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 20 Feet (inches per second)
Large Bulldozer	0.124
Caisson Drilling	0.124
Loaded Trucks	0.106
Rock Breaker	0.115
Jackhammer	0.049
Small Bulldozer/Tractor	0.004

Source: FTA 2018; Caltrans 2020

Based on the vibration levels presented in Table 2-7 [in the NIA, **Table NOI-5** herein], ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.124 inch per second PPV at 20 feet. Thus, the nearby structures would not be negatively affected.[245]

In addition to analyzing the potential for the to expose structures to substantial groundborne vibration during construction, the NIA analyzed the potential of the proposed Project's operation to result in excessive groudbourne vibration. As concluded in the NIA, "Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels[246]

[244] Op. Cit. 18-20.
[245] Op. Cit. 21-22.
[246] Op. Cit. 22.

The RMA agrees with the conclusions contained within and supported by qualified expertise in the NIA prepared by consultant ECORP Consulting, Inc., that the proposed Project would not generate excessive groundbourne vibration or groundbourne noise.

c) No Impact: The nearest public airport or public use or airport, Woodlake Airport (in the City of Woodlake) is located approximately 16 miles west of the proposed Project site. Therefore, the proposed Project site is located outside of the 55 dB CNEL noise contour. The proposed Project is not within an airport land use plan or within two miles of a public airport or public use airport. The proposed Project will not conflict with Tulare County Airport Land Use Plan policy. The project would not expose people residing or working in the project area to excessive noise levels. This conclusion is supported by the NIA which notes, "Although aircraft flight patterns may cover Three Rivers, noise from aircrafts is not a significant issue in the community. As shown in the Tulare General Plan, the community of Three Rivers is well outside of the airport zone. Aircraft noise does not significantly impact the community of Three Rivers and the Proposed Project would not expose people visiting or working on the Project site to excess airport noise levels."[247] The RMA agrees with the conclusions contained within and supported in the NIA prepared by qualified expert consultant ECORP Consulting, Inc. Therefore, there will be no impact.

Cumulative Impact: Cumulative noise impacts were analyzed in the NIA for cumulative construction noise and cumulative both analyses concluded that the proposed Project would not result in cumulative impacts; to wit regarding cumulative construction noise, "Construction activities associated with the Proposed Project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the Proposed Project was determined to be less than significant following compliance with the County General Plan's construction timing and construction noise control guidelines. The individual Project would not exceed the NOISH construction noise standard prior to implementation of construction noise control. Cumulative development in the vicinity of the Project site could result in elevated construction noise levels at sensitive receptors in the Project area."[248] Regarding cumulative operational noise the NIA concluded, the cumulative long-term noise sources associated with development at the proposed Project site, combined with other cumulative projects, could cause local noise level increases. Noise increase as a result of the proposed Project would not exceed County standards. Therefore, the proposed Project would not contribute to cumulative impacts during operations.[249]

The RMA agrees with the conclusions contained within and supported in the NIA prepared by qualified expert consultant ECORP Consulting, Inc., that the proposed Project would not significantly contribute to a cumulative impact to this resource. Further, as there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

14.	**POPULATION AND HOUSING**					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
	b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Analysis:

Environmental Setting

[247] Op. Cit.
[248] Op. Cit.
[249] Op. Cit. 23.

The California Department of Finance (DOF) provides population estimates for Tulare County. According to DOF population estimates, between 2010 and 2018, Tulare County grew from 442,179 to 475,834[250] persons; an increase of 33,655 persons. Between 2010 and 2018, the County experienced an average yearly population growth of 0.84 percent, for a total (Year 2018) population of 475,837. As of January 1, 2020, population estimates produced annually by the Department of Finance calculated Tulare County with a population estimate of 479,977 residents[251].

As indicated in the 2018 Regional Transportation Plan & Sustainable Communities Strategy (RTP/SCS), Draft Environmental Impact Report (SCH #2012081070); "A vital input to the SCS development process was a credible forecast of population, housing and jobs. TCAG developed a new forecast for this RTP/SCS based on the most comprehensive and up-to-date regional forecasts and projections available. The growth forecast for the 2018 RTP/SCS incorporates substantial new data available from the 2010 Census and new projections published by the California Department of Finance, Demographic Research Office (DOF) in 2017. The growth forecast, based on the DOF projection, is much more restrained than in the previous 2014 RTP/SCS (see RTP Appendix F). The new demographic forecast is summarized in Table 3.0-5 [of the RTP/SCS], Tulare County Demographic Forecast The new 2017 DOF population projection for the year 2040 (594,348) is significantly lower than that of the 2013 DOF projection for the year 2040 (722,838) used for the 2014 RTP/SCS, a difference of 128,490 persons. This is due to lower birthrates consistent with the state as a whole and the fact that Tulare County is still experiencing negative net migration (-150 persons in 2015) as opposed to the peak (+4,473 persons in 2004), as a result of the Great Recession."[252]

Regulatory Setting

Federal

U.S. Department of Housing and Urban Development (HUD)

"HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes: utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business."[253] However, as the Project does not propose any housing, HUD or other federal regulations do not apply to this Project.

State

California Department of Housing and Community Development (HCD)

HCD's mission is to "Promote safe, affordable homes and strong vibrant communities throughout California."[254] "In 1977, the State Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted. Each of these amendments has been considered during development of this Housing Element."[255]

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (California Government Code §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing

[250] State of California, Department of Finance. E-4 Population Estimates for City, Counties, and the State, 2011-2018 With 2010 Census Benchmark. Sacramento, California. November 2012 Accessed in October 2020 at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-4/2010-18/

[251] California Department of Finance. 2019 E-1 Population Estimates for Cities, Counties, and the State–January 1, 2018 and 2019. Accessed December 2019 at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/.

[252] RTP/SCS PEIR 2018. Pages 3.0-47 and -48. April 2018. Accessed October 2020 at: https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/rtp-20181/environmental-impact-report/

[253] U.S. Department of Housing and Urban Development, Mission, https://www.hud.gov/about/mission. Accessed October 2020.

[254] California Department of Housing and Community Development, Mission, http://www.hcd.ca.gov/about/mission.shtml. Accessed October 2020.

[255] Tulare County Housing Element 2015 Update. Page 1-3.

public programs and projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Local

Tulare County Regional Housing Needs Assessment Plan 2014-2023

The Tulare County Association of Governments (TCAG) was responsible for allocating the State's projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in this Housing Element. Tulare County has no control over the countywide population and housing projections provided to TCAG when it prepared the Regional Housing Needs Assessment Plan.

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:[256]

- Increase densities county-wide by 25% over the status quo densities;
- Establish light rail between cities;
- Extend Highway 65 north to Fresno County;
- Expand transit throughout the county;
- Maintain urban separators around cities; and
- Growth will be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

Tulare County Housing Authority

"The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. …HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is "to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant self sufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible."" [257]

"HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information about other affordable housing that is available in Tulare County. All programs are handicap accessible. Almost all of the complexes have 55-year recorded affordability covenants."[258]

Tulare County General Plan/Housing Element Policies

As this is a commercial hotel project that provides temporary, transient housing for visitors/tourists and others seeking temporary accommodations (i.e., no housing units are proposed); there are no policies from the Tulare County General Plan/Housing Element that would apply to this Project.

a) and b) No Impact: The proposed Project is the construction and operation of a new hotel within the community of Three Rivers. Construction workers may be drawn from the local and regional area and would not result in the need for additional, permanent housing to accommodate this temporary workforce. The proposed Project will not induce population growth; rather, as noted earlier, it will provide temporary accommodations for visitors/tourists. There will be no impact that the proposed Project would induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Additionally, the Project would not

[256] TCAG. Tulare County Regional Blueprint. May 2009. Page 18. http://www.tularecog.org/RTPSCS/TulareCountyBluePrint.pdf . Accessed May 2019.

[257] Tulare County Housing Element 2015 Update. Page 5-12. http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/110Part%20I%20Voluntary%20Elements%20Chapters%206,%2012%20and%2015/001CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015/CHP%206%20TULARE%20COUNTY%20HOUSING%20ELEMENT%20UPDATE%202015.pdf

[258] Ibid.

displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. As such, the proposed Project will result in **No Impact** to this resource.

Cumulative Impact: As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

15. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	a)	Fire protection?	☐	☐	☒	☐
	b)	Police protection?	☐	☐	☒	☐
	c)	Schools?	☐	☐	☐	☒
	d)	Parks?	☐	☐	☐	☒
	e)	Other public facilities?	☐	☐	☐	☒

Analysis:

Environmental Setting

Several agencies provide fire protection within Three Rivers including the County of Tulare, Cal Fire, the National Park Service, and the U.S. Forest Service, the latter two organizations through memoranda of understanding (MOU) with Tulare County.[259] Cal Fire Station 35, Tulare County Station 14 (located at 41412 South Fork Drive in Three Rivers) and the National Park Service's Hammond Station (located at 44726 Mineral King Road) are within the Three Rivers UDB and provide the community with apparatus and crews to respond to fire outbreaks (structural and wildland) during fire season. Generally Cal Fire has responsibility over wildland and vegetation fires, and the County handles structural fires.[260] Additionally, the next nearest Tulare County Fire Station is Fire Station13 located in Lemon Cove (at 32490 State Route 198), approximately 12 miles southwest of Three Rivers.[261]

The Tulare County Sheriff's Department has a resident deputy serving the rural population of Three Rivers. The resident deputy works one shift, five days week. The Sheriff's Department does not maintain a substation in Three Rivers. After hours law enforcement response to the community is dependent on request for service.[262]

The Three Rivers Union Elementary School is located on a 9.14-acre parcel of land (at 41932 State Route 198) within the Three Rivers Union School District. The school offers Kindergarten through 8th grade education and has had an average enrollment of 139 total students between school years 2014-2015 thru 2019-2020.[263] The school has 20 full and part-time employees including 10 teachers. Students beyond the 8th grade level attend Woodlake Union High School District. The Woodlake Union High School District serves grades 9-12 in the central region of Tulare County. The school district operates on a traditional schedule with 33 teachers. There is a maximum student capacity of 800 and an average daily attendance of 825 students. The district has two high schools, Bravo Lake High (continuation) serving grades 9-12 and Woodlake Union High serving grades 9-12.[264] Enrollment for year Grades 9-12 during the 2019-20 school year was 726 students.[265]

[259] Tulare County. Three Rivers Community Plan 2018 Update Draft EIR. Page 3.14-3.

[260] Ibid.

[261] Op. Cit.

[262] 3.14-4.

[263] CA Department of Education. 2020. Enrollment by Multi-Years 2016-2020. Accessed October 2020 at: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdYears.aspx?cds=5472207&agglevel=district&year=2019-20

[264] Tulare County, 2010. Tulare County General Plan 2030 Update Background Report. Page 7-86. http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf

[265] CA Department of Education. 2020. 2019-2020 Enrollment by Grade. Figure derived by using percentage of students in Grades 9-12 of total Woodlake School District student enrollment. Accessed October 2020 at: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=54767945430285&agglevel=school&year=2019-20

Three Rivers does not have any public parks. The community is bordered to the west by a federal recreation area and to the north, south and east by a national park and BLM-administered multi-use area(s). See Item 15 Recreation, below.

Regulatory Setting

Federal

None that are applicable to this Project.

State

California Fire Code and Building Code

The purpose of the California Fire Code (Title 24, Part 9 of the California Code of Regulations) is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations.[266]

Local

Tulare County Sheriff

The Tulare County Sheriff's Department (TCSD) is the primary law enforcement service provider for the unincorporated areas of Tulare County. The TCSD provides crime prevention and apprehension services across a wide range of activity sectors including: personal crime; property crime; agricultural crime; cybercrime; forensic services and specialized services (e.g., Dive team, Search and Rescue team, etc.). The Sheriff's Department also operates detention facilities for women, men and, juveniles.

Tulare County Fire Department (TCFD)

"Tulare County Fire Department mission is to provide all persons who reside, work or travel within the County of Tulare, with the protection of life, property and the environment within those areas, where the Tulare County Fire Department has direct protection responsibility by virtue of law, contract or mutual understanding. Tulare County Fire seeks to reduce public exposure to fire, risk and injury prevention programs that include public education, fire protection planning, fire prevention education, code enforcement, and fire suppression cost recovery."[267]

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update, Chapter 14 – Public Facilities and Services, contains the following policies that relate to public services and may apply to this Project: *HS-7.6 Search and Rescue* wherein the County should continue to provide search and rescue operation capabilities for the Tulare County Sheriff's Department in mountainous areas; *PFS-7.2 Fire Protection Standards* wherein the County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection*; PFS-7.3 Visible Signage for Roads and Buildings wherein the County shall strive to ensure all roads are properly identified by name or number with clearly visible signs; PFS-7.5 Fire Staffing and Response Time Standards* wherein the County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards; *PFS-7.6 Provision of Station Facilities and Equipment* wherein the County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County*; PFS-7.12 Design Features for Crime Prevention and Reduction* wherein the County shall promote the use of building and site design features as means for crime prevention and reduction; and *PFS-7.9 Sheriff Response Time* wherein the County shall work with the Sheriff's Department to achieve and maintain a response time of:

1. Less than 10 minutes for 90 percent of the calls in the valley region; and
2. 15 minutes for 75 percent of the calls in the foothill and mountain regions.

[266] 2016 California Fire Code (Title 24, Part 9 of the California Code of Regulations). Page 3. Accessed May 2019. https://www.citymb.info/Home/ShowDocument?id=28089

[267] Tulare County. Three Rivers Community Plan 2018 Update Draft EIR. Page 3.14-8.

The Three Rivers Community Plan

The Tree Rivers Community Plan also includes *Goal 7: Provide Adequate Emergency And Safety Access*: *Objective 7.1 Adequate Emergency Access*: Ensure adequate access for emergency and safety vehicles, consistent with the State Response Area (SRA) standards, Foothill Growth Management Plan Development Standards, and Tulare County Improvement standards as applicable. *Policy 7.1.2 Accessibility to Public Safety Services* to require that new development is accessible to the Tulare County Fire Department and Sheriff's Department.[268]

a) Fire Protection – Less Than Significant Impact: The County of Tulare will continue to provide fire protection services to the proposed Project site upon development. No residential construction is identified with this Project. Any vegetation that could present a fire hazard will be removed from the Project site. Additionally, the proposed Project site will be predominantly developed with the hotel (and ancillary uses such as the swimming pool) and paved parking areas thereby minimizing areas for ground cover to take root and prevent it from becoming a fire fuel hazard. As noted in the adopted Three Rivers Community Plan Update, "Community response time varies from one minute on a fairly flat terrain to three minutes on steeper terrain." As a result of Cal Fire Station 35, Tulare County Station 14 and the National Park Service's Hammond Station being located within Three Rivers and project design features, impacts to fire protection services will be less than significant.

b) Police Protection - Less than Significant: The County of Tulare will continue to provide police protection services to the Project site upon development. Emergency response is adequate to the Project site. Should additional police protection services be required, the County of Tulare would request mutual assistance from other law enforcement agencies (e.g., Woodlake P.D., Exeter P.D., California Highway Patrol, etc.) to augment police services. As discussed in Item 14 a), no residential is proposed for this Project. As such, any impact to police services will be less than significant.

c) Schools – No Impact: The nearest school, Three Rivers Elementary School, is located approximately 1.25 miles north of the proposed Project site in the Three Rivers. However, as discussed in Item 14 a), the Project will not include construction of any residential structures which could result in increases of school-aged children, nor change the existing land use. The Project will not result in an increase of population that will require additional school facilities because no employees will be assigned to on-site occupancy. There will be no impact.

d) Parks – No Impact: Cutler County Park is the nearest County-operated park and is located approximately twenty miles west of the proposed Project site. As the proposed Project will not induce population growth, the proposed Project will not create a need for additional park or recreational services. No employees will be assigned to on-site occupancy at the proposed Project site. There will be no impact. Also, see Item 16 Recreation.

e) Other public facilities – No Impact: The proposed Project will not require the need for other public facilities, as such, the proposed Project will result in no impact to this resource.

Cumulative Impact: The nature of the project will not result in permanent population growth, as such, the proposed Project would not result in demands for additional or expansion of school-related facilities. Fire and police protection services will remain as currently provided for both permanent residents and seasonal visitors/tourists. The proposed Project will not need to rely on or result in the need for addition or alteration of any public services and will utilize existing services provided by Tulare County. As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

16.	**RECREATION**				
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Would the project increase the use of existing neighborhood and regional parks	☐	☐	☐	☒

[268] Tulare County. Three Rivers Community Plan 2018 Update. Page 270.

		or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
	b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Analysis:

Environmental Setting

"Tulare County contains several county, state, and federal parks. Aside from parks in the county, there are many open space areas as well. This section will highlight these various parks and open space areas and identify recreational opportunities within them."[269] Two new parks were completed and became operational in the unincorporated communities of Plainview (Plainview Community Park) in 2016 and Earlimart (Earlimart Community Park) in 2017. In addition to the 15 parks and recreation facilities that are owned and operated by Tulare County, there are State Parks and Forests, National Parks and National Forests, trails, and recreational areas. Cutler County Park (an approximately 70-acre facility) is the nearest park to the Project site and located approximately twenty miles west of the proposed Project site. Lastly, each incorporated city in the County maintains and operates municipal park and recreation facilities which can also be accessed by the County's total population.

Federal

Lakes Kaweah and Success

"Lake Kaweah was formed after the construction of the Terminus Dam on the Kaweah River in 1962. The lake offers many recreational opportunities including fishing, camping, and boating. Lake Kaweah is located 20 miles east of Visalia on Highway 198 and was constructed by the U.S. Army Corps of Engineers for flood control and water conservation purposes. The lake has a maximum capacity to store 143,000 acre-feet of water. There are a total of 80 campsites at the lake's Horse Creek Campground, which contains toilets, showers and a playground. Campfire programs are also available. Aside from camping, boat ramps are provided at the Lemon Hill and Kaweah Recreation Areas. Both Kaweah and Horse Creek provide picnic areas, barbecue grills and piped water. Swimming is allowed in designated areas. In addition, there is a one-mile hiking trail between Slick Rock and Cobble Knoll, which is ideal for bird watching.

Lake Success was formed by construction of the Success Dam on the Tule River in 1961. The lake offers many recreational activities including fishing, boating, waterskiing, and picnicking. The U.S. Army Corps of Engineers (USACOE) constructed this reservoir for both flood control and irrigation purposes. The lake has a capacity of 85,000 acre-feet of water. The lake is located eight miles east of Porterville in the Sierra Nevada foothills area. Recreational opportunities include ranger programs, camping at the Tule campground, which provides 104 sites, boating, fishing, picnic sites, playgrounds and a softball field. Seasonal hunting is also permitted in the 1,400-acre Wildlife Management Area."[270]

National Parks and National Forests

"Most of the recreational opportunities in the county are located in Sequoia National Forest, Giant Sequoia National Monument, and in Sequoia and Kings Canyon National Parks (SEKI). Although these parks span adjacent counties, they make a significant contribution to the recreational opportunities that Tulare County has to offer."[271]

Sequoia National Forest

"Sequoia National Forest takes its name from the Giant Sequoia, which is the world's largest tree. There are more than 30 groves of sequoias in the lower slopes of the park. The park includes over 1,500 miles of maintained roads, 1,000 miles of abandoned roads and 850 miles of trails for hikers, off-highway vehicle users and horseback riders. The Pacific Crest Trail connecting Canada and

[269] Tulare County General Plan 2030 Update Background Report. February 2010. Page 4-1. Access *http://generalplan.co.tulare.ca.us/documents.html* then scroll to Recirculated Draft EIR, the click on *"Appendix B-Background Report"*

[270] Ibid. 4-7

[271] Op. Cit. 4-8.

Mexico, crosses a portion of the forest, 78 miles of the total 2,600 miles of the entire trail. It is estimated that 10 to 13 million people visit the forest each year. "[272]

Giant Sequoia National Monument

"The Giant Sequoia National Monument was created in 2000 by President Clinton in an effort to preserve 34 groves of ancient sequoias located in the Sequoia National Forest. The Monument includes a total of 327,769 acres of federal land, and provides various recreational opportunities, including camping, picnicking, fishing, and whitewater rafting. According to the Giant Sequoia National Monument Management Plan EIS, the Monument includes a total of 21 family campgrounds with 502 campsites and seven group campgrounds. In addition, there are approximately 160 miles of system trails, including 12 miles of the Summit National Recreation Trail."[273]

Sequoia and Kings Canyon National Parks (SEKI)

"The U.S. Congress created the Kings Canyon National Park in 1940 and Sequoia National Park in 1890. Because they share many miles of common boundaries, they are managed as one park. The extreme large elevation ranges in the parks (from 1,500 to 14,491 feet above sea level), provide for a wide range of vegetative and wildlife habitats. This is witnessed from exploring Mt. Whitney, which rises to an elevation of 14,491 feet, and is the tallest mountain in the contiguous United States. During the summer months, park rangers lead walks through the parks, and tours of Crystal and Boyden Caves. During the winter, visitors explore the higher elevations of the parks via cross country skis or snowshoes, or hike the trails in the foothills. The SEKI also contains visitor lodges, the majority of which are open year round. According to the National Parks Conservation Association, a combined total of approximately 1.5 million people visit the two parks on an annual basis."[274]

State

"The Mountain Home State Forest is a State Forest managed by the California Department of Forestry and Fire Protection (CDF). The Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Fishing ponds, hiking trails, and campsites are some of the amenities that can be found in the Forest."[275] Colonel Allensworth State Historic Park (approximately 3,715 acres in area)is located in the unincorporated community of Allensworth in southwestern Tulare County.

Other Recreational Facilities

Other recreational resources available in Tulare County include portions of the Pacific Crest Trail, South Sierra Wilderness Area, Dome Land Wilderness Area, Golden Trout Wilderness Area, International Agri-Center, and the Tulare County Fairgrounds.[276]

In addition, there are several nature preserves open to the public which are owned and operated by non-profit organizations, including the Kaweah Oaks Preserve and Dry Creek- Homer Ranch preserves, both owned and operated by Sequoia Riverlands Trust

Local

Parks

Three Rivers does not have a County owned-operated public park. As noted earlier, Cutler County Park is the nearest County owned/operated park near the Project site. It is an approximately 70-acre day use park; reservations for picnic areas area available and there is no entrance fee.

Schools

"A total of 48 school districts provide education throughout Tulare County... Of the 48 school districts, seven are unified districts providing educational services for kindergarten through 12th grade. The remaining 41 districts consist of 36 elementary school

[272] Op. Cit. 4-9.
[273] Op. Cit.
[274] Op. Cit.
[275] Op. Cit. 4-7.
[276] Op. Cit. 4-10 to 4-11.

districts and four high school districts. Many districts only have one school."[277] As noted earlier, the nearest school is Three Rivers Elementary located in Three Rivers, approximately 1.25 miles north of the proposed Project site on a 9.14-acre parcel. The school offers Kindergarten through 8th grade education and has had an average enrollment of 139 total students between school years 2014-2015 thru 2019-2020.

Regulatory Setting

Federal

None that apply to this Project.

State

None that apply to this Project.

Local

None that apply to this Project.

a) No Impact: As discussed in Item 15 e), the proposed Project will not increase the demand for recreational facilities nor will it put a strain on the existing recreational facilities. Although approximately 13 employees will work at the proposed Project site , no population growth will be associated with the proposed Project or necessitated by the proposed Project as the employees are anticipated to be drawn from the local workforce. The only potential impact on recreational facilities may occur if construction workers decide to recreate at their own leisure outside of work hours. As noted earlier, the nearest County owned/operated park is Cutler County Park approximately 20 miles west of the proposed Project site. As such, the project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, there will be no impact to this resource.

b) No Impact: The proposed Project does not include recreational facilities, As there is no population growth associated with the proposed Project, there will be no need to construct or expand any recreational facilities as there would be no adverse physical effect on the environment; therefore, there would be impact to this resource.

Cumulative Impact: The nature of the proposed Project will not result in permanent population growth, as such, the proposed Project would not result in demands for additional or expansion of recreation-related facilities. As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

17.	**TRANSPORTATION**					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Conflict with a program, plan, ordinance or policy addressing circulation systems, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
	b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
	c)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses, (e.g., farm equipment)?	☐	☐	☒	☐
	d)	Result in inadequate emergency access?	☐	☐	☐	☒

[277] Tulare County General Plan 2030 Update Background Report. Pages 7-75 and 7-76. *http://generalplan.co.tulare.ca.us/documents.html then scroll to Recirculated Draft EIR, the click on "Appendix B-Background Report"*

Analysis:

The proposed Project will result in Less Than Significant Impacts to Transportation resources. The "*Three Rivers Hampton Inn & Suites*" Traffic Impact Study Report (Traffic Impact Study or TIS) was prepared by a VRPA Technologies, Inc. (Consultant) in June 2020 which is included as Attachment "F" of this Initial Study. This TIS is used as the basis for determining that, based on the evidence/documentation (including incorporation of recommendations contained in the TIS) and the expertise of qualified consultant VRPA Technologies, Inc., the proposed Project will result in a less than significant impact.

Environmental Setting

"Tulare County has two major regional highways, State Highway [SR] 99 and 198. State Highway 99 [SR] connects Tulare County to Fresno and Sacramento to the north and Bakersfield to the south. State Highway [SR] 198 connects from U.S. Highway 101 on the west and continues eastward to Tulare County, passing through the City of Visalia and into Sequoia National Park. The highway system in the County also includes State highways, County-maintained roads, and local streets within each of the eight cities."[278]

"Tulare County's transportation system is composed of several State Routes, including three freeways, multiple highways, as well as numerous county and city routes. The County's public transit system also includes two common carriers (Greyhound and Orange Belt Stages), the AMTRAK Service Link, other local agency transit and paratransit services, general aviation, limited passenger air service and freight rail service."[279]

"Travel within Tulare County is a function of the size and spatial distribution of its population, economic activity, and the relationship to other major activity centers within the Central Valley (such as Fresno and Bakersfield) as well as more distant urban centers such as Los Angeles, Sacramento, and the Bay Area. In addition, there is considerable travel between the northwest portions of Tulare County and southern Fresno County and travel to/from Kings County to the west. Due to the interrelationship between urban and rural activities (employment, housing, services, etc.) and the low average density/ intensity of land uses, the private automobile is the dominant mode of travel for residents in Tulare County."[280]

As described in the TIS, "This Traffic Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the Three Rivers Hampton Inn & Suites Development (Project). The Project seeks to develop a 105-room hotel to be located off of State Route (SR) 198 (Sierra Drive), approximately 1,100 feet north of Old 3 Rivers Road in the Three Rivers Community.

Three Rivers is located in the Kaweah River canyon, just above Lake Kaweah, approximately 28 miles east of the City of Visalia as shown in Figure 1-1 [in the TIS]. Three Rivers' name comes from its location near the junction of the North, Middle, and South Forks of the Kaweah River. The surrounding terrain is marked by oak woodland forest and foothills. Three Rivers is located in the northern portion of Tulare County at an elevation of 825 feet above sea level with a total area of 45.4 square miles. Three Rivers is the gateway town for the Ash Mountain Main Entrance to Sequoia-Kings Canyon National Park, home of the Giant Sequoia trees."[281]

The TIS also describes the following: Project Access: The Project will have one (1) driveway along SR 198, approximately 1,100 feet to the north of Old 3 Rivers Road; Study Area: The Project location is shown in Figure 1-2 [of the TIS] and the Project site plan is provided in Appendix A [of the TIS]. The following intersections analyzed in this TIS are shown in Figure 1-2 [of the TIS] and include the intersections of SR 198 (Sierra Drive) / Project Driveway and Old Three Rivers Road; Study Scenarios of level of service (LOS) for the following traffic scenarios: Existing, Existing Plus Project. Near-Term Plus Project, Cumulative Year 2042 Without Project, and Cumulative Year 2042 Plus Project.[282]

The TIS also provides a description of the Methodology used for intersection analysis and policies to maintain level of service (LOS). It is important distinguish varying LOS thresholds (they are, A through F with A being optimum while F is the minimum), thus the TIS explains how Tulare County's and Caltrans' LOS may differ. However, for the Three Rivers area (i.e., along SR 198), Caltrans agrees that the County's General Plan minimum of LOS D would be appropriate within the Three Rivers Urban Development Boundary (UBD) planning area.[283]

[278] Tulare County. Three Rivers Community Plan 2018 Update Draft Environmental Impact Report (Draft EIR). Page 3.16-2.

[279] Ibid.

[280] Op. Cit.

[281] *"Three Rivers Hampton Inn & Suites" Traffic Impact Study Report."* June 2020. Prepared by a VRPA Technologies, Inc. and included in Attachment "F" of this document.

[282] Ibid. 1.

[283] Op. Cit. 5.

Included within the TIS are descriptions of various existing conditions to consider including. As noted in the TIS, "The first step toward assessing Project traffic impacts is to assess existing traffic conditions. Typically, existing peak hour counts are collected in the study area for purposes of evaluating existing conditions. However, the present COVID-19 pandemic has altered travel patterns in the State of California, especially with the closure of the Sequoia-Kings Canyon National Park. As a result, existing traffic counts would be skewed and wouldn't reflect typical travel patterns in the study area."[284] In addition to Existing Traffic Counts, Consultant VRPA also considered Roadway Geometrics; Existing Functional Roadway Classification System, Affected Streets and Highways; Level of Service (that is Intersection Capacity Analysis and Queuing Analysis); Public Transit and Active Transportation Systems. The considerations are contained in and full described in the TIS on pages 7 through 13.[285]

With Existing Conditions in hand, Consultant provided: an assessment of traffic the proposed Project is expected to generate and the impact of that traffic on the surrounding street system in regards to Trip Generation by the project which may impact surrounding street and high segments and intersections; distribution of traffic caused by the proposed Project; an analysis of existing plus proposed Project scenario to include existing traffic plus traffic generated by development of the proposed Project; an analysis of approved or pending developments that have not yet been built in the vicinity of the Project in addition to the proposed Project), an analysis of near-term plus proposed Project traffic conditions, a cumulative Year 2042 without the proposed Project traffic conditions; a cumulative Year 2042 plus proposed Project traffic conditions, an intersection capacity analysis and; a queuing analysis.[286]

Regulatory Setting

Federal

None that apply to this proposed Project.

State

Caltrans: Transportation Concept Reports

Each District of the State of California Transportation Department (Caltrans) prepares a Transportation Concept Report (TCR) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept". As the proposed Project is within the Caltrans District 6 region, SR 198 TCR would apply to the proposed.

Caltrans Guide for the Preparation of Traffic Impact Studies

"The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS)."[287]

Local

Tulare County Transportation Control Measures (TCM)

"Transportation Control Measures (TCM) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce vehicle emissions. Currently, Tulare County is a nonattainment region under the Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both of these acts require implementation of TCMs. These TCMs for Tulare County are as follows:

[284] Op. Cit. 7.

[285] Op. Cit. 7.

[286] Op. Cit. 14-23.

[287] Tulare County. Three Rivers Community Plan 2018 Update. Draft Environmental Impact Report. 2018. Page 3.16-22 and -23.

- Rideshare Projects;
- Park and Ride Lots;
- Alternate Work Schedules;
- Bicycle Facilities;
- Public Transit;
- Traffic Flow Improvement; and
- Passenger Rail and Support Facilities."[288]

Tulare County Association of Governments (TCAG)

Assembly Bill (AB) 69 State law has required the preparation of Regional Transportation Plans (RTPs) to address transportation issues and assist local and state decision makers in shaping California's transportation infrastructure."[289] The Tulare County Association of Government has prepared the 2014 Regional Transportation Plan. Specific policies that may apply to the proposed Project include:[290]

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *TC-1.16 County Level Of Service (LOS) Standards* wherein the County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual; and *HS-1.9 Emergency Access* wherein the County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

The Three Rivers Community Plan 2018 Update contains Objectives/Tactics[291] that may be applicable to this proposed Project. It is noted that the entirety of an Objective/Tactic may not apply to the proposed Project. Some Objectives/Tactics contain some elements that would apply and others that may not or not feasible due to physical constraints or jurisdiction by a non-Tulare County entity (e.g., Caltrans) where the County has no jurisdiction and does not have the authority to make policy decisions. Following are some Objectives/Tactics that may apply to the proposed Project: *Objective 1:* Design and implement a multi - modal transportation system that will serve projected future travel demand, minimize congestion, and address future growth in Three Rivers; *Objective 4:* Ensure the provision of adequate off- street parking for all land uses; *Objective 10:* Support the use of Transportation Demand Management (TDM) strategies to reduce dependence on the single - occupant vehicle, increase the ability of the existing transportation system to carry more people, and enhance mobility along congested corridors.

a) Less Than Significant Impact: Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Project would result in a less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion. As noted in the TIS, "An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County RMA and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs. Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of "D" on the County roadway system (both segments and intersections). Caltrans' SR-198 Transportation Concept Report (TCR) identifies the 2040 concept as LOS "D".

Results of the analysis show that the proposed Project will not exceed the minimum LOS standard of "D" as shown in Tables 2-1 and 3-2 [in the TIS].

The Project does not conflict with any applicable adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Tulare County Area Transit (TCaT) Route 30 (Northeast County Route) operates between the Three Rivers Memorial Building and the Visalia Transit Center in downtown Visalia. Route 30 provides 4 roundtrips to the Visalia Transit Center on weekdays and 1 roundtrip on the weekend, all at 4-hour intervals. Implementation of the Project will not hinder the operation of Route 30 in the Three Rivers Community.

[288] Tulare County. Tulare County 2030 General Plan 2030 Update Recirculated Draft Environmental Impact Report. Page 3.2-2.

[289] California Transportation Commission, 2017; 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations. Page 9. http://www.dot.ca.gov/hq/tpp/offices/orip/rtp/index_files/2017FINALDraft_MPORTPGuidelines.pdf

[290] Tulare County Association of Governments. Regional Transportation Plan. 2018 Policy Element. Page A-15 and A-16. https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/rtp-20181/policy-element/

[291] Three Rivers Community Plan 2018 Update. Pages 320-321, 322, and 325. Accessed at: https://tularecounty.ca.gov/rma/index.cfm/planning-building/community-plans/updated-community-plans/three-rivers-community-plan-adopted-pdf/

Caltrans' SR 198 TCR indicated that bicycles are permitted along the SR 198 corridor in the Three Rivers Community. The proposed Project will not prohibit the use of bicycles along SR 198. The SR 198 TCR also indicates that pedestrian facilities are nonexistent in the Three Rivers community. The Project will comply with Tulare County General Plan goals, which include Bicycle/Pedestrian Trail System (TC-5.1) and Consideration of Non-Motorized Modes in Planning and Development (TC-5.2).

Therefore, the Project will not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Therefore, no mitigation is needed. As such, the proposed Project would result in a less than significant impact."[292]

b) Less Than Significant Impact: Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Project would result in a less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion. As noted in the TIS, "In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. For California, this legislation will eventually change the way that transportation studies are conducted for environmental documents. Delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, new performance measures such as vehicle miles travelled (VMT) or other similar measures will be used.

July 1, 2020 is the statewide implementation date and agencies may opt-in use of new metrics prior to that date. Therefore, the traffic analysis currently follows current practice regarding state and local guidance as of the date of preparation.

Tourism is the largest and most important industry in the Three Rivers area, as the town is situated near Sequoia National Forest, which receives over 1.2 million annual visitors, and Kings Canyon National Park, which receives nearly 700,000 annual visitors. The industries and businesses surrounding Three Rivers are almost all related to visitors passing through, en route to the Sequoia National Forest and Kings Canyon National Park. The Three Rivers Community and surrounding area features a multitude of boutique lodging facilities, restaurants, and small retail shops to support the area's small population and transient travelers.

The Feasibility Study prepared for the Project forecasts an unaccommodated demand equivalent to 7.3% of the base-year demand, resulting from the analysis of monthly and weekly peak demand and sell-out trends. Unaccommodated demand refers to individuals who are unable to secure accommodations in the market because all the local hotels are filled. These travelers must settle for less desirable accommodations or stay in properties located outside the market area. Seeking accommodations outside of the desired market area increases VMT since travelers would be forced to travel longer distances to secure accommodations. The development of the Project would reduce the unaccommodated demand, thus reducing VMT in the market area. Therefore, no mitigation is needed. As such, the proposed Project would result in a less than significant impact."[293]

c) Less Than Significant Impact: Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Project would result in a less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion. As noted in the TIS, "The Project would not result in hazards due to design features, since all proposed improvements (Project Driveway) would be built to County design standards. Access to the proposed Project will be provided at one (1) driveway along SR 198 (Sierra Drive), which is an existing driveway within Tulare County jurisdiction. Internal traffic and parking operations will be designed in accordance with Tulare County design standards. The proposed Project seeks to utilize a plot of relatively undeveloped land for a hotel with approximately 105 rooms in a rural area surrounded by rural/agricultural residences. The Project would not increase the use of farm equipment on streets and roads in the Three Rivers Community. As a result, the Project will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, no mitigation is needed."[294] As such, the proposed Project would result in a less than significant impact.

d) No Impact: Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Project would result in a less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion. As noted in the TIS, The Project would not result in any degradation of emergency access within the community. Congestion at an intersection or along a roadway can adversely impact emergency access. Results of the traffic analysis shows that all of the

[292] *"Three Rivers Hampton Inn & Suites Traffic Impact Study Report."* June 2020. Pages 24-25. Prepared by a VRPA Technologies, Inc. and included in Attachment "F" of this document.

[293] Ibid. 25-26.

[294] Ibid. 26.

study intersections and roadway segments will meet Tulare County's and Caltrans' LOS "D" criteria through the year 2042. As a result, the Project will not result in inadequate emergency access. Therefore, no mitigation is needed. As such, the proposed Project would result no impact.[295]

Cumulative Impact: The nature of the proposed Project is to accommodate transient tourist/visitors in the area of Three Rivers. As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

18. TRIBAL CULTURAL RESOURCES

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			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☒	☐	☐
	b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

Analysis:

The proposed Project will result in Less Than Significant Impacts to Tribal Cultural Resources with mitigation. The "*Cultural Resources Inventory Report Hampton Inn and Suites Three Rivers*" (CRIR or Report) was prepared by ECORP Consulting, Inc. (Consultant) in June 2020 which is included as Attachment "C" of this Initial Study. This Report is used as the basis for determining that, based on the evidence/documentation (including incorporation of recommendations contained in the Report) and the expertise of qualified consultant ECORP Consulting, Inc. (Consultant), the proposed Project will result in a less than significant impact.
Environmental Setting

As described in the Report, "The Project Area is located in a rural residential and commercial center in the unincorporated community of Three Rivers along Sierra Drive/Highway 198. This area is in the foothills of the Sierra Nevada at the edge of the San Joaquin Valley. Three Rivers is in the Kaweah River canyon, the gateway to the entrance to Sequoia and Kings Canyon National Parks. The Project Area is along the southern bank of the Kaweah River, which is 200 feet west, and is approximately five miles northwest of Kaweah Lake. Highway 198 separates the Project Area land from the Kaweah River. Elevations range from 755 to 765 feet above mean sea level"[296]

Records Search Results

Consultant undertook at records search with the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS) at California State University, Bakersfield on May 18, 2020 (SSJVIC, included in the Report). As indicated in the Report, "The purpose of the records search was to determine the extent of previous surveys within

[295] Op. Cit.

[296] *"Cultural Resources Inventory Report Hampton Inn and Suites Three Rivers"* (CRIR or Report). Page 4. June 2020. Prepared by ECORP Consulting, Inc. and included in Attachment "C" of this Initial Study.

a 0.5-mile (800-meter) radius of the proposed Project location, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area."[297]

"In addition to the official records and maps for archaeological sites and surveys in Tulare County, the following historic references were also reviewed: Historic Property Data File for Tulare County (OHP 2012); The National Register Information System (NPS 2020b); Office of Historic Preservation, California Historical Landmarks (OHP 2020); 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 2019); Caltrans State Bridge Survey (Caltrans 2018); and Historic Spots in California (Kyle 2002). Other references examined include a RealQuest Property Search and historic General Land Office (GLO) land patent records (Bureau of Land Management [BLM] 2020)."[298] Historic maps reviewed include: 1870 BLM GLO Plat map for Township 17 South Range 28 East; 1885 BLM GLO Plat map for Township 17 South Range 28 East; 1892 Tulare County, California Map (published by Thos. H. Thompson, page 046, Sequoia National Park 3, Kaweah); 1957 USGS Kaweah, California topographic quadrangle map (15-minute scale); 1986 USGS Kaweah, California topographic quadrangle map (1:62,500 scale); and 1986 photo revised 1994 USGS Kaweah, California topographic quadrangle map (1:24,000 scale).[299] Historic aerial photos taken in 1955, 1989, 2005, 2009, 2010, and 2012 were also reviewed for any indications of property usage and built environment.[300]

Native American Consultation

The Native American Heritage Commission (NAHC) maintains a contact list of Native American Tribes as having traditional lands located within the County's jurisdiction. A search of the Sacred Lands Inventory on file with the Native American Heritage Commission (NAHC) was also requested by Consultant and resulted in negative results (i.e., no sacred lands were identified in the Project site) in a letter received from the NAHC on May 13, 2020 (see Attachment "C"). Pursuant to AB 52 Tulare County RMA staff contacted seven Native American Tribes (see Attachment "C") by certified mail on April 11, 2019 regarding the proposed Project. As of the publication date of this Initial Study, the County has not receive any response from any of the Tribes. The Tribes will have an opportunity to comment on the Draft EIR upon its release. Upon written request, any Tribe seeking a confidential copy of the Cultural Resource Inventory Report will be allowed that opportunity. Due to the nature of confidential information contained in the Report, it will not be readily available to the public; however, Tulare County will allow access to the Report within legal limitations.

Regulatory Setting

Federal

The National Historic Preservation Act

"The Advisory Council on Historic Preservation (ACHP) is an independent federal agency with the primary mission to encourage historic preservation in the government and across the nation. The National Historic Preservation Act (NHPA), which established the ACHP in 1966, directs federal agencies to act as responsible stewards when their actions affect historic properties. The ACHP is given the legal responsibility to assist federal agencies in their efforts and to ensure they consider preservation during project planning. The ACHP serves as the federal policy advisor to the President and Congress; recommends administrative and legislative improvements for protecting the nation's diverse heritage; and reviews federal programs and policies to promote effectiveness, coordination, and consistency with national preservation policies. A key ACHP function is overseeing the federal historic preservation review process established by Section 106 of the NHPA. Section 106 requires federal agencies to consider the effects of projects, carried out by them or subject to their assistance or approval, on historic properties and provide the ACHP an opportunity to comment on these projects prior to a final decision on them."[301]

State

California State Office of Historic Preservation (OHP)

[297] Ibid. 12-13.
[298] Op. Cit. 13.
[299] Op. Cit.
[300] Op. Cit.
[301] Advisory Council on Historic Preservation. https://www.achp.gov/sites/default/files/documents/2019-10/AboutTheACHPFactSheet2019_100319.pdfl

"The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), a gubernatorial appointee, and the State Historical Resources Commission."[302]

"OHP's responsibilities include: Identifying, evaluating, and registering historic properties; Ensuring compliance with federal and state regulatory obligations; Encouraging the adoption of economic incentives programs designed to benefit property owners; Encouraging economic revitalization by promoting a historic preservation ethic through preservation education and public awareness and, most significantly, by demonstrating leadership and stewardship for historic preservation in California."[303]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- 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
- Has yielded, or may be likely to yield, information important in prehistory or history.[304]

As mentioned in the CRIR, the use of both federal and state regulatory requirements apply to the proposed Project. "To meet the regulatory requirements of this Project, this cultural resources investigation was conducted pursuant to the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA) and in CEQA (Public Resources Code [PRC] § 21000 et seq.) The goal of NHPA and CEQA is to develop and maintain a high-quality environment that serves to identify the significant environmental effects of the actions of a proposed project and to either avoid or mitigate those significant effects where feasible. CEQA pertains to all proposed projects that require State or local government agency approval, including the enactment of zoning ordinances, the issuance of conditional use permits, and the approval of development project maps. The NHPA pertains to projects that entail some degree of federal funding or permit approval.

The NHPA and CEQA (Title 54 U.S. Code [USC] Section 100101 et seq. and Title 14, California Code of Regulations [CCR], Article 5, § 15064.5) apply to cultural resources of the historical and pre-contact periods. Any project with an effect that may cause a substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant effect on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on either the California Register of Historical Resources (CRHR) (PRC § 5024.1, Title 14 CCR, § 4852) or the National Register of Historic Places (NRHP) (36 Code of Federal Regulations [CFR] 60.4). Cultural resources eligible for listing on the NRHP are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the CRHR. Resources listed on or eligible for inclusion in the CRHR are considered Historical Resources under CEQA.

Tribal Cultural Resources are defined in Section 21074 of the California PRC as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either included in or determined to be eligible for inclusion in the CRHR, or are included in a local register of historical resources as defined in subdivision (k) of Section 5020.1, or are 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 Section 5024.1. Section 1(b)(4) of Assembly Bill (AB) 52 established that only California Native American tribes, as defined in Section 21073 of the California PRC, are experts in the identification of Tribal Cultural Resources and impacts thereto. Because ECORP does not meet the definition of a California Native American tribe, this report only addresses information for which ECORP is qualified to identify and evaluate, and that which is needed to inform the cultural resources section of CEQA documents. This report, therefore, does not identify or evaluate Tribal Cultural Resources. Should California Native American tribes ascribe additional importance to or interpretation of archaeological resources described herein, or provide information about non-archeological Tribal Cultural Resources, that information is documented separately in the AB 52 tribal consultation record between the tribe(s) and lead agency, and summarized in the Tribal Cultural Resources section of the CEQA document, if applicable."[305]

[302] State of California. Office of Historic Preservation. Mission and Responsibilities. http://ohp.parks.ca.gov/?page_id=1066

[303] Ibid.

[304] Office of Historic Preservation. California Register of Historic Places. http://www.ohp.parks.ca.gov/?page_id=21238

[305] *"Cultural Resources Inventory Report Hampton Inn and Suites Three Rivers"* (CRIR or Report). Page 3. June 2020. Prepared by ECORP Consulting, Inc. and included in Attachment "C" of this Initial Study.

Native American Heritage Commission

"The Native American Heritage Commission (NAHC), created in statute in 1976, is a nine-member body, appointed by the Governor, to identify and catalog cultural resources (i.e., places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands) in California. The Commission is charged with the duty of preserving and ensuring accessibility of sacred sites and burials, the disposition of Native American human remains and burial items, maintain an inventory of Native American sacred sites located on public lands, and review current administrative and statutory protections related to these sacred sites."[306]

Tribal Consultation Requirements: AB 52 (Gatto, 2014)

The Public Resources Code has established that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. (Pub. Resources Code, § 21080.3.1.) If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact.[307]

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below. [308]

(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.
(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:[309]

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:
(3) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

[306] Native American Heritage Commission. Welcome. http://nahc.ca.gov/

[307] Office of Planning and Research. Discussion Draft Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA (May 2015). Page 3. http://opr.ca.gov/docs/DRAFT_AB_52_Technical_Advisory.pdf

[308] California Natural Resources Agency. 15064.5. Determining the Significance of Impacts to Archeological and Historical Resources, Section 15064.5(c). http://resources.ca.gov/ceqa/guidelines/art5.html

[309] Ibid.

(4) The requirements of CEQA and the Coastal Act.

(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(C) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(D) If the coroner determines the remains to be Native American:

4. The coroner shall contact the Native American Heritage Commission within 24 hours.
5. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
6. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

(3) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(C) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(D) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. 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

Tulare County General Plan 2030 Update

The General Plan has a number of policies that apply to Projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *ERM-6.1 Evaluation of Cultural and Archaeological Resources* wherein the County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards; *ERM-6.2 Protection of Resources with Potential State or Federal Designations* wherein the County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources; *ERM-6.3 Alteration of Sites with Identified Cultural Resources* which states that when planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource; *ERM-6.4 Mitigation* which states that if preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records; *ERM-6.8 Solicit Input from Local Native Americans* wherein the County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance; *ERM-6.9 Confidentiality of Archaeological Sites* wherein the County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts; and *ERM-6.10 Grading Cultural Resources Sites* wherein the County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

a) and b) Less Than Significant Impact With Mitigation: Consultant used a variety of accepted methodologies to research/investigate the proposed Project's location in determining presence of Tribal Cultural Resources. As noted in the CRIR,

Consultant provided evidence of its personnel's qualifications[310]; a search of records by the Southern San Joaquin Valley Information Center of the California Historical Resources Information System[311]; RealQuest Property Search and historic General Land Office (GLO) land patent records (Bureau of Land Management [BLM];[312] aerial phots taken in 1955, 1989, 2005, 2009, 2010, and 2012 were also reviewed for any indications of property usage and built environment;[313] Sacred Lands File Search (SLF) by the California Native America Heritage commission (NAHC)[314]; contacted the Tulare County Historical society[315] and; an intensive pedestrian survey under the guidance of the Secretary of the Interior's Standards for the Identification of Historic Properties (NPS 1983).

To summarize the findings contained in the CRIR, Consultant concluded, "No cultural resources were identified on the property as a result of the records search and field survey. Therefore, no Historic Properties under Section 106 of the NHPA or Historical Resources under CEQA will be affected by the proposed Project."[316] However, the CRIR conclusions cannot eliminate the possibility of subsurface cultural resources, to wit; "Due to the presence of alluvium along the Kaweah River, and given the likelihood of pre-contact archaeological sites located along perennial waterways, the potential exists for buried pre-contact archaeological sites in the Project Area. This potential is considered to be high, as the Kaweah River exhibits significant sinuosity that reflects a meandering channel over time, which has the potential to bury archaeological sites that were once along the river's edge."[317] To that end, consultant provides recommendation in the event of post-review discovery (see item 5 cultural Resources).

Therefore, as an abundance of caution, in the unlikely event that subsurface resources are located, **Mitigation Measures CUL-1 subsets (a) through (c)** as specified at Item 5 Cultural Resources would be implemented thereby reducing the potential level of impact to this resource as less than significant for resources 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 to a resource consider significant to a California Native American tribe. Therefore, the Project would result in a less than significant impact to this resource.

Cumulative Impact: As noted above, surface resources are not present on the proposed Project location. In the event subsurface resources are encountered, **Mitigation Measures CUL-1 subsets (a)** through **(c)** would apply to minimize any impact to less than significant. As there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

19.	**UTILITIES AND SERVICE SYSTEMS**					
Would the project:			**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**
	a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
	b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒

[310] *"Cultural Resources Inventory Report Hampton Inn and Suites Three Rivers"* (CRIR or Report). Page 12. June 2020. Prepared by ECORP Consulting, Inc. and included in Attachment "C" of this Initial Study.
[311] Ibid. 12.
[312] Op. Cit. 13.
[313] Op. Cit.
[314] Op. Cit.
[315] Op. Cit. 14.
[316] Op. Cit. 21
[317] Op. Cit. 21.

	c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
	d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
	e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Analysis:

Environmental Setting

"Tulare County and special districts provide many important services to County residents and businesses in unincorporated communities and hamlets such as water, wastewater, storm drainage, solid waste removal, utilities, communications, fire protection, law enforcement, and a number of other community facilities and services (schools, community centers, etc.)."[318]

"Water districts supply water to communities and hamlets throughout the County. Most communities and some hamlets have wastewater treatment systems; however, several communities including Three Rivers, Plainview, Alpaugh, and Ducor rely on individual septic systems. Storm drainage facilities are generally constructed and maintained in conjunction with transportation improvements or new subdivisions in communities. Solid waste collection in the County is divided into service areas, as determined by the Board of Supervisors, with one license for each area. Southern California Edison provides electric service to the south and central areas of Tulare County while PG&E provides electric service in the north. The [Southern California] Gas Company is the primary provider of natural gas throughout the County."[319]

Regulatory Setting

Federal

U.S. Environmental Protection Agency (U.S. EPA) - Federal Regulation Tile 40, Part 503

In 1993, the U.S. Environmental Protection Agency (U.S. EPA) promulgated Standards for the Use or Disposal of Sewage Sludge (Code of Federal Regulations Title 40, Part 503), which establish pollutant limitations, operational standards for pathogen and vector attraction reduction, management practices, and other provisions intended to protect public health and the environment from any reasonably anticipated adverse conditions from potential waste constituents and pathogenic organisms.

This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are pathogen and alternative vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site.

In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more.[320]

[318] Tulare County General Plan Update 2030. Page 14-3.

[319] Ibid. 14-3.

[320] Title 40: Protection of Environment Part 503: Standards for the Use of Disposal of Sewage Sludge, http://www.ecfr.gov/cgi-bin/text-idx?SID=faac2040ebd49d57cc2786437545c8cf&node=40:30.0.1.2.42.1.13.1&rgn=div8

Resource Conservation and Recovery Act (RCRA)[321]

Congress passed RCRA on October 21, 1976 to address the increasing problems the nation faced from our growing volume of municipal and industrial waste. RCRA, which amended the Solid Waste Disposal Act of 1965, set national goals for:

- Protecting human health and the environment from the potential hazards of waste disposal.
- Conserving energy and natural resources.
- Reducing the amount of waste generated.
- Ensuring that wastes are managed in an environmentally-sound manner
- To achieve these goals, RCRA established three distinct, yet interrelated, programs:
  - ✓ The solid waste program, under RCRA Subtitle D, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits the open dumping of solid waste.
  - ✓ The hazardous waste program, under RCRA Subtitle C, establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal — in effect, from "cradle to grave."
  - ✓ The underground storage tank (UST) program, under RCRA Subtitle I, regulates underground storage tanks containing hazardous substances and petroleum products. RCRA banned all open dumping of waste, encouraged source reduction and recycling, and promoted the safe disposal of municipal waste. RCRA also mandated strict controls over the treatment, storage, and disposal of hazardous waste.

State

The Integrated Waste Management Act (Assembly Bill 939)

In 1989 the California legislature passed the Integrated Waste Management Act of 1989, known as AB 939. The bill mandates a reduction of waste being disposed: jurisdictions were required to meet diversion goals of 25% by 1995 and 50% by the year 2000. AB 939 also established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance.

The Regional Water Quality Control Board – Biosolids

In California, the beneficial reuse of treated municipal sewage sludge *(a.k.a.,* biosolids*)* generally must comply with the California Water Code in addition to meeting the requirements specified in Part 503 in Title 40 of the Code of Federal Regulations.

In July 2004, the State Water Resources Control Board adopted Water Quality Order No. 2004-12-DWQ (General Order), and certified a supporting statewide Programmatic Environmental Impact Report (PEIR)

The General Order incorporates the minimum standards established by the Part 503 Rule and expands upon them to fulfill obligations to the California Water Code. However, since California does not have delegated authority to implement the Part 503 Rule, the General Order does not replace the Part 503 Rule. The General Order also does not preempt or supersede the authority of local agencies to prohibit, restrict, or control the use of biosolids subject to their jurisdiction, as allowed by law.

Persons interested in seeking coverage under the General Order should contact the appropriate Regional Water Quality Control Board. Only applicants who submit a complete *Notice of Intent* (NOI), appropriate application fee, and are issued a Notice of Applicability by the executive officer of the appropriate Regional Water Quality Control Board are authorized to land apply biosolids at an agricultural, horticultural, silvicultural, or land reclamation site as a soil amendment under the General Order.

State Water Resources Control Board, Divisions of Drinking Water and Clean Water

Recycled water regulations are administered by both Central RWQCB and the California State Water Resources Control Board (SWRCB). The regulations governing recycled water are found in a combination of sources, including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations (CCR). Issues related to the treatment and distribution of recycled water are generally under the permitting authority of RWQCB and the Clean Water Division of the SWRCB. .

CalRecycle

[321] United States Environmental Protection Agency, http://www.epa.gov/epawaste/laws-regs/rcrahistory.htm

CalRecycle (formerly the California Integrated Waste Management Board) governs solid waste regulations on the state level, delegating local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies (LEA). Regulations authored by CalRecycle (Title 14) were integrated with related regulations adopted by the State Water Resources Control Board (SWRCB) pertaining to landfills (Title 23, Chapter 15) to form CCR Title 27.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912, the Legislature passed the Public Utilities Act, expanding the Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

Local

Tulare County General Plan 2030 Update

As the proposed Project will not utilize any new or expanded water, wastewater treatment or storm water drainage, natural gas, or telecommunications facilities, the applicable Tulare County General Plan 2030 Update policies for this resource are limited to the following for this resource item: *PFS-5.3 Solid Waste Reduction* wherein the County shall promote the maximum feasible use of solid waste reduction, recycling, and composting of waste, strive to reduce commercial and industrial waste on an annual basis, and pursue financing mechanisms for solid waste reduction programs; *PFS-5.4 County Usage of Recycled Materials and Products* wherein the County shall encourage all industries and government agencies in the County to use recycled materials and products where economically feasible*; PFS-5.5 Private Use of Recycled Products* wherein the County shall work with recycling contractors to encourage businesses to use recycled products and encourage consumers to purchase recycled products; *PFS-5.6 Ensure Capacity* wherein the County shall require evidence that there is adequate capacity within the solid waste system for the processing, recycling, transmission, and disposal of solid waste prior to approving new development; *PFS-5.7 Provisions for Solid Waste Storage, Handling, and Collection* wherein the County shall ensure all new development adequately provides for solid waste storage, screening, handling, and collection prior to issuing building permits*; PFS-5.8 Hazardous Waste Disposal Capabilities* wherein the County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan*;PFS-9.1 Expansion of Gas and Electricity Facilities* wherein the County shall coordinate with gas and electricity service providers to plan the expansion of gas and electrical facilities to meet the future needs of County residents*;PFS-9.2 Appropriate Siting of Natural Gas and Electric Systems* wherein the County shall coordinate with natural gas and electricity service providers to locate and design gas and electric systems that minimize impacts to existing and future residents*; PFS-9.4 Power Transmission Lines* wherein the County shall work with the Public Utilities Commission and power utilities in the siting of transmission lines to avoid interfering with scenic views, historic resources, and areas designated for future urban development; and *PFS-9.3 Transmission Corridors* wherein the County shall work with the Public Utilities Commission and power utilities so that transmission corridors meet the following minimum requirements:

1. Transmission corridors shall be located to avoid health impacts on residential lands and sensitive receptors, and
2. Transmission corridors shall not impact the economic use of adjacent properties.

a) through c) No Impact: The proposed Project will provide both its own water supply and wastewater treatment on site. Please refer to the discussion at Item 10 Hydrology and Water Quality. As such, there will be no impact to these resources.

d) and e) Less Than Significant Impact: As such, the Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and it will comply with federal, state, and local management and reduction statutes and regulations related to solid waste as applicable.

20.	**WILDFIRES**			
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	**SIGNIFICANT IMPACT**	**LESS THAN SIGNIFICANT IMPACT WITH MITIGATION**	**LESS THAN SIGNIFICANT IMPACT**	**NO IMPACT**

	a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
	b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
	c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
	d)	Expose people or structures to significant risks, including downslope or downstream flooding, or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Analysis:

Environmental Setting

As noted earlier, the proposed Project is a 3-story hotel which will consist of 105 guest rooms with an elevator, managers office, meeting room, in-house food preparation and breakfast area, and other typical hotel facilities (such as in-house and guest laundry, fitness center, various storage closets, etc.) and outdoor swimming pool/cabana building. Consistent with Tulare County parking requirements, the proposed Project includes 108 standard parking stalls, (6 of which will be handicap stalls). Utilities include a septic tank with filter and dripline system and new domestic well, and storm drainage will be retained on-site (with an option for biofiltration). The proposed Project is anticipated to have 12 employees, 70 customers, 1 delivery, and 1 shipment per day, for a total of 168 daily vehicle trips.

The proposed Project site is located in unincorporated community of Three Rivers in Tulare County (County), California, approximately thirty miles east of Visalia, the County Seat. The nearest city is Woodlake located approximately 15 miles west of the Project site. The community is approximately five miles south of the entrance of Sequoia National Park. It lies in a natural valley area created by the convergence of the North, Middle, and South Forks of the Kaweah River near the western edge of the Sierra Nevada Mountains.[322] "The Project area is located in the Sierra foothills on the western slope of the Sierra Nevada range at elevations between 700 and 3,000 feet. Geophysical factors including elevation, slope, hydrogeology and climate… This area is typified by undulating terrain that varies from relatively flat riparian valleys immediately adjacent to the North, South, and Middle Forks of the Kaweah River…Elevations along the State Highway 198 corridor range from approximately 772 feet at Lake Kaweah to a high elevation of 2400 feet east of the entrance to the Sequoia National Park."[323]

"The mild climate in Three Rivers is generally characterized as Mediterranean. The area tends to be clear, sunny, warm, dry and free of fog. The mean temperatures range from a low of 35° F in January to a high of 95° F in July. The average yearly rainfall for the area is approximately 18 inches with 90 percent of the precipitation falling between the months of November and April. The winds in the area are considered light, moving up the canyons in the mornings and down the canyons in the evening."[324]

Regulatory Setting

Federal

Federal responsibility areas (FRA) include lands administered by the following Federal Agencies: The United States Department of Agriculture Forest Service, The United States Department of the Interior, National Park Service, Fish and Wildlife Service, Bureau

[322] Tulare County. Three Rivers Community Plan 2018 Update. Draft Environmental Impact Report. Page. 3.8-2.

[323] Ibid.

[324] Tulare County. Three Rivers Community Plan 2018 Update. Page 73.

of Indian Affairs, and Bureau of Land Management, State Responsibility Area (SRA), Fire Safe Regulations (Title 14- Natural Resources Division 1.5, Department of Forestry Chapter 7, Fire Protection Subchapter 2, SRA Fire Safe Regulations Articles 1-5).. Although located very near areas of federal jurisdiction, and the fact that the proposed Project will not be funded by any federal sources, no federal wildland fire regulations would apply to the proposed Project.

State

State Responsibility Area (SRA)

"Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. The State Responsibility Area (SRA) is the area of the state where the State of California is financially responsible for the prevention and suppression of wildfires. Local responsibility areas (LRA) include incorporated cities, cultivated agriculture lands, and portions of the desert. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government.

SRA regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in SRA. These measures provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification. These regulations do not apply to existing structures, roads, streets and private lanes or facilities. These regulations apply as appropriate to all construction within the SRA approved after January 1, 1991, (see Figure 10) SRA Zones and SRA regulations in (Attachment A-7)."[325]

Local

Tulare County General Plan

The proposed Project is located in state responsibility areas (SRA) or lands classified as very high fire hazard severity zones, would the project: The following Tulare County General Plan 2030 Update policies could apply to this Project as it is located in or near fire hazards areas and/or areas with potential for wildland fires: *HS-1.5 Hazard Awareness and Public Education* wherein the County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures; *HS-6.1 New Building Fire Hazards* wherein the County shall ensure that all building permits in urban areas, as well as areas with potential for wildland fires, are reviewed by the County Fire Chief; *HS-6.2 Development in Fire Hazard Zones* wherein the County shall ensure that development in extreme or high fire hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable State and County fire standards; *HS-6.4 Encourage Cluster Development* wherein the County shall encourage cluster developments in areas identified as subject to high or very high fire hazard, to provide for more localized and effective fire protection measures such as consolidations of fuel build-up abatement, firebreak maintenance, firefighting equipment access, and water service provision; *HS-6.5 Fire Risk Recommendations* wherein the County shall encourage the County Fire Chief to make recommendations to property owners regarding hazards associated with the use of materials, types of structures, location of structures and subdivisions, road widths, location of fire hydrants, water supply, and other important considerations regarding fire hazard that may be technically feasible but not included in present ordinances or policies; *HS-6.8 Private Water Supply* wherein the County shall require separately developed dwellings with individual private water supply to provide an acceptable guaranteed minimum supply of water for fire safety, in addition to the amount required for domestic needs.

Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP)

"The 2011 Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) for the Tulare Operational Area (County and all cities and special districts) was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's 2008 Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short- and long-term strategies, involve planning, policy changes, programs, projects, and other activities."[326]

"The Tulare County Emergency Operations Plan (EOP) establishes an emergency management organization and assigns functions and tasks consistent with California's Standardized Emergency Management System (SEMS) and the National Incident Management

[325] Tulare County. Three Rivers Community Plan 2018 Update. Page 68.

[326] Tulare County. Tulare County General Plan 2030 Update. Draft Environmental Impact Report. 2018. Page 3.8-16.

System (NIMS). The plan provides for the integration and coordination of planning efforts of the County with those of the cities, special districts, and Tule River Tribe comprising the Operational Area, as well as neighboring jurisdictions and the State. The content of this plan is based on guidance provided by the State of California's Governor's Office of Emergency Services, the Federal Emergency Management Agency, and the US Department of Homeland Security. The intent of the EOP is to facilitate coordinated emergency response and post emergency short-term recovery by providing a framework for response to all significant emergencies, regardless of the nature of the event."[327]

a) – d) ***No Impact:*** The proposed Project is located in an active area of wildland fire occurrence. The proposed Project site has the potential to expose people or structures to an increased risk of loss, injury or death due to wildland fire events. "The Tulare County 2030 General Plan Update includes Three Rivers within a "very high" fire threat area containing fire hazards based on fuels, terrain, weather, and other relevant factors."[328]

"Emergency response and/or evacuation plans in the community of Three Rivers allow for the integration and coordinated response among local, state, and federal agencies. Three Rivers is considered a "Gateway" community and borders an international icon, Sequoia Kings Canyon National Park (SEKI). SEKI maintains its own emergency and law enforcement services and maintains mutual aid agreements with the County of Tulare. [329] "Emergency response and evacuation plans based on threats posed by wildland and structural fire issues in the Three Rivers UDB area benefit from the presence of federal, state, and local fire suppression services. The National Park Service (NPS) maintains fire brigades at Ash Mountain and Hammond Station. The Ash Mountain heliport provides emergency services with Helicopter 552 including search and rescue and fire suppression services. Cal Fire and Tulare County maintain fire stations in Three Rivers and nearby Lemon Cove. An air attack base can provide aerial tanker and air drop support within minutes and is located in nearby Porterville.[330]

"The County of Tulare and the State of California maintain policies and regulations that seek to minimize the exposure of foothill communities and mountain service centers to wildfire events.

In geographical terms, the Three Rivers UDB largely falls into CalFire's State Responsibility Area (SRA). CalFire oversight of at-risk locales, such as foothill communities, includes programs and regimens of wildland fire engineering, vegetation management programs, risk analysis, education, enforcement, and land use planning to the end of diminishing and ameliorating the risk posed by wildland fire.

Tulare County, in addition to a comprehensive reactive emergency plan and policy (2013 Emergency Operations Plan; See References Section) also outlines extensive preventative measures to combat the threat of wildland fire as delineated in the Health and Safety Element of the County's General Plan 2030 Update.

This plan offers a comprehensive approach to preempting wildland fire outbreaks in the Project area. As discussed in Chapter 10, section 10.6 of Health and Safety Element, the County commits to ensuring "[t]hat development in very high or high fire hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable State and County fire standards. This shall include promoting the use of fire resistant materials designed to reduce fire vulnerability within high or very high fire hazard areas through use of Article 86-A of the 2001 California Fire Code, SRA Fire Safe Regulations, and other nationally recognized standards, as may be updated periodically. Special consideration shall be given to the use of fire-resistant-materials and fire-resistant-construction in the underside of eaves, balconies, unenclosed roofs and floors, and other similar horizontal surfaces in areas with steep slopes. Ensure new development proposals contain specific fire protection plans, actions, and codes for fire engineering features for structures in Very High Fire Hazard Safety Zones including automatic sprinklers as required by applicable codes.

In its enumeration of fire-safe preventative measures, a summary analysis of the safeguards found in the Health and Safety Element indicates upwards of twenty-five safety policies endorsed by the County's planning department and enforced by the County's fire department to the end of minimizing exposure of County residents, visitors, and public and private property to the effects of urban and wildland fires. Included among these safeguards are the encouragement of cluster development, water supply specifications sufficient for fire suppression (public and private), the creation of fire buffers, integration of open space, wildfire risk reduction

[327] Ibid. 3.7-17.
[328] Op. Cit. 3.7-18 and -19.
[329] Op. Cit. 3.7-17.
[330] Op. Cit. 3.7-17.

related to climate change, and fuel breaks."[331] A complete listing of these policies is available in Chapter 10 of the Health and Safety Element located in the Tulare County General Plan 2030 Update.

Based on overlapping and cumulative regulatory and administrative controls, safety policies and through the implementation of applicable regulations found in both County and State sources, the proposed Project will not substantially impair an adopted emergency response plan or emergency evacuation plan, it will not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; and it will not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As such, the proposed Project would result in no impacts to this resource Item.

Cumulative Impact: As noted earlier, cumulative regulatory and administrative controls, safety policies and through the implementation of applicable regulations found in both County and State sources and the analysis above, and as there are no other hotel (or motel) or other development proposals within the vicinity of Three Rivers, the proposed Project will not significantly contribute to a cumulative impact to this resource.

21. MANDATORY FINDINGS OF SIGNIFICANCE

			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal species, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
	b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
	c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Analysis:

The analysis conducted in this Initial Study/Environmental Impact Report results in a preliminary determination that the Project will have a less than significant effect on the local environment. A final determination will be made following conclusion of the EIR process. The proposed Project is a 3-story hotel which will consist of 105 guest rooms with an elevator, managers office, meeting room, in-house food preparation and breakfast area, and other typical hotel facilities (such as in-house and guest laundry, fitness center, various storage closets, etc.) and outdoor swimming pool/cabana building. Consistent with Tulare County parking requirements, the proposed Project includes 108 standard parking stalls, (6 of which will be handicap accessible stalls). Utilities

[331] Op. Cit. 3.8-19 and -20.

include a septic tank with filter and dripline system and new domestic well, and storm drainage will be retained on-site (with an option for biofiltration). The proposed Project is anticipated to have 12 employees, 70 customers, 1 delivery, and 1 shipment per day, for a total of 168 daily vehicle trips.

a) Less Than Significant Impact With Mitigation: The analysis conducted in this Initial Study/Environmental Impact Report results in a preliminary determination that the Project will have a less than significant effect on biological and cultural resources from the construction and operation of the proposed Project will be less than significant with the incorporation of the **Mitigation Measures CUL-1** through **CUL -5** as contained in Item 5 Cultural Resources. The analysis contained in Item 4 Biological Resources concludes that this resource has the potential to be impacted and has included **Mitigation Measures BIO-1** through **BIO-16**. Accordingly, the proposed Project will involve no potential for significant impacts due to degradation of the quality of the environment, substantial reductions in the habitat of a fish or wildlife species, causing a fish or wildlife population to drop below self-sustaining levels, threatening to eliminate a plant or animal community, reduction in the number or restriction of the range of a rare or endangered plant or animal or elimination of important examples of the major periods of California history or prehistory. As such, the impact will be less than significant for biological resources and less than significant with mitigation for cultural and tribal cultural resources.

b) Less Than Significant Impact: The analysis conducted in this Initial Study/Environmental Impact Report results in a preliminary determination that the Project will have a less than significant cumulative effect. Projects considered in a cumulative analysis include those that would be constructed concurrently with the Project and those that would be in operation at the same time as the Project. The cumulative projects considered in this analysis are limited to projects that would result in similar impacts to the Project due to their potential to collectively contribute to significant cumulative impacts, as well as other development projects that would be located in the vicinity of the Project. There are no similar projects (i.e., hotel/motel) under consideration or construction located in and around a 10-mile radius of the Project site. As such, its physical distance and location would not contribute to a cumulative impact.

Tulare County staff have preliminarily determined that there are no projects that could have the potential to contribute to cumulative impacts. The Project was preliminarily determined to have no impacts to Aesthetics, Agricultural Resources, Air Quality, Energy, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems, and Wildfire. The following environmental impacts were determined to be less than significant: Air Quality, Biological Resources, Cultural Resources, Greenhouse Gases, Noise, and Tribal Cultural Resources.

c) **Less Than Significant Impact:** The proposed Project will not result in substantial adverse effect on human beings, either directly or indirectly. Mitigation measures are provided to reduce the Project's potential effects on Biological Resources, Cultural Resources (and Tribal Cultural Resources), Greenhouse Gases, and Noise to less than significant (see **BIO-1** thorough **BIO-16**, **CUL-1** through **CUL-3**, **GHG-1** and **GH-2**, and **NOI-1** through **NOI-5**). No additional mitigation measures will be required. Therefore, implementation of the proposed Project would result in a less than significant impact.

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Attachment “A”

Air Quality and Greenhouse Gases

Air Quality & Greenhouse Gas Assessment

Three Rivers Hampton Inn and Suites Project

Tulare County, California

Prepared For:

Ineffable Hospitality, Inc.

July 2020
(Updated October 2020)

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
µg/m^3	Micrograms per cubic meter; ppm = parts per million
AB	Assembly Bill
AQMD	Air Quality Management District
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EO	Executive Order
GHG	Greenhouse gas
GWP	Global warming potential

LIST OF ACRONYMS AND ABBREVIATIONS

IPCC	Intergovernmental Panel on Climate Change
LOS	Level of service
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen dioxide
NO_x	Nitric oxides
O_3	Ozone
OEHHA	California Office of Environmental Health Hazard Assessment
PM	Particulate matter
PM_{10}	Coarse particulate matter 10 micrometers or smaller
$PM_{2.5}$	Fine particulate matter 2.5 micrometers or smaller
ppb	Parts per billion
Project	Three Rivers Hampton Inn & Suites Project
RCPG	Regional Comprehensive Plan and Guide
ROGs	Reactive organic gases
SB	Senate Bill
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SO_x	Sulfur oxides
SR	State Route
SRA	Source receptor area
TACs	Toxic air contaminants
USEPA	U.S. Environmental Protection Agency
VOCs	Volatile organic compounds

1.0 INTRODUCTION

This report documents the results of an Air Quality and Greenhouse Gas (GHG) Emissions Assessment completed for the Three Rivers Hampton Inn and Suites Project (Project), which is the construction of a three-story hotel on approximately 2.8 acres in Tulare County. The Project site is currently undeveloped.

This assessment was prepared using methodologies and assumptions recommended by the San Joaquin Valley Air Pollution Control District (SJVAPCD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

1.1 Project Location and Description

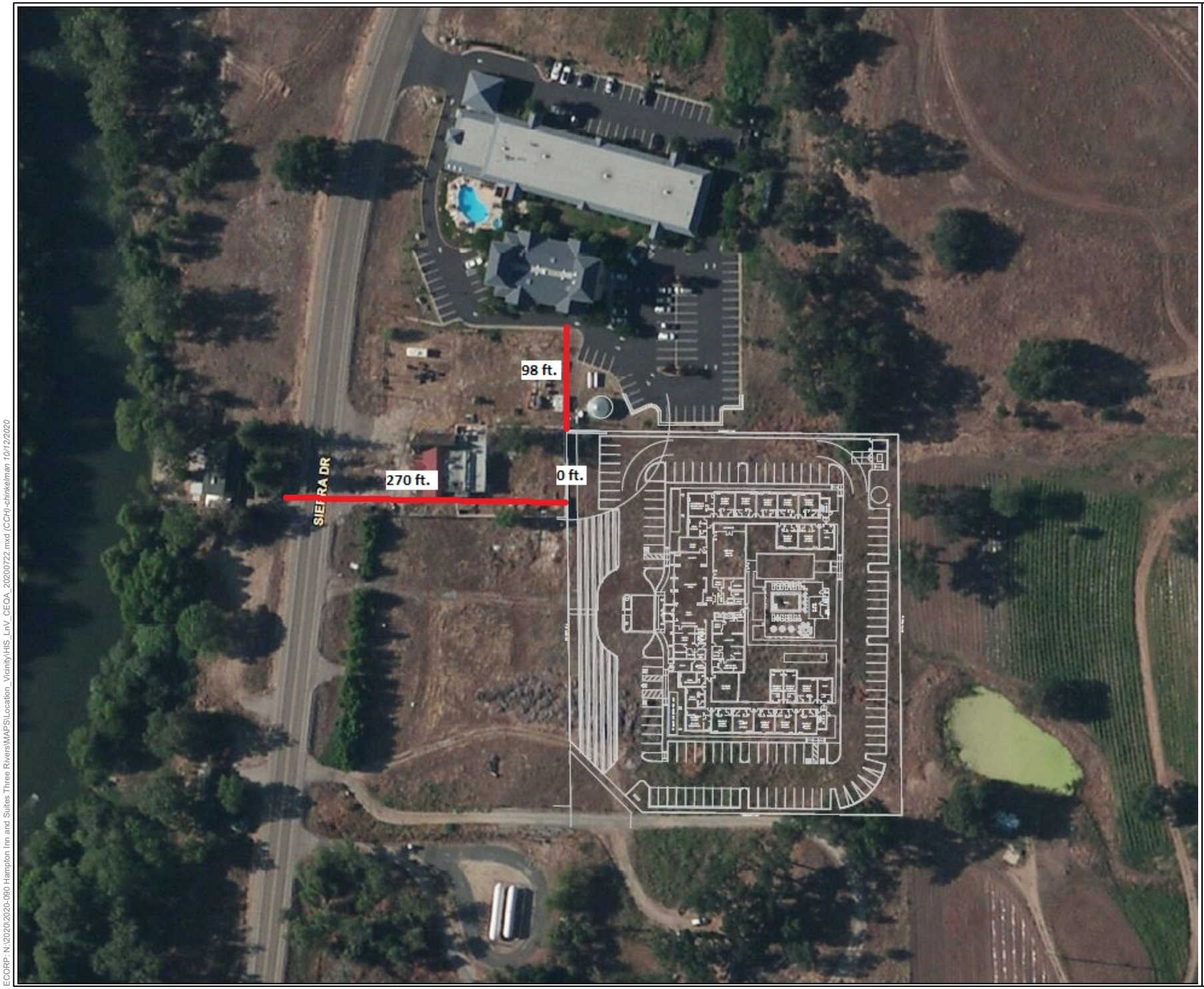
The Project site is located within Tulare county, in the community of Three Rivers. Three Rivers is located in the northern portion of Tulare County, bordered by Fresno, Inyo, and Kings Counties. The Project site is located on approximately 2.8 acres, just east of State Highway 198 (see Figure 1. *Project Location*). The Project is the development of a Hampton Inn on the currently undeveloped Project site. The Project site is surrounded by a Comfort Inn and Suites hotel and a vacant commercial building to the north, and farmland and rural housing to the east, south, and west.

The Project is the development of a 105-room hotel with 108 parking spaces. The hotel is proposed to be three stories tall. Aside from the 105 guest rooms, the hotel is proposed to contain a meeting room, lobby, breakfast and food preparation areas, laundry, an employee breakroom, and more rooms typical of a moderate to high-end hotel. Other onsite infrastructure would include a swimming pool, two water tanks and wells, and a trash enclosure.

Per the Traffic Study prepared for the Project, the Project is conservatively anticipated to generate 860 additional one-way vehicle trips per day on Saturdays and 625 additional one-way vehicle trips per day on Sundays (VRPA 2020). Based on the CalEEMod defaults for Tulare County for weekday trip generation, the Project is anticipated to generate 858 additional one-way vehicle trips per day on weekdays.

A construction period of approximately one year is anticipated, with construction likely to begin in summer of 2021. Project construction is anticipated to include site preparation, grading, building construction, paving, and painting of buildings and parking space and road lines.

The Proposed Project site is designated for *Urban Development* in the Tulare County General Plan; however, the Project site is located in a generally rural area.



Map Features

Site Plan

Sources: ESRI, USGS

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Map Date: 10/12/2020

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Scale in Feet
0 50 100

Figure 1. Project Location and Vicinity

2020-090 Hampton Inn and Suites Three Rivers

2.0 AIR QUALITY

2.1 Air Quality Setting

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that increase the potential for high levels of regional and local air pollutants. These factors are discussed below, along with the current regulatory structure that applies to the San Joaquin Valley Air Basin (SJVAB), which encompasses the Project site, pursuant to the regulatory authority of the SJVAPCD.

2.1.1 San Joaquin Valley Air Basin

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The SJVAB occupies the southern two-thirds of the Central Valley and includes the community of Three Rivers. The SJVAB is mostly flat, less than 1,000 feet in elevation, and is surrounded on three sides by the Sierra Nevada, Tehachapi, and Coast Range mountains. This bowl-shaped feature forms a natural barrier to the dispersion (spreading over an area) of air pollutants. As a result, the SJVAB is highly susceptible to pollutant accumulation over time (CARB 2003).

Climate and Meteorology

The climate in the SJVAB is strongly influenced by the presence of mountain ranges. The mountains create a partial rain shadow over the valley and block the free circulation of air, trapping stable air in the valley for extended periods. The climate is semi-arid and is characterized by long, hot, dry summers and cool, wet, and foggy winters. Based on historical data obtained from Weatherspark, the hot season in Visalia, located approximately 22 miles southwest of Three Rivers, lasts from June 1 to September 22, with an average daily high temperature above 88°F. The hottest day of the year is July 16, with an average high of 96°F and low of 65°F. The cool season lasts from November 20 to February 21, with an average daily high temperature below 64°F. The coldest day of the year is December 22, with an average low of 38°F and high of 56°F. The rainy period of the year lasts for seven months, from October 8 to May 8, with a sliding 31-day rainfall of at least 0.5 inches. The most rain falls during the 31 days centered around January 2, with an average total accumulation of 2.6 inches. The windier part of the year lasts from April 4 to July 23, with average wind speeds of more than 5.1 miles per hour. The windiest day of the year is May 30, with an average hourly wind speed of 5.9 miles per hour. The calmer time lasts from July 23 to April 4. The calmest day of the year is November 11, with an average hourly wind speed of 4.3 miles per hour (Weatherspark 2020).

Atmospheric Stability and Inversions

Stability describes the relative resistance of the atmosphere to vertical motion, which in turn mixes the air. The stability of the atmosphere is dependent on the vertical distribution of temperature with height. Unstable conditions often occur during daytime hours when solar heating warms the lower atmospheric layers while the upper layers remain cold. In contrast, an inversion is a layer of warmer air over a layer of cooler air. Inversions influence the mixing depth of the atmosphere, which is the vertical depth available

for diluting air pollution near the ground. The SJVAB experiences both surface-based and elevated inversions. The shallow surface-based inversions can be present in the morning but are often broken by daytime heating of the air layers near the ground. The deep, elevated inversions occur less frequently than the surface-based inversions but generally result in more severe air stagnation. The surface-based inversions occur more frequently in the fall, and the stronger elevated inversions usually occur during December and January. These naturally occurring conditions can make local air quality significantly worse than they would be without the inversions and the stagnation created by regional weather and topography.

2.1.2 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 2-1.

Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manmade Sources	Human Health & Welfare Effects
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, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, 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.
PM_{10} & $PM_{2.5}$	Power plants, steel mills, 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; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

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

Carbon Monoxide

CO in the urban environment is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and NO_2, attribute to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROGs and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. NO_x forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

Particulate Matter

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and small than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

2.1.3 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. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM 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 (USEPA 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. DPM 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.

2.1.4 Ambient Air Quality

Ambient air quality at the Project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region. As described in detail below, the region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$, and PM_{10} (CARB 2018). The Visalia monitoring station, located at 310 N. Church St., Visalia, CA 93291, located approximately 22 miles southwest of the Project site monitors ambient concentrations of O_3, $PM_{2.5}$, and PM_{10}. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the Project area.

Table 2-2 summarizes the published data concerning O_3, $PM_{2.5}$ and PM_{10} since 2016 for each year that the monitoring data is provided.

Table 2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2016	2017	2018
O_3			
Max 1-hour concentration (ppm)	0.098	0.109	0.112
Max 8-hour concentration (ppm) (state/federal)	0.083 / 0.083	0.092 / 0.091	0.095 / 0.094
Number of days above 1-hour standard (state/federal)	1 / 0	9 / 0	8 / 0
Number of days above 8-hour standard (state/federal)	19 / 0	65 / 6	58 / 7
PM_{10}			
Max 24-hour concentration (µg/m3) (state/federal)	132.5 / 137.1	145.7 / 144.8	159.6 / 153.4
Number of days above 24-hour standard (state/federal)	* / 0	135.9 / 0	164.4 / 0
$PM_{2.5}$			
Max 24-hour concentration (µg/m3) (state/federal)	132.5 / 137.1	145.7 / 144.8	159.6 / 153.4
Number of days above federal 24-hour standard	21.3	26.7	42.3

Source: CARB 2019a
µg/m^3 = micrograms per cubic meter; ppm = parts per million
* = Insufficient data available

The USEPA 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} and $PM_{2.5}$ 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 Tulare County portion of the SJVAB, which encompasses the Project site, is included in Table 2-3.

Table 2-3. Attainment Status for the San Joaquin Valley Air Basin

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/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 nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$ standards (CARB 2018).

2.1.5 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who 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.

The nearest sensitive receptors to the Project site are the Comfort Inn and Suites located approximately 98 feet north of the Project site boundary, the vacant commercial building located approximately zero feet west of the Project site boundary, and a residence located across State Highway 198 from the site, approximately 270 feet to the west. The distance to the Comfort Inn and Suites was measured from the property line of the Proposed Project to the portion of the Comfort Inn and Suites property line which is located adjacent to the nearest hotel building on the property (see Figure 1). The parking lot located in the southeast section of the Comfort Inn and Suites site is not considered to be the nearest point to the sensitive receptor, as visitors to the hotel would spend the majority of their stay in their hotel room, in the nearby community center, and/or in Sequoia and Kings Canyon National Parks, thus remaining in the parking lot for a relatively short duration. In addition, hotel staff would spend relatively little time in the hotel parking lot.

2.2 Regulatory Framework

2.2.1 Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA 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 (CO_2) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO_2.

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 USEPA 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 2-3 lists the federal attainment status of the SJVAB for the criteria pollutants.

2.2.2 State

California Clean Air Act

The California Clean Air Act (CCAA) allows the state 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, 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 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 USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register.

The SJVAPCD is the agency primarily responsible for ensuring that national and state ambient air quality standards are not exceeded and that air quality conditions are maintained in the SJVAB. In an attempt to achieve NAAQS and CAAQS and maintain air quality, the air district has completed the following air quality attainment plans and reports, which together constitute the SIP for the portion of the SJVAB encompassing the Project:

- **2004 Extreme Ozone Attainment Demonstration Plan and 2013 Plan for the Revoked 1-Hour Ozone Standard**. The SJVAPCD initially adopted this plan in 2004 to address EPA's 1-hour ozone standard. Although the EPA approved the SJVAPCD's 2004 plan in 2010, the EPA withdrew this approval as a result of a court ruling in November 2012. The SJVAPCD adopted a new plan for the EPA's revoked 1-hour ozone standard in September 2013 (SJVAPCD 2013).

- **2007 Ozone Plan**. The Ozone Plan, approved in 2007, contains a comprehensive list of regulatory and incentive-based measures to reduce emissions and particulate matter with the goal of addressing the EPA's standards. The 2007 Ozone Plan calls for a 75 percent reduction of ozone-forming NOx emissions (SJVAPCD 2007a). These NO_x reductions are preferred and essential to meeting the new 8-hour ozone and $PM_{2.5}$ standards. The plan calls for new and more stringent rules and regulations for stationary sources, new and more stringent tail-pipe emission standards for mobile sources, emission standards for locomotives, local regulations and voluntary measures to reduce and/or mitigate mobile source emissions, incentive-based measures, and alternative compliance programs. This plan also addresses EPA's 8-hour ozone standard of 84 parts per billion (ppb), which was established by EPA in 1997 (SJVAPCD 2007a).

- **2009 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plan**. The SJVAPCD adopted the Reasonably Available Control Technology (RACT) Demonstration for Ozone State Implementation Plan in 2009. The Clean Air Act requires RACT for certain sources in all nonattainment areas. The SJVAPCD is required to ensure the EPA's Control Techniques Guidance (CTG) is being implemented through SJVAPCD regulations. The 42 CTGs were developed to control major sources of emissions (SJVAPCD 2009).

- **2016 Plan for the 2008 8-Hour Ozone Standard**. The Ozone Plan, approved in 2016, contains a comprehensive list of regulatory and incentive-based measures to reduce emissions and particulate matter with the goal of addressing the EPA's standards. The plan calls for new and more stringent rules and regulations for stationary sources, new and more stringent tail-pipe emission standards for mobile sources, emission standards for locomotives, local regulations and voluntary measures to reduce and/or mitigate mobile source emissions, incentive-based measures, and alternative compliance programs. This plan satisfies CAA requirements and ensures expeditious attainment of the 75 parts per billion 8-hour ozone standard (SJVAPCD 2016a).

- **2020 Reasonably Available Control Technology Demonstration Plan**. The SJVAPCD adopted the 2020 Reasonably Available Control Technology (RACT) Demonstration Plan for the 2015 8-Hour Ozone Standard on June 18, 2020. The Plan guides implementation of RACT requirements for sources subject to EPA Control Techniques Guidelines (CTGs) and for major sources of VOCs and NOx, to reduce ozone emissions and help attain ozone reduction goals (SJVAPCD 2020a).

- **2007 PM_{10} Maintenance Plan and Request for Redesignation**. In 2007, the SJVAPCD adopted the 2007 PM_{10} Attainment Plan to ensure the continued attainment of the EPA's PM_{10} standard. Since the EPA determined that the air basin had attained the federal PM_{10} standards on October 30, 2006, the valley is designated as an attainment area (SJVAPCD 2007b).

- **2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard**. In 2016, the SJVAPCD adopted the 2016 $PM_{2.5}$ Plan to address the EPA's 24-hour standards. The plan utilizes the best available information to develop a strategy to demonstrate attainment of the federal standard for $PM_{2.5}$. A number of local strategies are included in the plan, including regulations to address stationary sources, use of a risk-based approach to prioritize measures to expedite attainment standards, incentive measures, technology advances, policy efforts to shape new legislation, and public outreach (SJVAPCD 2016b).
- **2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards**. This Plan outlines a strategy to attain the federal health-based 1997, 2006, and 2012 national ambient air quality standards (standards, or NAAQS) for fine particulate matter (PM2.5); as expeditiously as considered practical by the SJVAPCD. The EPA 1997 standard for $PM_{2.5}$ is an annual average standard of 15 micrograms per cubic meter ($\mu g/m^3$) and a 24-hour average standard of 65 $\mu g/m^3$, the 2006 standard is a 24-hour average standard of 35 $\mu g/m^3$,and the 2012 annual standard is an annual PM2.5 standard of 12 $\mu g/m^3$ (SJVAPCD 2018).

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

CARB's Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (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 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 (HRA) 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.

2.2.3 Local

San Joaquin Valley Air Pollution Control District

The local air quality agency affecting the SJVAB is the San Joaquin Valley Air Pollution Control District (SJVAPCD), which is charged with the responsibility of implementing air quality programs and ensuring that national and state ambient air quality standards are not exceeded and that air quality conditions are maintained in the SJVAB. In an attempt to achieve national and state ambient air quality standards and maintain air quality, the air district has completed several air quality attainment plans and reports, which together constitute the State Implementation Plan (SIP) for the portion of the SJVAB encompassing the Project.

The SJVAPCD has also adopted various rules and regulations for the control of stationary and area sources of emissions. Provisions applicable to the Proposed Project are summarized as follows:

- **Regulation IV (Prohibitions, Rule 4101 Visible Emissions.** The purpose of this rule is to prohibit the emissions of visible air contaminants to the atmosphere.. It prohibits emissions of visible air contaminants into the atmosphere for a period or periods aggregating more than three minutes in any one hour which exceeds opacity or shade standards.
- **Regulation IV (Prohibitions), Rule 4102, Nuisance.** The purpose of this rule is to protect the health and safety of the public. The rule prohibits discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.
- **Regulation IV (Prohibitions), Rule 4601, Architectural Coatings.** The rule limits volatile organic compound (VOC) emissions from architectural coatings and specifies practices for proper storage, cleanup, and labeling requirements. Rule 4601 applies to "any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the District." Materials covered by the rule include adhesives, architectural coatings, paints, varnishes, sealers, stains, concrete curing compounds, concrete/masonry sealers, and waterproofing sealers. The rule contains VOC content limits for colorants and coatings with different VOC limits for prior to and after January 1st, 2022.
- **Regulation IV (Prohibitions), Rule 4641, Cutback, Slow Curve and Emulsified Asphalt, Paving and Maintenance Operations.** The purpose of this rule is to limit VOC emissions by restricting the application and manufacturing of certain types of asphalt and maintenance operations and applies to the use of these materials. Specifically, certain types of asphalt cannot be used for penetrating prime coat, dust palliative, or other paving: rapid cure and medium cure cutback asphalt, slow cure asphalt that contains more than 0.5 percent of organic compound which evaporates at 500˚F or lower, and emulsified asphalt containing VOC in excess of 3 percent which evaporates at 500˚F or lower.
- **Regulation VIII (Fugitive PM_{10} Prohibitions), Rules 8021–8071, Fugitive PM_{10} Prohibitions.** The purpose of these rules is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources.
- **Regulation IX (Mobile and Indirect Sources), Rule 9510, Indirect Source Review.** This rule is the result of state requirements outlined in California Health and Safety Code Section 40604 and the SIP. The air district's SIP commitments were originally contained in the SJVAPCD's 2003 PM_{10} Plan and 2004 Extreme Ozone Attainment Demonstration Plan, which presented the SJVAPCD's strategy to reduce PM_{10} and NO_x in order to reach the ambient air pollution standards on schedule, which had been 2010. The plans quantify the reduction from current SJVAPCD rules and

proposed rules, as well as state and federal regulations, and then model future emissions to determine whether the SJVAPCD may reach attainment for applicable pollutants. This rule is meant to reduce emissions of NO_x and PM_{10} from new development projects that attract or generate motor vehicle trips. In general, new development contributes to the air pollution problem in the SJVAB by increasing the number of vehicles and vehicle miles traveled. Although newer, cleaner technology is reducing per-vehicle pollution, the emissions increase from new development partially offsets emission reductions gained from technology advances.

Per Section 2.1, this rule applies to any applicant that seeks to gain a final discretionary approval for a development project, or any portion thereof that meets certain size and use requirements. Per Section 2.2, this rule also applies to any applicant that seeks to gain approval from a public agency for a large development project that meets certain size and use requirements. Rule 9510 applies to the Project under Section 2.2, as the Project is otherwise permitted by-right and is 10,000 square feet or more of commercial space. In accordance with this rule, developers of larger residential, commercial, and industrial projects are required to reduce smog-forming NO_x and PM_{10} emissions from their projects' baselines as follows (SJVAPCD 2017):

- 20 percent of construction NO_x exhaust
- 45 percent of construction PM_{10} exhaust
- 33 percent of operational NO_x over 10 years
- 50 percent of operational PM_{10} over 10 years

These reductions are intended to be achieved through incorporation of on-site reduction measures. If, after implementation of on-site emissions reduction measures project emissions still exceed the minimum baseline reduction, the Indirect Source Review requires a project applicant to pay an off-site fee to the SJVAPCD, which is then used to fund clean-air projects within the air basin.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

1) Conflict with or obstruct implementation of any applicable air quality plan.

2) 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) Expose sensitive receptors to substantial pollutant concentrations.

4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the SJVAPCD. 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 calculated using CalEEMod model defaults for Tulare County.

Operational air pollutant emissions were based on the Project site plans and the estimated weekend traffic trip generation rates calculated by VRPA Technologies, Inc. (2020), and the CalEEMod defaults for Tulare County for weekday trip generation.

2.3.3 Impact Analysis

Project Construction-Generated Criteria Air Quality Emissions

Construction associated with the Proposed Project would generate short-term emissions of criteria air pollutants, including ROG, CO, NO_X, SOx, PM_{10}, and $PM_{2.5}$. The largest amount of ROG, CO, SOx, and NO_X emissions would occur during the earthwork phase. PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to and from the site. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

During construction activities, the Project would be required to comply with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions). The purpose of this regulation is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources. For instance, the Project applicant would be required to prepare a dust control plan. Construction activities anywhere within the regulatory jurisdiction of the SJVAPCD, including the Proposed Project site, may not commence until the SJVAPCD has approved or conditionally approved the dust control plan, which must describe all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. Regulation VIII specifies the following measures that may be included in the dust control plan to minimize fugitive dust emissions:

- Apply water to unpaved surfaces and areas.
- Use nontoxic chemical or organic dust suppressants on unpaved roads and traffic areas.

- Limit or reduce vehicle speed on unpaved roads and traffic areas to a maximum 15 miles per hour.
- Maintain areas in a stabilized condition by restricting vehicle access.
- Install wind barriers.
- During high winds, cease outdoor activities that disturb the soil.
- Keep bulk materials sufficiently wet when handling.
- Store and handle materials in a three-sided structure.
- When storing bulk materials, apply water to the surface or cover the storage pile with a tarp.
- Don't overload haul trucks. Overloaded trucks are likely to spill bulk materials.
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions.
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site.
- Prevent trackout by installing a trackout control device.
- Clean up trackout at least once a day. If along a busy road or highway, clean up trackout immediately.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.

The SJVAPCD's (2015) Guidance for Assessing and Mitigating Air Quality Impacts identifies significance thresholds for ROG, CO, and NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Construction-generated criteria air pollutant emissions associated with the Proposed Project were calculated using CalEEMod. Predicted maximum annual construction-generated emissions of criteria air pollutants for the Proposed Project are summarized in Table 2-4.

Table 2-4. Construction-Related Emissions - Fugitive PM_{10} Prohibitions Included

Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Annual (Maximum Tons per Year)						
Year One Construction (2021)	0.71	2.65	2.62	0.00	0.21	0.14
Year Two Construction (2022)	0.20	0.71	0.78	0.00	0.05	0.03
SJVAPCD Potentially Significant Impact Threshold	*10*	*10*	*100*	*27*	*15*	*15*
Exceed SJVAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SJVAPCD Regulation VIII. The specific regulation applied in CalEEMod was watering unpaved surfaces two times per day.

Emissions account for the site preparation and grading for 2.8 acres.

As shown in Table 2-4, construction-generated emissions would not exceed SJVAPCD significance thresholds.

In addition to the SJVAPCD criteria air pollutant thresholds, SJVAPCD Rule 9510, Indirect Source Review, Section 2.2, aims to fulfill the District's emission reduction commitments in the PM_{10} and Ozone Attainment Plans. This rule applies to construction projects within the jurisdiction of the SJVAPCD which upon full build-out will include any one of the following:

- 250 residential units;
- 10,000 square feet of commercial space;
- 125,000 square feet of light industrial space;
- 500,000 square feet of heavy industrial space;
- 100,000 square feet of medical office space;
- 195,000 square feet of general office space;
- 45,000 square feet of educational space;
- 50,000 square feet of government space;
- 100,000 square feet of recreational space; or
- 45,000 square feet of space not identified above..

This rule also applies to any transportation or transit project where construction exhaust emissions equal or exceed two tons of NO_x or two tons of PM_{10}. The project developers are required to reduce concentrations of NO_x by 20 percent and PM_{10} by 45 percent during construction activities. Development projects that have a mitigated baseline below two tons per year of NOx and two tons per year of PM_{10} shall be exempt from the requirements per Rule 9510 (SJVAPCD 2017).

The Project is proposing the construction of more than 10,000 square feet of commercial space, permitted by-right. Thus, adherence to Rule 9510 is required of the Proposed Project. In accordance with Rule 9510, the Project applicant is required to prepare a detailed air impact assessment (AIA) for submittal to the SJVAPCD, which demonstrates reduction of NO_x emissions from the Project's baseline by 20 percent and a reduction of PM_{10} by 45 percent. Therefore, the following mitigation is required.

Mitigation Measures

AQ-1 In accordance with SJVAPCD Rule 9510, a detailed air impact assessment (AIA) shall be prepared detailing the specific construction requirement (i.e., equipment required, hours of use, etc.). In accordance with this rule, emissions of NO_X from construction equipment greater than 50 horsepower used or associated with the development Project shall be reduced by 20 percent from baseline (unmitigated) emissions and PM_{10} shall be reduced by 45 percent. The Project shall demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit.

While the specific emission reduction measures will be developed to the satisfaction of the SJVAPCD, the following measures would reduce short-term air quality impacts attributable to the Proposed Project consistent with Rule 9510:

- During all construction activities, all diesel-fueled construction equipment including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors shall be of a certified clean fleet.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. Equipment maintenance records shall be kept on-site and made available upon request by the SJVAPCD or the County.
- The Project applicant shall comply with all applicable SJVAPCD rules and regulations. Copies of any applicable air quality permits and/or monitoring plans shall be provided to the County.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *Tulare County*

As demonstrated in Table 2-5, implementation of mitigation measure AQ-1 would reduce annual NO_x emissions by as much as 75 percent during each phase of construction and would reduce annual PM_{10} emissions by more than 60 percent, which is far beyond the reduction needed to achieve the SJVAPCD Rule 9510 target. The actual emissions reduction would depend on the construction fleet utilized for construction, as clean fleet vehicles vary in emissions.

Table 2-5. Construction Related NO_x and PM_{10} Emissions- Baseline and Mitigated (tons per year)			
Construction Year	**NO_x Baseline**	**NO_x Mitigated**	**Percent Reduction**
Year One Construction (2021)	2.65	0.61	77%
Year Two Construction (2022)	0.71	0.18	75%
SJVAPCD Potentially Significant Impact Threshold			**20%**
Construction Year	**PM_{10} Baseline**	**PM_{10} Mitigated**	**Percent Reduction**
Year One Construction (2021)	0.19	0.07	63%
Year Two Construction (2022)	0.05	0.02	60%
SJVAPCD Potentially Significant Impact Threshold			**45%**

Source: CalEEMod version 2013.2.2. See Attachment A for emission outputs
Notes: Percent reduction calculated using ((baseline-mitigated) / baseline) = percent reduction

As previously stated, construction-generated emissions would not exceed SJVAPCD significance thresholds. However, the Project is the construction of a by-right commercial project over 10,000 square feet, instigating the implementation of Rule 9510. Rule 9510 requires a project to reduce NO_x emissions from the Project's baseline by 20 percent and reduce annual PM_{10} emissions by 45 percent. Mitigation measure AQ-1 would result in a greater than required reduction in NO_x and PM_{10} emissions from baseline for all construction activities. Note that the actual emissions reduction would depend on the construction fleet utilized for construction, as clean fleet vehicles vary in emissions. Since the project's emissions would not exceed SJVAPCD thresholds, no exceedance of the ambient air quality standards would occur, and no health effects from project criteria pollutants would occur.

Project Operations Criteria Air Quality Emissions

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's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Implementation 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 and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Table 2-6 summarizes operational emissions from the Proposed Project.

The SJVAPCD's (2015) Guidance for Assessing and Mitigation Air Quality Impacts identifies significance thresholds for ROG, CO, and NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Operational-generated O_3 precursor emissions associated with the both Proposed Project were calculated using CalEEMod. Predicted maximum annual operational-generated emissions of criteria air pollutants for the Proposed Projects are summarized in Table 2-6.

Table 2-6. Operational Emissions						
Emission Source	**Maximum Pollutants (tons per year) – Operations Commencing 2022**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Proposed Project Annual Emissions						
Area	0.33	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.08	0.07	0.00	0.00	0.00
Mobile	0.24	2.05	2.24	0.00	0.60	0.16
Total	**0.58**	**2.14**	**2.32**	**0.00**	**0.60**	**0.17**
SJVAPCD Significance Threshold	*10*	*10*	*100*	*27*	*15*	*15*
Exceed SJVAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emissions projections account for trip generation rates identified by VRPA Technologies, Inc. (2020) for weekend trips and CalEEMod default trips for Tulare County for weekday trips.

As indicated in Table 2-6, operational-generated emissions would not exceed SJVAPCD significance thresholds.

As previously mentioned, SJVAPCD Rule 9510 is intended to fulfill the region's emission reduction commitments in the SJVAPCD PM_{10} and Ozone Attainment Plans. The Proposed Project is subject to Rule 9510 and would be required to consult with the SJVAPCD regarding the specific applicability of Rule 9510 in relation to Project operations. In accordance with Rule 9510, the Project applicant would be required to prepare a detailed air impact assessment for submittal to the SJVAPCD demonstrating the reduction from the Project's baseline of NO_x emissions. The following mitigation is required.

Mitigation Measures

AQ-2 In accordance with SJVAPCD Rule 9510, a detailed air impact assessment shall be prepared detailing the operational characteristics associated with the Proposed Project. In accordance with this rule, operational emissions of NO_x shall be reduced by a minimum of 33.3 percent and operational emissions of PM_{10} must be reduced by a minimum of 50 percent over a period of ten years. (Emissions reductions are in comparison to the Project's operational baseline emissions presented in Table 2-6.) The Project would demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit.

Based on the findings of the air impact assessment, the applicant shall pay the SJVAPCD a monetary sum necessary to offset the required operational emissions that are not reduced by the emission reduction measures contained in the air impact assessment. The quantity of operational emissions that need to be offset will be calculated in accordance with the methodologies identified in Rule 9510, Indirect

Source Review, and approved by the SJVAPCD. Operational emissions reduction methods will be selected under the direction of the SJVAPCD according to the air impact assessment process detailed in, and required by Rule 9510, Indirect Source Review (see Rule 9510, subsection 5).

Timing/Implementation: *Prior to the issuance of building permits*

Monitoring/Enforcement: *County of Tulare Planning and Building Department*

Since the project's emissions do not exceed SJVAPCD thresholds, no exceedance of the ambient air quality standards would occur, and no health effects from project criteria pollutants would occur.

As previously identified, the Tulare County portion of the SJVAB is listed as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$, and PM_{10}. O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. PM can adversely affect the human respiratory system. As shown in Table 2-6, the Proposed Project would result in increased emissions of the O_3 precursor pollutants ROG and NO_x, PM_{10}, and $PM_{2.5}$, however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in the SJVAB is contained in the SJVAPCD air quality planning documents, previously described. The SJVAPCD air quality attainment plans and reports provide control measures that reduce emissions to attain federal ambient air quality standards by their applicable deadlines such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods. The CEQA thresholds of significance established by the SJVAPCD are designed to meet the objectives of regional air quality planning efforts and in doing so achieve attainment status with state and federal standards. As noted above, the Project would increase the emission of these pollutants, but would not exceed the thresholds of significance established by the SJVAPCD for purposes of reducing air pollution and its deleterious health effects.

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (Sierra Club v. County of Fresno [Friant Ranch, L.P.] [2018] 6 Cal.5th 502, Case No. S219783). Pursuant to Rule 8.520(f) of the Rules of the California Court, the SJVAPCD filed an amicus curiae brief in regard to this case. In the brief, SJVAPCD provided technical explanations as to why it may not be feasible for a project to relate the expected adverse air quality impacts to likely health consequences. As summarized below, for the reasons set forth by the SJVAPCD, the Proposed Project's air pollutant contribution currently cannot feasibly be directly related to likely health consequences. The technical demands for feasibly and accurately relating regional air pollutants to likely health consequences are too high for this Proposed Project at this time. The technical challenges are listed below, with the SJVAPCD amicus brief providing support on the findings for the Proposed Project:

- O_3 is not formed at the location of sources/emissions, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

  "For the so-called criteria pollutants, such as O_3, it may be more difficult to quantify health impacts. O_3 is formed in the atmosphere from the chemical reaction of NOx and VOC [ROG] in the presence of sunlight. It takes time and the influence of meteorological conditions for these reactions to occur, so O_3 may be formed at a distance downwind from the sources." [SJVAPCD p.11]

- O_3 and secondary PM formation is complex, which necessitates the use of more sophisticated modeling that is not reasonably feasible for the Project at this time. The Proposed Project, while much smaller in scale to the Friant Ranch project, similarly includes area wide sources and mobile sources.

  "Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of O_3 or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single 'point source,' but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site." [SJVAPCD p.9]

- The quantity of precursor emissions is not proportional to local O_3 and secondary PM concentration, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

  "Ground level O_3 (smog) is not directly emitted into the air but is formed when precursor pollutants such as NO_x and VOCs [ROG] are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight. Once formed, O_3 can be transported long distances by wind. Because of the complexity of O_3 formation, a specific tonnage amount of NO_x or VOCs [ROG] emitted in a particular area does not equate to a particular concentration of O_3 in that area." [SJVAPCD p.4]

  "Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x. Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area." [SJVAPCD p.5]

- Emissions do not cause health effects – it is the resulting concentration of criteria pollutants, which is influenced by sunlight, complex reactions, and transport, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

  "The disconnect between the tonnage of precursor pollutants (NOx, SOx and VOCs [ROG]) and the concentration of O_3 or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting O_3 or PM." [SJVAPCD p.5]

- Currently available modeling tools are appropriate for regional evaluations, but not individual projects like the Proposed Project.

  "For instance, the computer models used to simulate and predict an attainment date for the O_3 or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NOx, SOx and VOCs [ROG]) and the atmospheric chemistry and meteorology of the Valley… the models simulate future O_3 or PM levels based on predicted changes in precursor emissions Valley wide… The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which all of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment." [SJVAPCD p.6-7]

  "Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, "cumulative impacts."" [SJVAPCD p.8]

  "...the currently available modeling tools are equipped to model the impact of all emission sources in the Valley on attainment... Running the photochemical grid model used for predicting O_3 attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC [ROG] in the Valley) is not likely to yield valid information given the relative scale involved." [SJVAPCD p.9-10]

- The SJVAPCD indicates that it is currently impossible to accurately correlate project level emissions to specific health impacts.

  "Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like O_3 and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level." [SJVAPCD p.10]

For the reasons set forth above, it is not currently feasible to relate the Proposed Project's contribution of regional air pollutants to likely health consequences. The SJVAPCD is responsible for assessing air pollutant impacts regionally, and the potential health consequences from those on a regional basis. The current evaluation on the limitations and uncertainties of existing tools is consistent with SJVAPCD findings. Currently available regional modeling tools are not designed to capture changes in pollutant concentrations for this Proposed Project that would be meaningful. This is due in part to a relatively course spatial resolution (e.g., greater than 4 x 4 kilometers) which makes it speculative to discern regional Project impacts on air quality.

Conflict with the SJVAPCD Air Quality Attainment Plans

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a 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 to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The SJVAPCD prepared the 2004 Extreme Ozone Attainment Demonstration Plan, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2009 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plan, 2016 Plan for the 2008 8-Hour Ozone Standard, 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards, 2020 RACT Demonstration, and 2007 PM_{10} Maintenance Plan and Request for Re-designation. These plans collectively address the air basin's nonattainment status with the national and state O_3 standards as well as particulate matter by establishing a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and associated vehicle miles traveled projections for the region. SJVAPCD's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans.

The Project site is designated for *Urban Development* by the General Plan. The General Plan identifies the *Urban Development* designation as meant for development generally characterized by low to high density residential development, commercial development, industrial development, and typically supported by public services such as central water and sewer systems. The Project is consistent with this General Plan designation and would not exceed the population or job growth projections used by the SJVAPCD to develop its air quality attainment plans. Additionally, as shown in Table 2-4 and Table 2-6 above, both Project construction and Project operations would not generate emissions that would exceed SJVAPCD significance thresholds. Furthermore, the implementation of AQ-1 would reduce construction-generated emissions below what is required in Rule 9510 and AQ-2 would reduce operational-generated emissions or offset the emissions with payment of a fee, which is then used to fund clean-air projects within the air basin. Note that reductions in construction-generated emissions due to AQ-1 will vary per the fleet used. Regardless, AQ-1 would reduce construction-generated emissions below what is required in Rule 9510.The Project would be consistent with the emission-reduction goals of the SJVAPCD Attainment Plans.

Exposure of Sensitive Receptors to Toxic Air Contaminants

As previously described, 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 age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project site are the Comfort Inn and Suites located approximately 98 feet north of the Project site boundary, the vacant commercial building located approximately zero feet west of the Project

site boundary, and a residence located across State Highway 198 from the site, approximately 270 feet to the west. As stated previously, the distance to the Comfort Inn and Suites was measured from the property line of the Proposed Project to the portion of the Comfort Inn and Suites property line which is located adjacent to the nearest hotel building on the property (see Figure 1). The parking lot located in the southeast section of the Comfort Inn and Suites site is not considered to be the nearest point to the sensitive receptor, as visitors to the hotel would spend the majority of their stay in their hotel room, at the nearby community center, and/or in Sequoia and Kings Canyon National Parks, thus remaining in the parking lot for a relatively short duration. In addition, hotel staff would spend relatively little time in the hotel parking lot.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. However, as shown in Tables 2-4, the Project would not exceed the SJVAPCD construction emission thresholds. The portion of the SJVAB which encompasses the Project area is classified nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$, and PM_{10} (CARB 2018). Thus, existing O_3, PM_{10}, and $PM_{2.5}$ levels in the SJVAB are at unhealthy levels during certain periods.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the SJVAPCD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SJVAPCD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (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 outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions (mitigated) of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 0.07 pounds/day (see Attachment A). ($PM_{2.5}$ exhaust 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., $PM_{2.5}$). Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) As with O_3 and NO_x, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SJVAPCD's thresholds. Additionally, the Project would be required to comply with Regulation VIII, Rules 8021–8071- Fugitive PM_{10} Prohibitions and Rule 9510- Indirect Source Review, as described above, which limit the amount of fugitive dust generated during construction. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants. Although health risk due to TACs cannot be accurately quantified, based on quantitative and qualitative analysis of anticipated Project emissions, a significant health risk would not result.

In summary, the Project would not result in a potentially significant contribution to regional or localized concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Naturally Occurring Asbestos

Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally-occurring asbestos-containing soils. The Proposed Project is not located within an area designated by the State of California as likely to contain naturally-occurring asbestos (DOC 2011). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos.

Valley Fever

Coccidioidomycosis (CM), often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus (an organism that grows and feeds on dead or decaying organic matter) lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley fever (Coccidioidomycosis) is found in California, including Tulare County. In about 50 to 75 percent of people, valley fever causes either no symptoms or mild symptoms and those infected never seek medical care; when symptoms are more pronounced, they usually present as lung problems (cough, shortness of breath, sputum production, fever, and chest pains). The disease can progress to chronic or

progressive lung disease and may even become disseminated to the skin, lining tissue of the brain (meninges), skeleton, and other body areas.

Tulare County is considered a highly endemic area for valley fever. When soil containing this fungus is disturbed by ground-disturbing activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get valley fever. Fungal spores are small particles that can grow and reproduce in the body. The highest infection period for valley fever occurs during the driest months in California, between June and November. Infection from valley fever during ground-disturbing activities can be partially mitigated through the control of Project-generated dust. As noted, Project-generated dust would be controlled by adhering to SJVAPCD dust-reducing measures (Regulation VIII), which includes the preparation of a SJVAPCD-approved dust control plan describing all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity.

With minimal site grading and conformance with SJVAPCD Regulation VIII, dust from the construction of the Project would not add significantly to the existing exposure level of people to this fungus, including construction workers.

Operational Air Contaminants

Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract additional heavy-duty trucks that spend long periods queuing and idling at the site. Onsite Project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors. The maximum operation-related emissions of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 0.09 pounds per day, produced by the estimated 860 additional one-way vehicle trips per day on Saturdays, 625 additional one-way vehicle trips per day on Sundays, and 858 additional one-way vehicle trips per day on weekdays. Therefore, the Project would not be a source of TACs and there would be no impact as a result of the Project during operations. The Project would not have a high carcinogenic or non-carcinogenic risk during operation.

Carbon Monoxide Hot Spots

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. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. 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. In 1993, much of the state was designated nonattainment under the CAAQS and NAAQS for CO. Currently, the allowable CO emissions standard in

California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration across the entire state is now designated as attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. A study conducted in Los Angeles County by the South Coast Air Quality Management District (SCAQMD) is helpful in showing the amount of traffic necessary to result in a CO Hotspot, and can be used to demonstrate the traffic necessary to create a hots pot anywhere in California, including the Central Valley. The SCAQMD analysis prepared for CO attainment in the SCAQMD's *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 Air Quality Management Plan can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at 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. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). To establish a more accurate record of baseline CO concentrations affecting the SoCAB, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

Furthermore, the SJVAPCD Guidance for Assessing and Mitigating Impacts (2015b) includes the following CO hot spot criteria:

> If neither of the following criteria are met at all intersections affected by the developmental project, the project will result in no potential to create a violation of the CO standard:
>
> - A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
> - A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity.

According to the Traffic Study prepared for the Project, LOS at the SR 198 (Sierra Drive) and Project Driveway and SR 198 (Sierra Drive) and Old 3 Rivers Road intersections would not exceed target LOS 'D' for all the study scenarios. In addition, the Project is expected to generate 860 trips generated per day on Saturdays and the estimated 625 trips generated per day on Sundays (VRPA Technologies, Inc. 2020). Using CalEEMod trip generation defaults for Tulare County, 858 trips are anticipated to be generated on weekdays. Thus, based on Project traffic generation and resultant LOS on affected roadways, it can be determined that the Project would not result in CO hotspots.

It is acknowledged that the Project site is located relatively close to the entrance of the Sequoia National Park entrance. Historically, there have been instances when a substantial amount of automobiles are queued for entrance into the park and idling along the road as far out as to Three Rivers. However, such instances are uncommon and very unlikely to result in traffic volumes of over 100,000 vehicles per day. Thus, neither the Proposed Project nor the cumulative park plus Project traffic would not generate traffic volumes of more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values.

Odors

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 considered to be associated with odors.

In addition, per the SJVAPCD's Guidance to Conduct Detailed Analysis for Assessing Odor Impacts to Sensitive Receptors, this analysis of potential odor impacts contains a review of odor complaints for "similar facilities". Specifically, a records request for odor complaints submitted within the last three years involving the adjacent Comfort Inn and Suites was submitted on October 12, 2020. The SJVAPCD confirmed no odor complaints were found to be on file for the Three Rivers Comfort Inn and Suites within the last three years (SJVAPCD 2020b). As such, it is also expected that substantial odors would not be generated by the proposed hotel Project.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas 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 CO_2, methane (CH_4), and 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 3-1 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. 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 TACs, 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 3-1. Greenhouse Gases

Greenhouse Gas	Description
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.[1]
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.[2]
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. N_2O 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.[3]

Sources: [1]USEPA 2016a, [2] USEPA 2016b, [3] USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient 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.

3.1.1 Sources of Greenhouse Gas Emissions

In 2019, CARB released the 2019 edition of the California GHG inventory covering calendar year 2017 emissions. In 2017, California emitted 424.1 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of

California's GHG emissions in 2017, accounting for approximately 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (24 percent) and the electric power sector including both in- and out-of-state sources (15 percent) (CARB 2019b). Emissions of CO_2 are by-products 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. CO_2 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 CO_2 from the atmosphere.

3.2 Regulatory Framework

3.2.1 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 EO 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 GHG 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 Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), 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, which was 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 (about 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. 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 Edmund (Jerry) Brown, Jr., 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˚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 § 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 Renewables Portfolio Standard.

2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 standards are a major step toward meeting Zero Net Energy. According to the California Energy Commission, single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards and nonresidential buildings will use about 30 percent less energy (due mainly to lighting upgrades) (CEC 2018). The most significant efficiency improvement to the residential Standards include the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. These new standards apply only to certain nonresidential building types, as specified in the requirements.

3.2.2 Local

San Joaquin Valley Air Pollution Control District Climate Change Climate Action Plan

The SJVAPCD has adopted guidance and policy for implementation of the Climate Change Climate Action Plan (CCAP). The guidance and policy rely on the use of performance-based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change.

However, the BAU portion of the tiered approach is problematic based on the 2015 California Supreme Court Newhall Ranch decision, which stated that an GHG-related impact determination based on the BAU approach is "not supported by a reasoned explanation based on substantial evidence."

Tulare County Climate Action Plan

Tulare County adopted the Tulare County Climate Action Plan (CAP) in 2012. Since then, the CAP was updated in 2018 to establish GHG reduction targets which support the SB 32 2030 target signed by Governor Brown in 2016.

The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The 2030 target requires the State to reduce emissions by 40 percent below 1990 levels from the 2017 Scoping Plan and County data. The CAP identifies the County's fair share of reductions required to maintain consistency with the State target.

The CAP provides a CEQA consistency checklist for project review of projects below a certain size limit. Proposed development projects that are consistent with the emission reduction and adaptation measures included in the CAP and the programs that are developed as a result of the CAP, would be considered to have a less than significant cumulative impact on climate change and emissions consistent with CEQA Guidelines Section 15064(h)(3) (as amended to comply with SB 97).

Tulare County 2030 General Plan

The Tulare County General Plan contains numerous policies aimed at reducing GHG emissions. The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The 2030 target requires the State to reduce emissions by 40 percent below 1990 levels from the 2017 Scoping Plan and County data. The CAP identifies the County's fair share of reductions required to maintain consistency with the state target.

The CAP references the General Plan policies as tools for reducing GHG emissions. These policies are divided into the categories of Transportation Strategies, Building Energy Efficiency, Water Conservation Energy Savings, Solid Waste Reduction and Recycling, and Agricultural Programs and Incentives. The policies are aimed at County action and do not specifically mandate action at the project level.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to GHG emissions if it would:

1) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases or

2) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

The Appendix G thresholds for GHG's do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the

appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines § 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 California Code of Regulations [CCR] 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines § 15130(f)). As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines § 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines § 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The Tulare County CAP aims to reduce GHG emissions from development projects in Tulare County. The CAP builds on state and regional policies aimed at reducing GHG emissions consistent with the SB 32 2030 GHG reduction target. The CAP relies on policies of the Tulare County General Plan to guide development projects. In addition, the Project provides specific guidelines for determining if new development projects are consistent with the CAP. The CAP includes a progress report with metrics and benchmarks for tracking progress toward meeting the GHG reduction targets. The County's progress is on track for all metrics.

The CAP is utilized to evaluate the significance of the Project GHG emissions.

3.3.2 Methodology

Project GHG emissions were quantified using CalEEMod, version 2016.3.2. Project construction generated GHG emissions were primarily calculated using CalEEMod model defaults for Tulare County and the Project site plans. Operational GHG emissions were calculated based on the Project site plans, the estimated weekend traffic trip generation rates from VRPA Technologies, Inc. (2020), and the CalEEMod default traffic trips for Tulare County for weekday traffic trips. The Project is anticipated to generate 860 additional one-way vehicle trips per day on Saturdays, 625 additional one-way vehicle trips per day on Sundays, and 858 additional one-way vehicle trips per day on weekdays.

The traffic fleet mix defaults contained in the CalEEMod model are based on the average fleet mix of Tulare County.

3.3.3 Impact Analysis

Contribution of Greenhouse Gas Emissions at a Level that would Conflict with an Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

Project GHG emissions were quantified for disclosure purposes. The Tulare County CAP does not require quantification of emissions for projects less intense than a 500-unit subdivision or 100,000 square feet of retail or equivalent intensity for other uses. The Proposed Project would include approximately 72,000 square feet of commercial hotel space, and this is less intense than the threshold requiring GHG emissions quantification. However, the anticipated GHG emissions for the Project are quantified for disclosure purposes. The GHG emissions represent Project emissions prior to implementation of mitigation measures GHG-1 and GHG-2 (explained below), as the specific energy use offset from these measures cannot be determined until the scale and specifications of the renewable energy generation and electric vehicle (EV) charging are known.

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 3-2 illustrates the specific construction generated GHG emissions that would result from construction of the Project.

Table 3-2. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Year One Construction (2021)	420
Year Two Construction (2022)	126
Total Emissions	**546**

Source: CalEEMod version 2016.3.2. Refer to Attachment B for Model Data Outputs.

As shown in Table 3-2, Project construction would result in the generation of approximately 546 metric tons of CO_2e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. The amortized construction emissions are added to the annual average operational emissions.

Operations

Operation 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 3-3.

Table 3-3. Operational-Related GHG Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Construction Emissions (amortized over the 30-year life of the Project)	18
Area Source Emissions	0
Energy Source Emissions	295
Mobile Source Emissions	842
Solid Waste Emissions	31
Water Emissions	6
Total Emissions	**1,175**

Source: CalEEMod version 2016.3.2. Refer to Attachment B for Model Data Outputs.

As shown in Table 3-3, Project operations would result in the generation of approximately 1,175 metric tons of CO_2e annually.

The Tulare County CAP (2018) is a strategic planning document that identifies sources of GHG emissions within the County, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic policies and actions to reduce emissions from the development

project subject to CEQA. The GHG-reduction strategies in the Plan build key opportunities prioritized by County staff and members of the public.

To be consistent with the CAP, development projects less intense than a 500-unit subdivision or 100,000 square feet of retail or equivalent intensity for other uses can use the CAP consistency checklist. The checklist contains design features and measures that are used to determine consistency. The overarching CAP consistency requirements for all projects are outlined in Table 3-4.

Table 3-4. CEQA Project Requirements for Consistency with CAP

Item	Project Compliance?
Project helps to meet the density goals from the Tulare Blueprint	Yes
Consistency with General Plan policies	Yes
Consistency with Rural Valley Land Plans or Foothill Growth Management Plan development criteria	Yes
Consistency with Urban Growth Boundary expansion criteria	Yes
Consistency for development within Rural Community Urban Development Boundaries (UDB) and Hamlet Development Boundaries HDB, and Legacy Development Boundaries (LDB)	Yes

Source: Tulare County 2018
Note: Criteria as identified in the General Plan Planning Framework

The Project would comply with all applicable General Plan policies intended to reduce GHG emissions. The Project site in the community of Three Rivers and is covered by the Foothill Growth Management Plan of the 2030 General Plan (County of Tulare 2012). The Project would not conflict with the applicable policies of the Foothill Growth Management Plan. Furthermore, the Project would comply with the Land Use and Urban Policies of the 2030 General Plan. Finally, for the Project to be approved for development by the County of Tulare they would require the Project to meet the development requirements as they pertain to Rural Community Urban Development Boundaries and/or Hamlet Development Boundaries. The Project site is located within the Three Rivers Urban Development Boundary depicted within the 2030 General Plan. In addition, the Project is consistent with the 2009 Tulare County Regional Blueprint goals and objectives.

Furthermore, both the existing and the projected GHG inventories in the CAP were derived based on the land use designations and associated densities defined in the County's General Plan. The Proposed Project is consistent with the land use designation and development density presented in the General Plan. As previously stated, the Project site is designated by the 2030 General Plan as *Urban Development Boundaries* (zoned for commercial use). Since the Project is consistent with the General Plan, it is consistent with the urban development types, intensity, and patterns of land use envisioned for the site vicinity in the General Plan. As a result, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by the County to develop the CAP.

A more detailed review for compliance with CAP measures is required to ensure that a project is doing its part in reducing emissions. Table 3-5 provides a checklist containing all applicable measures that will provide reductions necessary to achieve CAP consistency.

Table 3-5. CAP Consistency Checklist (Applicable to the Project)

CAP Measure	Compliance	Project Compliant Prior to Mitigation?
Land Use: Project is consistent with the Tulare County General Plan policies listed in the CAP applicable to GHG emissions and sustainability.	Review for compliance during project review process.	Yes
Energy Efficiency: Project complies with current version of Title 24	Provide copy of the Title 24 Report demonstrating compliance with the applicable standards with Building Permit application.	Yes
Renewable Energy: Project includes solar panels or other alternative energy source meeting County Solar Ordinance or new Title 24 standards whichever is more stringent.	Include solar on building plans and provide Title 24 compliance reports with Building Permit applications.	No
EV Charging: Project meets charging installation/charging ready requirements of the CalGreen Code.	Include charging in building plans.	No
CalGreen Building Code Water: Project complies with indoor and outdoor water conservation measures.	Provide copy of report showing code compliance.	Yes
Water Conservation Landscaping:	Project complies with County water conservation ordinance requirements for landscaping.	Yes
Solid Waste: Project has access to recycling service for homes and businesses meeting CalRecycle requirements.	County verify that providers are in compliance with CalRecycle regulations regarding recycling and diversion of solid waste.	Yes

Source: Tulare County 2018

As shown in Table 3-4, the Project is consistent with the applicable General Plan Policies. In addition, the Project is required by California state law to meet the Title 24 energy efficiency requirements, comply with the CALGreen Building Water Code (California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations), and meet the California Model Water Efficient Landscape Ordinance (MWELO) requirements. Furthermore, the County mandates that applicable codified County standards are met by the Project and will enforce the implementation of these standards as a condition of approval. During the design review process, the County will mandate that the Project not only meets state MWELO standards, but complies with the specific requirements of the County water conservation ordinance requirements for landscaping. The County will also review the trash enclosure design to ensure solid waste pick-up is feasible and will ensure the Project meets the CalRecycle requirements. Further, the County must verify the Project is consistent with the General Plan policies, and the County requires all feasible GHG-reducing strategies of the CAP are incorporated into projects and their permits through development review and application of conditions of approval as applicable.

As shown in Table 3-5, the Project Preliminary Concept Design does not specify that the Project design includes EV charging and a renewable energy source. As such, mitigation measures GHG-1 and GHG-2 are required to for the Project to be consistent with the CAP.

Mitigation Measures

GHG-1 The Project must provide an onsite renewable energy system(s). The Project shall include solar panels or other alternative energy source meeting the County Solar Ordinance or new Title 24 standards, whichever is more stringent. The onsite renewable

energy system(s) must be installed as part of the construction process and be functional upon commencement of Project operation. The Project Proponent must include solar on building plans and provide Title 24 compliance reports with Building Permit applications to the County.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of Tulare Planning and Building Department*

GHG-2 The Project shall meet the charging installation/charging ready requirements of the CALGreen Code. The Project Proponent shall include EV charging accommodations as specified in the CALGreen Code in building plans for review and approval by the County, prior to commencement of Project construction.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of Tulare Planning and Building Department*

Following implementation of mitigation measures GHG-1 and GHG-2, the Project would be consistent with the Tulare County CAP for the purpose of meeting 2030 GHG emission reduction targets in compliance with SB 32.

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LIST OF ATTACHMENTS

Attachment A – CalEEMod Output Files

ATTACHMENT A

CalEEMod Output Files

Three Rivers Hampton Inn & Suites

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	108.00	Space	0.97	43,200.00	0
Hotel	105.00	Room	1.81	72,364.00	0
Recreational Swimming Pool	0.80	1000sqft	0.02	800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	549	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Three Rivers Hampton Innn & Suites - Tulare County, Annual

Project Characteristics - Southern California Edison improved their CO2 emissions to 549 lb/MWh in 2017.

Land Use - Project information is derived from the project feasibility study (HVS Consulting & Valuation 2020) , preliminary design (DVB Architecture 2020), and traffic study (VRPA Technologies, Inc. 2020).

Construction Phase - Building construction, paving, and painting will occur simultaneously.

Vehicle Trips - All trips attributed to hotel use. Traffic Impact Study Report (VRPA Technologies, Inc. 2020).

Energy Use -

Construction Off-road Equipment Mitigation - SJVAPCD Rule VII Fugitive PM10 prohibitions, rules 8021-8071. Required clean fleet is a MM aimed to reduce NOx and comply with Rule 9510.

Energy Mitigation - Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018).

Water Mitigation - CA water efficient appliance requirements.

Fleet Mix -

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	220.00
tblConstructionPhase	NumDays	10.00	220.00
tblLandUse	LandUseSquareFeet	152,460.00	72,364.00
tblLandUse	LotAcreage	3.50	1.81
tblProjectCharacteristics	CO2IntensityFactor	702.44	549
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	33.82	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.7116	2.6512	2.6238	4.8500e-003	0.0824	0.1301	0.2126	0.0267	0.1231	0.1498	0.0000	418.6831	418.6831	0.0829	0.0000	420.7563
2022	0.2086	0.7157	0.7842	1.4600e-003	0.0186	0.0333	0.0519	5.0200e-003	0.0316	0.0366	0.0000	126.2786	126.2786	0.0245	0.0000	126.8915
Maximum	**0.7116**	**2.6512**	**2.6238**	**4.8500e-003**	**0.0824**	**0.1301**	**0.2126**	**0.0267**	**0.1231**	**0.1498**	**0.0000**	**418.6831**	**418.6831**	**0.0829**	**0.0000**	**420.7563**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.4734	0.6119	2.7621	4.8500e-003	0.0690	6.6600e-003	0.0757	0.0203	6.6100e-003	0.0270	0.0000	418.6827	418.6827	0.0829	0.0000	420.7559
2022	0.1453	0.1844	0.8330	1.4600e-003	0.0186	1.9900e-003	0.0206	5.0200e-003	1.9700e-003	6.9900e-003	0.0000	126.2785	126.2785	0.0245	0.0000	126.8914
Maximum	**0.4734**	**0.6119**	**2.7621**	**4.8500e-003**	**0.0690**	**6.6600e-003**	**0.0757**	**0.0203**	**6.6100e-003**	**0.0270**	**0.0000**	**418.6827**	**418.6827**	**0.0829**	**0.0000**	**420.7559**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**32.76**	**76.35**	**-5.49**	**0.00**	**13.31**	**94.71**	**63.61**	**19.95**	**94.45**	**81.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2021	6-30-2021	0.7932	0.2364
2	7-1-2021	9-30-2021	1.2779	0.4220
3	10-1-2021	12-31-2021	1.2789	0.4230
4	1-1-2022	3-31-2022	0.9403	0.3360
		Highest	1.2789	0.4230

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3368	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8200e-003	3.8200e-003	1.0000e-005	0.0000	4.0700e-003
Energy	0.0138	0.1254	0.1053	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	356.8381	356.8381	0.0143	4.9100e-003	358.6578
Mobile	0.2432	2.0511	2.2490	9.0900e-003	0.5924	7.8000e-003	0.6002	0.1592	7.3500e-003	0.1665	0.0000	841.8615	841.8615	0.0420	0.0000	842.9121
Waste						0.0000	0.0000		0.0000	0.0000	12.5956	0.0000	12.5956	0.7444	0.0000	31.2050
Water						0.0000	0.0000		0.0000	0.0000	0.8600	3.9359	4.7960	0.0885	2.1300e-003	7.6438
Total	**0.5938**	**2.1764**	**2.3562**	**9.8400e-003**	**0.5924**	**0.0173**	**0.6098**	**0.1592**	**0.0169**	**0.1761**	**13.4556**	**1,202.6394**	**1,216.0950**	**0.8892**	**7.0400e-003**	**1,240.4229**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3368	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8200e-003	3.8200e-003	1.0000e-005	0.0000	4.0700e-003
Energy	9.8900e-003	0.0899	0.0755	5.4000e-004		6.8300e-003	6.8300e-003		6.8300e-003	6.8300e-003	0.0000	293.7170	293.7170	0.0122	3.9300e-003	295.1951
Mobile	0.2432	2.0511	2.2490	9.0900e-003	0.5924	7.8000e-003	0.6002	0.1592	7.3500e-003	0.1665	0.0000	841.8615	841.8615	0.0420	0.0000	842.9121
Waste						0.0000	0.0000		0.0000	0.0000	12.5956	0.0000	12.5956	0.7444	0.0000	31.2050
Water						0.0000	0.0000		0.0000	0.0000	0.6880	3.2054	3.8934	0.0708	1.7000e-003	6.1720
Total	**0.5899**	**2.1410**	**2.3265**	**9.6300e-003**	**0.5924**	**0.0146**	**0.6071**	**0.1592**	**0.0142**	**0.1734**	**13.2836**	**1,138.7877**	**1,152.0713**	**0.8695**	**5.6300e-003**	**1,175.4883**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.66**	**1.63**	**1.26**	**2.13**	**0.00**	**15.57**	**0.44**	**0.00**	**15.99**	**1.53**	**1.28**	**5.31**	**5.26**	**2.22**	**20.03**	**5.23**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/29/2021	5/3/2021	5	3	
2	Grading	Grading	5/4/2021	5/11/2021	5	6	
3	Building Construction	Building Construction	5/12/2021	3/15/2022	5	220	
4	Paving	Paving	5/12/2021	3/15/2022	5	220	
5	Architectural Coating	Architectural Coating	5/12/2021	3/15/2022	5	220	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.97

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 108,546; Non-Residential Outdoor: 36,182; Striped Parking Area: 2,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	49.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.3200e-003**	**0.0274**	**0.0161**	**4.0000e-005**	**2.3900e-003**	**1.0500e-003**	**3.4400e-003**	**2.6000e-004**	**9.7000e-004**	**1.2300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	3.4000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0796	0.0796	0.0000	0.0000	0.0796
Total	**5.0000e-005**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0796**	**0.0796**	**0.0000**	**0.0000**	**0.0796**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3000e-004	0.0000	9.3000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	1.9600e-003	0.0178	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**4.5000e-004**	**1.9600e-003**	**0.0178**	**4.0000e-005**	**9.3000e-004**	**6.0000e-005**	**9.9000e-004**	**1.0000e-004**	**6.0000e-005**	**1.6000e-004**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	3.4000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0796	0.0796	0.0000	0.0000	0.0796
Total	**5.0000e-005**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0796**	**0.0796**	**0.0000**	**0.0000**	**0.0796**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4800e-003	0.0606	0.0293	6.0000e-005		2.7500e-003	2.7500e-003		2.5300e-003	2.5300e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	**5.4800e-003**	**0.0606**	**0.0293**	**6.0000e-005**	**0.0197**	**2.7500e-003**	**0.0224**	**0.0101**	**2.5300e-003**	**0.0126**	**0.0000**	**5.4312**	**5.4312**	**1.7600e-003**	**0.0000**	**5.4751**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	8.0000e-005	8.6000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1989	0.1989	1.0000e-005	0.0000	0.1990
Total	**1.3000e-004**	**8.0000e-005**	**8.6000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1989**	**0.1989**	**1.0000e-005**	**0.0000**	**0.1990**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	3.9400e-003	0.0000	3.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6000e-004	3.2800e-003	0.0327	6.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	**7.6000e-004**	**3.2800e-003**	**0.0327**	**6.0000e-005**	**7.6700e-003**	**1.0000e-004**	**7.7700e-003**	**3.9400e-003**	**1.0000e-004**	**4.0400e-003**	**0.0000**	**5.4312**	**5.4312**	**1.7600e-003**	**0.0000**	**5.4751**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	8.0000e-005	8.6000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1989	0.1989	1.0000e-005	0.0000	0.1990
Total	**1.3000e-004**	**8.0000e-005**	**8.6000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1989**	**0.1989**	**1.0000e-005**	**0.0000**	**0.1990**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1718	1.3463	1.2233	2.1000e-003		0.0687	0.0687		0.0658	0.0658	0.0000	174.4249	174.4249	0.0343	0.0000	175.2828
Total	**0.1718**	**1.3463**	**1.2233**	**2.1000e-003**		**0.0687**	**0.0687**		**0.0658**	**0.0658**	**0.0000**	**174.4249**	**174.4249**	**0.0343**	**0.0000**	**175.2828**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1300e-003	0.1767	0.0337	4.5000e-004	0.0106	5.2000e-004	0.0111	3.0500e-003	4.9000e-004	3.5400e-003	0.0000	42.4268	42.4268	1.8800e-003	0.0000	42.4737
Worker	0.0178	0.0115	0.1181	3.0000e-004	0.0328	2.2000e-004	0.0330	8.7200e-003	2.0000e-004	8.9200e-003	0.0000	27.2845	27.2845	7.8000e-004	0.0000	27.3040
Total	**0.0230**	**0.1882**	**0.1518**	**7.5000e-004**	**0.0433**	**7.4000e-004**	**0.0441**	**0.0118**	**6.9000e-004**	**0.0125**	**0.0000**	**69.7113**	**69.7113**	**2.6600e-003**	**0.0000**	**69.7777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0277	0.3251	1.2546	2.1000e-003		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	174.4247	174.4247	0.0343	0.0000	175.2826
Total	**0.0277**	**0.3251**	**1.2546**	**2.1000e-003**		**2.9500e-003**	**2.9500e-003**		**2.9500e-003**	**2.9500e-003**	**0.0000**	**174.4247**	**174.4247**	**0.0343**	**0.0000**	**175.2826**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1300e-003	0.1767	0.0337	4.5000e-004	0.0106	5.2000e-004	0.0111	3.0500e-003	4.9000e-004	3.5400e-003	0.0000	42.4268	42.4268	1.8800e-003	0.0000	42.4737
Worker	0.0178	0.0115	0.1181	3.0000e-004	0.0328	2.2000e-004	0.0330	8.7200e-003	2.0000e-004	8.9200e-003	0.0000	27.2845	27.2845	7.8000e-004	0.0000	27.3040
Total	**0.0230**	**0.1882**	**0.1518**	**7.5000e-004**	**0.0433**	**7.4000e-004**	**0.0441**	**0.0118**	**6.9000e-004**	**0.0125**	**0.0000**	**69.7113**	**69.7113**	**2.6600e-003**	**0.0000**	**69.7777**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0482	0.3797	0.3732	6.5000e-004		0.0183	0.0183		0.0175	0.0175	0.0000	53.9968	53.9968	0.0104	0.0000	54.2573
Total	**0.0482**	**0.3797**	**0.3732**	**6.5000e-004**		**0.0183**	**0.0183**		**0.0175**	**0.0175**	**0.0000**	**53.9968**	**53.9968**	**0.0104**	**0.0000**	**54.2573**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0519	9.6300e-003	1.4000e-004	3.2700e-003	1.4000e-004	3.4000e-003	9.4000e-004	1.3000e-004	1.0800e-003	0.0000	13.0155	13.0155	5.6000e-004	0.0000	13.0294
Worker	5.1000e-003	3.1600e-003	0.0332	9.0000e-005	0.0102	7.0000e-005	0.0102	2.7000e-003	6.0000e-005	2.7600e-003	0.0000	8.1458	8.1458	2.1000e-004	0.0000	8.1512
Total	**6.5700e-003**	**0.0551**	**0.0428**	**2.3000e-004**	**0.0134**	**2.1000e-004**	**0.0136**	**3.6400e-003**	**1.9000e-004**	**3.8400e-003**	**0.0000**	**21.1612**	**21.1612**	**7.7000e-004**	**0.0000**	**21.1806**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.5700e-003	0.1006	0.3883	6.5000e-004		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	53.9968	53.9968	0.0104	0.0000	54.2572
Total	**8.5700e-003**	**0.1006**	**0.3883**	**6.5000e-004**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**53.9968**	**53.9968**	**0.0104**	**0.0000**	**54.2572**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0519	9.6300e-003	1.4000e-004	3.2700e-003	1.4000e-004	3.4000e-003	9.4000e-004	1.3000e-004	1.0800e-003	0.0000	13.0155	13.0155	5.6000e-004	0.0000	13.0294
Worker	5.1000e-003	3.1600e-003	0.0332	9.0000e-005	0.0102	7.0000e-005	0.0102	2.7000e-003	6.0000e-005	2.7600e-003	0.0000	8.1458	8.1458	2.1000e-004	0.0000	8.1512
Total	**6.5700e-003**	**0.0551**	**0.0428**	**2.3000e-004**	**0.0134**	**2.1000e-004**	**0.0136**	**3.6400e-003**	**1.9000e-004**	**3.8400e-003**	**0.0000**	**21.1612**	**21.1612**	**7.7000e-004**	**0.0000**	**21.1806**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0893	0.8944	0.9892	1.5000e-003		0.0489	0.0489		0.0451	0.0451	0.0000	130.2403	130.2403	0.0413	0.0000	131.2722
Paving	9.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0903**	**0.8944**	**0.9892**	**1.5000e-003**		**0.0489**	**0.0489**		**0.0451**	**0.0451**	**0.0000**	**130.2403**	**130.2403**	**0.0413**	**0.0000**	**131.2722**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4600e-003	3.5100e-003	0.0362	9.0000e-005	0.0100	7.0000e-005	0.0101	2.6700e-003	6.0000e-005	2.7300e-003	0.0000	8.3524	8.3524	2.4000e-004	0.0000	8.3584
Total	**5.4600e-003**	**3.5100e-003**	**0.0362**	**9.0000e-005**	**0.0100**	**7.0000e-005**	**0.0101**	**2.6700e-003**	**6.0000e-005**	**2.7300e-003**	**0.0000**	**8.3524**	**8.3524**	**2.4000e-004**	**0.0000**	**8.3584**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0177	0.0766	1.0898	1.5000e-003		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	130.2401	130.2401	0.0413	0.0000	131.2720
Paving	9.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0186**	**0.0766**	**1.0898**	**1.5000e-003**		**2.3600e-003**	**2.3600e-003**		**2.3600e-003**	**2.3600e-003**	**0.0000**	**130.2401**	**130.2401**	**0.0413**	**0.0000**	**131.2720**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4600e-003	3.5100e-003	0.0362	9.0000e-005	0.0100	7.0000e-005	0.0101	2.6700e-003	6.0000e-005	2.7300e-003	0.0000	8.3524	8.3524	2.4000e-004	0.0000	8.3584
Total	**5.4600e-003**	**3.5100e-003**	**0.0362**	**9.0000e-005**	**0.0100**	**7.0000e-005**	**0.0101**	**2.6700e-003**	**6.0000e-005**	**2.7300e-003**	**0.0000**	**8.3524**	**8.3524**	**2.4000e-004**	**0.0000**	**8.3584**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0245	0.2426	0.3041	4.6000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	40.3261	40.3261	0.0128	0.0000	40.6456
Paving	3.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0248**	**0.2426**	**0.3041**	**4.6000e-004**		**0.0127**	**0.0127**		**0.0117**	**0.0117**	**0.0000**	**40.3261**	**40.3261**	**0.0128**	**0.0000**	**40.6456**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	9.7000e-004	0.0102	3.0000e-005	3.1100e-003	2.0000e-005	3.1300e-003	8.3000e-004	2.0000e-005	8.4000e-004	0.0000	2.4936	2.4936	7.0000e-005	0.0000	2.4953
Total	**1.5600e-003**	**9.7000e-004**	**0.0102**	**3.0000e-005**	**3.1100e-003**	**2.0000e-005**	**3.1300e-003**	**8.3000e-004**	**2.0000e-005**	**8.4000e-004**	**0.0000**	**2.4936**	**2.4936**	**7.0000e-005**	**0.0000**	**2.4953**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4700e-003	0.0237	0.3373	4.6000e-004		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	40.3261	40.3261	0.0128	0.0000	40.6456
Paving	3.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.7700e-003**	**0.0237**	**0.3373**	**4.6000e-004**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**40.3261**	**40.3261**	**0.0128**	**0.0000**	**40.6456**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	9.7000e-004	0.0102	3.0000e-005	3.1100e-003	2.0000e-005	3.1300e-003	8.3000e-004	2.0000e-005	8.4000e-004	0.0000	2.4936	2.4936	7.0000e-005	0.0000	2.4953
Total	**1.5600e-003**	**9.7000e-004**	**0.0102**	**3.0000e-005**	**3.1100e-003**	**2.0000e-005**	**3.1300e-003**	**8.3000e-004**	**2.0000e-005**	**8.4000e-004**	**0.0000**	**2.4936**	**2.4936**	**7.0000e-005**	**0.0000**	**2.4953**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0184	0.1283	0.1527	2.5000e-004		7.9000e-003	7.9000e-003		7.9000e-003	7.9000e-003	0.0000	21.4473	21.4473	1.4700e-003	0.0000	21.4841
Total	**0.4095**	**0.1283**	**0.1527**	**2.5000e-004**		**7.9000e-003**	**7.9000e-003**		**7.9000e-003**	**7.9000e-003**	**0.0000**	**21.4473**	**21.4473**	**1.4700e-003**	**0.0000**	**21.4841**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6400e-003	2.3400e-003	0.0241	6.0000e-005	6.6900e-003	5.0000e-005	6.7400e-003	1.7800e-003	4.0000e-005	1.8200e-003	0.0000	5.5683	5.5683	1.6000e-004	0.0000	5.5723
Total	**3.6400e-003**	**2.3400e-003**	**0.0241**	**6.0000e-005**	**6.6900e-003**	**5.0000e-005**	**6.7400e-003**	**1.7800e-003**	**4.0000e-005**	**1.8200e-003**	**0.0000**	**5.5683**	**5.5683**	**1.6000e-004**	**0.0000**	**5.5723**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5000e-003	0.0108	0.1539	2.5000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	21.4473	21.4473	1.4700e-003	0.0000	21.4841
Total	**0.3936**	**0.0108**	**0.1539**	**2.5000e-004**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**	**0.0000**	**21.4473**	**21.4473**	**1.4700e-003**	**0.0000**	**21.4841**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6400e-003	2.3400e-003	0.0241	6.0000e-005	6.6900e-003	5.0000e-005	6.7400e-003	1.7800e-003	4.0000e-005	1.8200e-003	0.0000	5.5683	5.5683	1.6000e-004	0.0000	5.5723
Total	**3.6400e-003**	**2.3400e-003**	**0.0241**	**6.0000e-005**	**6.6900e-003**	**5.0000e-005**	**6.7400e-003**	**1.7800e-003**	**4.0000e-005**	**1.8200e-003**	**0.0000**	**5.5683**	**5.5683**	**1.6000e-004**	**0.0000**	**5.5723**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1211					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0366	0.0472	8.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	6.6385	6.6385	4.3000e-004	0.0000	6.6493
Total	**0.1264**	**0.0366**	**0.0472**	**8.0000e-005**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**6.6385**	**6.6385**	**4.3000e-004**	**0.0000**	**6.6493**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0400e-003	6.5000e-004	6.7700e-003	2.0000e-005	2.0700e-003	1.0000e-005	2.0800e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.6624	1.6624	4.0000e-005	0.0000	1.6635
Total	**1.0400e-003**	**6.5000e-004**	**6.7700e-003**	**2.0000e-005**	**2.0700e-003**	**1.0000e-005**	**2.0800e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.6624**	**1.6624**	**4.0000e-005**	**0.0000**	**1.6635**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1211					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7000e-004	3.3500e-003	0.0476	8.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	6.6385	6.6385	4.3000e-004	0.0000	6.6493
Total	**0.1218**	**3.3500e-003**	**0.0476**	**8.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**6.6385**	**6.6385**	**4.3000e-004**	**0.0000**	**6.6493**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0400e-003	6.5000e-004	6.7700e-003	2.0000e-005	2.0700e-003	1.0000e-005	2.0800e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.6624	1.6624	4.0000e-005	0.0000	1.6635
Total	**1.0400e-003**	**6.5000e-004**	**6.7700e-003**	**2.0000e-005**	**2.0700e-003**	**1.0000e-005**	**2.0800e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.6624**	**1.6624**	**4.0000e-005**	**0.0000**	**1.6635**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2432	2.0511	2.2490	9.0900e-003	0.5924	7.8000e-003	0.6002	0.1592	7.3500e-003	0.1665	0.0000	841.8615	841.8615	0.0420	0.0000	842.9121
Unmitigated	0.2432	2.0511	2.2490	9.0900e-003	0.5924	7.8000e-003	0.6002	0.1592	7.3500e-003	0.1665	0.0000	841.8615	841.8615	0.0420	0.0000	842.9121

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	857.85	859.95	624.75	1,567,158	1,567,158
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	857.85	859.95	624.75	1,567,158	1,567,158

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710
Parking Lot	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710
Recreational Swimming Pool	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	195.8250	195.8250	0.0103	2.1400e-003	196.7213
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	220.3685	220.3685	0.0116	2.4100e-003	221.3773
NaturalGas Mitigated	9.8900e-003	0.0899	0.0755	5.4000e-004		6.8300e-003	6.8300e-003		6.8300e-003	6.8300e-003	0.0000	97.8920	97.8920	1.8800e-003	1.7900e-003	98.4738
NaturalGas Unmitigated	0.0138	0.1254	0.1053	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.4696	136.4696	2.6200e-003	2.5000e-003	137.2806

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	2.55734e+006	0.0138	0.1254	0.1053	7.5000e-004		9.5300e-003	9.5300e-003		9.5300e-003	9.5300e-003	0.0000	136.4696	136.4696	2.6200e-003	2.5000e-003	137.2806
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0138**	**0.1254**	**0.1053**	**7.5000e-004**		**9.5300e-003**	**9.5300e-003**		**9.5300e-003**	**9.5300e-003**	**0.0000**	**136.4696**	**136.4696**	**2.6200e-003**	**2.5000e-003**	**137.2806**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	1.83443e+006	9.8900e-003	0.0899	0.0755	5.4000e-004		6.8300e-003	6.8300e-003		6.8300e-003	6.8300e-003	0.0000	97.8920	97.8920	1.8800e-003	1.7900e-003	98.4738
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.8900e-003**	**0.0899**	**0.0755**	**5.4000e-004**		**6.8300e-003**	**6.8300e-003**		**6.8300e-003**	**6.8300e-003**	**0.0000**	**97.8920**	**97.8920**	**1.8800e-003**	**1.7900e-003**	**98.4738**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	869815	216.6033	0.0114	2.3700e-003	217.5948
Parking Lot	15120	3.7652	2.0000e-004	4.0000e-005	3.7825
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		**220.3685**	**0.0116**	**2.4100e-003**	**221.3773**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	771256	192.0598	0.0102	2.1000e-003	192.9389
Parking Lot	15120	3.7652	2.0000e-004	4.0000e-005	3.7825
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		**195.8250**	**0.0104**	**2.1400e-003**	**196.7213**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3368	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8200e-003	3.8200e-003	1.0000e-005	0.0000	4.0700e-003
Unmitigated	0.3368	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8200e-003	3.8200e-003	1.0000e-005	0.0000	4.0700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2854					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8200e-003	3.8200e-003	1.0000e-005	0.0000	4.0700e-003
Total	**0.3368**	**2.0000e-005**	**1.9700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.8200e-003**	**3.8200e-003**	**1.0000e-005**	**0.0000**	**4.0700e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2854					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8200e-003	3.8200e-003	1.0000e-005	0.0000	4.0700e-003
Total	**0.3368**	**2.0000e-005**	**1.9700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.8200e-003**	**3.8200e-003**	**1.0000e-005**	**0.0000**	**4.0700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.8934	0.0708	1.7000e-003	6.1720
Unmitigated	4.7960	0.0885	2.1300e-003	7.6438

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.66351 / 0.295946	4.6919	0.0870	2.0900e-003	7.4900
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0473145 / 0.0289992	0.1040	1.5500e-003	4.0000e-005	0.1538
Total		**4.7960**	**0.0885**	**2.1300e-003**	**7.6438**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.13081 / 0.295946	3.8051	0.0696	1.6700e-003	6.0438
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0378516 / 0.0289992	0.0883	1.2400e-003	3.0000e-005	0.1282
Total		**3.8934**	**0.0708**	**1.7000e-003**	**6.1720**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.5956	0.7444	0.0000	31.2050
Unmitigated	12.5956	0.7444	0.0000	31.2050

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	57.49	11.6700	0.6897	0.0000	28.9118
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	4.56	0.9256	0.0547	0.0000	2.2932
Total		**12.5956**	**0.7444**	**0.0000**	**31.2050**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	57.49	11.6700	0.6897	0.0000	28.9118
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	4.56	0.9256	0.0547	0.0000	2.2932
Total		**12.5956**	**0.7444**	**0.0000**	**31.2050**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Three Rivers Hampton Inn & Suites

Tulare County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	108.00	Space	0.97	43,200.00	0
Hotel	105.00	Room	1.81	72,364.00	0
Recreational Swimming Pool	0.80	1000sqft	0.02	800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	549	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Three Rivers Hampton Innn & Suites - Tulare County, Summer

Project Characteristics - Southern California Edison improved their CO2 emissions to 549 lb/MWh in 2017.

Land Use - Project information is derived from the project feasibility study (HVS Consulting & Valuation 2020) , preliminary design (DVB Architecture 2020), and traffic study (VRPA Technologies, Inc. 2020).

Construction Phase - Building construction, paving, and painting will occur simultaneously.

Vehicle Trips - All trips attributed to hotel use. Traffic Impact Study Report (VRPA Technologies, Inc. 2020).

Energy Use -

Construction Off-road Equipment Mitigation - SJVAPCD Rule VII Fugitive PM10 prohibitions, rules 8021-8071. Required clean fleet is a MM aimed to reduce NOx and comply with Rule 9510.

Energy Mitigation - Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018).

Water Mitigation - CA water efficient appliance requirements.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	220.00
tblConstructionPhase	NumDays	10.00	220.00
tblLandUse	LandUseSquareFeet	152,460.00	72,364.00
tblLandUse	LotAcreage	3.50	1.81
tblProjectCharacteristics	CO2IntensityFactor	702.44	549
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	33.82	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.4211	30.4703	30.9998	0.0572	6.6345	1.5040	7.5508	3.3893	1.4237	4.2323	0.0000	5,436.7133	5,436.7133	1.0519	0.0000	5,463.0118
2022	8.0626	27.4889	30.4532	0.0569	0.7367	1.2808	2.0175	0.1983	1.2133	1.4117	0.0000	5,411.6348	5,411.6348	1.0397	0.0000	5,437.6270
Maximum	**8.4211**	**30.4703**	**30.9998**	**0.0572**	**6.6345**	**1.5040**	**7.5508**	**3.3893**	**1.4237**	**4.2323**	**0.0000**	**5,436.7133**	**5,436.7133**	**1.0519**	**0.0000**	**5,463.0118**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.6634	7.1791	32.5854	0.0572	2.6376	0.0772	2.6717	1.3351	0.0766	1.3692	0.0000	5,436.7133	5,436.7133	1.0519	0.0000	5,463.0118
2022	5.6310	7.0552	32.3310	0.0569	0.7367	0.0763	0.8130	0.1983	0.0757	0.2741	0.0000	5,411.6348	5,411.6348	1.0397	0.0000	5,437.6270
Maximum	**5.6634**	**7.1791**	**32.5854**	**0.0572**	**2.6376**	**0.0772**	**2.6717**	**1.3351**	**0.0766**	**1.3692**	**0.0000**	**5,436.7133**	**5,436.7133**	**1.0519**	**0.0000**	**5,463.0118**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**31.48**	**75.44**	**-5.64**	**0.00**	**54.22**	**94.49**	**63.58**	**57.26**	**94.22**	**70.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8465	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Energy	0.0756	0.6869	0.5770	4.1200e-003		0.0522	0.0522		0.0522	0.0522		824.2849	824.2849	0.0158	0.0151	829.1832
Mobile	1.7186	11.6150	13.9082	0.0552	3.4972	0.0442	3.5414	0.9372	0.0416	0.9788		5,633.7136	5,633.7136	0.2628		5,640.2830
Total	**3.6407**	**12.3021**	**14.5071**	**0.0594**	**3.4972**	**0.0965**	**3.5937**	**0.9372**	**0.0939**	**1.0311**		**6,458.0452**	**6,458.0452**	**0.2787**	**0.0151**	**6,469.5161**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8465	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Energy	0.0542	0.4927	0.4139	2.9600e-003		0.0375	0.0375		0.0375	0.0375		591.2739	591.2739	0.0113	0.0108	594.7876
Mobile	1.7186	11.6150	13.9082	0.0552	3.4972	0.0442	3.5414	0.9372	0.0416	0.9788		5,633.7136	5,633.7136	0.2628		5,640.2830
Total	**3.6194**	**12.1079**	**14.3440**	**0.0582**	**3.4972**	**0.0817**	**3.5789**	**0.9372**	**0.0791**	**1.0163**		**6,225.0343**	**6,225.0343**	**0.2742**	**0.0108**	**6,235.1205**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.59**	**1.58**	**1.12**	**1.95**	**0.00**	**15.29**	**0.41**	**0.00**	**15.71**	**1.43**	**0.00**	**3.61**	**3.61**	**1.60**	**28.26**	**3.62**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/29/2021	5/3/2021	5	3	
2	Grading	Grading	5/4/2021	5/11/2021	5	6	
3	Building Construction	Building Construction	5/12/2021	3/15/2022	5	220	
4	Paving	Paving	5/12/2021	3/15/2022	5	220	
5	Architectural Coating	Architectural Coating	5/12/2021	3/15/2022	5	220	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.97

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 108,546; Non-Residential Outdoor: 36,182; Striped Parking Area: 2,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	49.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**1.5908**	**0.7019**	**2.2926**	**0.1718**	**0.6457**	**0.8175**		**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0396	0.0208	0.2671	6.4000e-004	0.0657	4.3000e-004	0.0662	0.0174	4.0000e-004	0.0178		64.1367	64.1367	1.8600e-003		64.1833
Total	**0.0396**	**0.0208**	**0.2671**	**6.4000e-004**	**0.0657**	**4.3000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**64.1367**	**64.1367**	**1.8600e-003**		**64.1833**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	0.3008	1.3034	11.8595	0.0245		0.0401	0.0401		0.0401	0.0401	0.0000	2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**0.3008**	**1.3034**	**11.8595**	**0.0245**	**0.6204**	**0.0401**	**0.6605**	**0.0670**	**0.0401**	**0.1071**	**0.0000**	**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0396	0.0208	0.2671	6.4000e-004	0.0657	4.3000e-004	0.0662	0.0174	4.0000e-004	0.0178		64.1367	64.1367	1.8600e-003		64.1833
Total	**0.0396**	**0.0208**	**0.2671**	**6.4000e-004**	**0.0657**	**4.3000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**64.1367**	**64.1367**	**1.8600e-003**		**64.1833**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.5523**	**0.9158**	**7.4681**	**3.3675**	**0.8425**	**4.2100**		**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0495	0.0260	0.3339	8.1000e-004	0.0822	5.4000e-004	0.0827	0.0218	4.9000e-004	0.0223		80.1709	80.1709	2.3300e-003		80.2291
Total	**0.0495**	**0.0260**	**0.3339**	**8.1000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**80.1709**	**80.1709**	**2.3300e-003**		**80.2291**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	0.2522	1.0927	10.9071	0.0206		0.0336	0.0336		0.0336	0.0336	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**0.2522**	**1.0927**	**10.9071**	**0.0206**	**2.5554**	**0.0336**	**2.5890**	**1.3133**	**0.0336**	**1.3469**	**0.0000**	**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0495	0.0260	0.3339	8.1000e-004	0.0822	5.4000e-004	0.0827	0.0218	4.9000e-004	0.0223		80.1709	80.1709	2.3300e-003		80.2291
Total	**0.0495**	**0.0260**	**0.3339**	**8.1000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**80.1709**	**80.1709**	**2.3300e-003**		**80.2291**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0600	2.0760	0.3728	5.3800e-003	0.1288	6.0500e-003	0.1348	0.0371	5.7800e-003	0.0429		563.9543	563.9543	0.0234		564.5399
Worker	0.2427	0.1272	1.6361	3.9500e-003	0.4025	2.6300e-003	0.4052	0.1068	2.4300e-003	0.1092		392.8375	392.8375	0.0114		393.1224
Total	**0.3028**	**2.2033**	**2.0090**	**9.3300e-003**	**0.5313**	**8.6800e-003**	**0.5400**	**0.1439**	**8.2100e-003**	**0.1521**		**956.7918**	**956.7918**	**0.0348**		**957.6623**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	3.8705	14.9355	0.0250		0.0352	0.0352		0.0352	0.0352	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**0.3296**	**3.8705**	**14.9355**	**0.0250**		**0.0352**	**0.0352**		**0.0352**	**0.0352**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0600	2.0760	0.3728	5.3800e-003	0.1288	6.0500e-003	0.1348	0.0371	5.7800e-003	0.0429		563.9543	563.9543	0.0234		564.5399
Worker	0.2427	0.1272	1.6361	3.9500e-003	0.4025	2.6300e-003	0.4052	0.1068	2.4300e-003	0.1092		392.8375	392.8375	0.0114		393.1224
Total	**0.3028**	**2.2033**	**2.0090**	**9.3300e-003**	**0.5313**	**8.6800e-003**	**0.5400**	**0.1439**	**8.2100e-003**	**0.1521**		**956.7918**	**956.7918**	**0.0348**		**957.6623**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.9731	0.3437	5.3300e-003	0.1288	5.2500e-003	0.1340	0.0371	5.0300e-003	0.0421		559.0002	559.0002	0.0226		559.5638
Worker	0.2241	0.1133	1.4870	3.8100e-003	0.4025	2.5300e-003	0.4051	0.1068	2.3300e-003	0.1091		378.8999	378.8999	0.0101		379.1530
Total	**0.2799**	**2.0865**	**1.8307**	**9.1400e-003**	**0.5313**	**7.7800e-003**	**0.5391**	**0.1439**	**7.3600e-003**	**0.1512**		**937.9000**	**937.9000**	**0.0327**		**938.7168**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	3.8705	14.9355	0.0250		0.0352	0.0352		0.0352	0.0352	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**0.3296**	**3.8705**	**14.9355**	**0.0250**		**0.0352**	**0.0352**		**0.0352**	**0.0352**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.9731	0.3437	5.3300e-003	0.1288	5.2500e-003	0.1340	0.0371	5.0300e-003	0.0421		559.0002	559.0002	0.0226		559.5638
Worker	0.2241	0.1133	1.4870	3.8100e-003	0.4025	2.5300e-003	0.4051	0.1068	2.3300e-003	0.1091		378.8999	378.8999	0.0101		379.1530
Total	**0.2799**	**2.0865**	**1.8307**	**9.1400e-003**	**0.5313**	**7.7800e-003**	**0.5391**	**0.1439**	**7.3600e-003**	**0.1512**		**937.9000**	**937.9000**	**0.0327**		**938.7168**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0749**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**		**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0743	0.0390	0.5009	1.2100e-003	0.1232	8.1000e-004	0.1240	0.0327	7.4000e-004	0.0334		120.2564	120.2564	3.4900e-003		120.3436
Total	**0.0743**	**0.0390**	**0.5009**	**1.2100e-003**	**0.1232**	**8.1000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**120.2564**	**120.2564**	**3.4900e-003**		**120.3436**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2104	0.9117	12.9737	0.0178		0.0281	0.0281		0.0281	0.0281	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2219**	**0.9117**	**12.9737**	**0.0178**		**0.0281**	**0.0281**		**0.0281**	**0.0281**	**0.0000**	**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0743	0.0390	0.5009	1.2100e-003	0.1232	8.1000e-004	0.1240	0.0327	7.4000e-004	0.0334		120.2564	120.2564	3.4900e-003		120.3436
Total	**0.0743**	**0.0390**	**0.5009**	**1.2100e-003**	**0.1232**	**8.1000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**120.2564**	**120.2564**	**3.4900e-003**		**120.3436**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9527**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**		**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0686	0.0347	0.4552	1.1700e-003	0.1232	7.8000e-004	0.1240	0.0327	7.1000e-004	0.0334		115.9898	115.9898	3.1000e-003		116.0673
Total	**0.0686**	**0.0347**	**0.4552**	**1.1700e-003**	**0.1232**	**7.8000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**115.9898**	**115.9898**	**3.1000e-003**		**116.0673**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2104	0.9117	12.9737	0.0179		0.0281	0.0281		0.0281	0.0281	0.0000	1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2219**	**0.9117**	**12.9737**	**0.0179**		**0.0281**	**0.0281**		**0.0281**	**0.0281**	**0.0000**	**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0686	0.0347	0.4552	1.1700e-003	0.1232	7.8000e-004	0.1240	0.0327	7.1000e-004	0.0334		115.9898	115.9898	3.1000e-003		116.0673
Total	**0.0686**	**0.0347**	**0.4552**	**1.1700e-003**	**0.1232**	**7.8000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**115.9898**	**115.9898**	**3.1000e-003**		**116.0673**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6557					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**4.8746**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0495	0.0260	0.3339	8.1000e-004	0.0822	5.4000e-004	0.0827	0.0218	4.9000e-004	0.0223		80.1709	80.1709	2.3300e-003		80.2291
Total	**0.0495**	**0.0260**	**0.3339**	**8.1000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**80.1709**	**80.1709**	**2.3300e-003**		**80.2291**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6557					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**4.6854**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0495	0.0260	0.3339	8.1000e-004	0.0822	5.4000e-004	0.0827	0.0218	4.9000e-004	0.0223		80.1709	80.1709	2.3300e-003		80.2291
Total	**0.0495**	**0.0260**	**0.3339**	**8.1000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**80.1709**	**80.1709**	**2.3300e-003**		**80.2291**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6557					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**4.8602**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0457	0.0231	0.3035	7.8000e-004	0.0822	5.2000e-004	0.0827	0.0218	4.8000e-004	0.0223		77.3265	77.3265	2.0700e-003		77.3782
Total	**0.0457**	**0.0231**	**0.3035**	**7.8000e-004**	**0.0822**	**5.2000e-004**	**0.0827**	**0.0218**	**4.8000e-004**	**0.0223**		**77.3265**	**77.3265**	**2.0700e-003**		**77.3782**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6557					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**4.6854**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0457	0.0231	0.3035	7.8000e-004	0.0822	5.2000e-004	0.0827	0.0218	4.8000e-004	0.0223		77.3265	77.3265	2.0700e-003		77.3782
Total	**0.0457**	**0.0231**	**0.3035**	**7.8000e-004**	**0.0822**	**5.2000e-004**	**0.0827**	**0.0218**	**4.8000e-004**	**0.0223**		**77.3265**	**77.3265**	**2.0700e-003**		**77.3782**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7186	11.6150	13.9082	0.0552	3.4972	0.0442	3.5414	0.9372	0.0416	0.9788		5,633.7136	5,633.7136	0.2628		5,640.2830
Unmitigated	1.7186	11.6150	13.9082	0.0552	3.4972	0.0442	3.5414	0.9372	0.0416	0.9788		5,633.7136	5,633.7136	0.2628		5,640.2830

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	857.85	859.95	624.75	1,567,158	1,567,158
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	857.85	859.95	624.75	1,567,158	1,567,158

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710
Parking Lot	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710
Recreational Swimming Pool	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0542	0.4927	0.4139	2.9600e-003		0.0375	0.0375		0.0375	0.0375		591.2739	591.2739	0.0113	0.0108	594.7876
NaturalGas Unmitigated	0.0756	0.6869	0.5770	4.1200e-003		0.0522	0.0522		0.0522	0.0522		824.2849	824.2849	0.0158	0.0151	829.1832

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	7006.42	0.0756	0.6869	0.5770	4.1200e-003		0.0522	0.0522		0.0522	0.0522		824.2849	824.2849	0.0158	0.0151	829.1832
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0756**	**0.6869**	**0.5770**	**4.1200e-003**		**0.0522**	**0.0522**		**0.0522**	**0.0522**		**824.2849**	**824.2849**	**0.0158**	**0.0151**	**829.1832**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	5.02583	0.0542	0.4927	0.4139	2.9600e-003		0.0375	0.0375		0.0375	0.0375		591.2739	591.2739	0.0113	0.0108	594.7876
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0542**	**0.4927**	**0.4139**	**2.9600e-003**		**0.0375**	**0.0375**		**0.0375**	**0.0375**		**591.2739**	**591.2739**	**0.0113**	**0.0108**	**594.7876**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8465	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Unmitigated	1.8465	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2806					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0300e-003	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Total	**1.8465**	**2.0000e-004**	**0.0219**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0468**	**0.0468**	**1.2000e-004**		**0.0499**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2806					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0300e-003	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Total	**1.8465**	**2.0000e-004**	**0.0219**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0468**	**0.0468**	**1.2000e-004**		**0.0499**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Three Rivers Hampton Inn & Suites

Tulare County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	108.00	Space	0.97	43,200.00	0
Hotel	105.00	Room	1.81	72,364.00	0
Recreational Swimming Pool	0.80	1000sqft	0.02	800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	549	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Three Rivers Hampton Innn & Suites - Tulare County, Winter

Project Characteristics - Southern California Edison improved their CO2 emissions to 549 lb/MWh in 2017.

Land Use - Project information is derived from the project feasibility study (HVS Consulting & Valuation 2020) , preliminary design (DVB Architecture 2020), and traffic study (VRPA Technologies, Inc. 2020).

Construction Phase - Building construction, paving, and painting will occur simultaneously.

Vehicle Trips - All trips attributed to hotel use. Traffic Impact Study Report (VRPA Technologies, Inc. 2020).

Energy Use -

Construction Off-road Equipment Mitigation - SJVAPCD Rule VII Fugitive PM10 prohibitions, rules 8021-8071. Required clean fleet is a MM aimed to reduce NOx and comply with Rule 9510.

Energy Mitigation - Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018).

Water Mitigation - CA water efficient appliance requirements.

Fleet Mix -

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	10.00	220.00
tblConstructionPhase	NumDays	10.00	220.00
tblLandUse	LandUseSquareFeet	152,460.00	72,364.00
tblLandUse	LotAcreage	3.50	1.81
tblProjectCharacteristics	CO2IntensityFactor	702.44	549
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	33.82	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.3962	30.5264	30.6734	0.0563	6.6345	1.5042	7.5508	3.3893	1.4240	4.2323	0.0000	5,345.5682	5,345.5682	1.0526	0.0000	5,371.8825
2022	8.0401	27.5373	30.1507	0.0560	0.7367	1.2811	2.0178	0.1983	1.2135	1.4119	0.0000	5,323.1539	5,323.1539	1.0405	0.0000	5,349.1662
Maximum	**8.3962**	**30.5264**	**30.6734**	**0.0563**	**6.6345**	**1.5042**	**7.5508**	**3.3893**	**1.4240**	**4.2323**	**0.0000**	**5,345.5682**	**5,345.5682**	**1.0526**	**0.0000**	**5,371.8825**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.6386	7.2351	32.2590	0.0563	2.6376	0.0775	2.6717	1.3351	0.0769	1.3692	0.0000	5,345.5682	5,345.5682	1.0526	0.0000	5,371.8825
2022	5.6086	7.1036	32.0285	0.0560	0.7367	0.0765	0.8132	0.1983	0.0760	0.2743	0.0000	5,323.1539	5,323.1539	1.0405	0.0000	5,349.1662
Maximum	**5.6386**	**7.2351**	**32.2590**	**0.0563**	**2.6376**	**0.0775**	**2.6717**	**1.3351**	**0.0769**	**1.3692**	**0.0000**	**5,345.5682**	**5,345.5682**	**1.0526**	**0.0000**	**5,371.8825**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**31.57**	**75.31**	**-5.69**	**0.00**	**54.22**	**94.47**	**63.58**	**57.26**	**94.21**	**70.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8465	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Energy	0.0756	0.6869	0.5770	4.1200e-003		0.0522	0.0522		0.0522	0.0522		824.2849	824.2849	0.0158	0.0151	829.1832
Mobile	1.3017	11.7853	13.3078	0.0504	3.4972	0.0455	3.5427	0.9372	0.0429	0.9801		5,146.0011	5,146.0011	0.2768		5,152.9217
Total	**3.2238**	**12.4724**	**13.9067**	**0.0545**	**3.4972**	**0.0978**	**3.5950**	**0.9372**	**0.0952**	**1.0324**		**5,970.3327**	**5,970.3327**	**0.2927**	**0.0151**	**5,982.1547**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8465	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Energy	0.0542	0.4927	0.4139	2.9600e-003		0.0375	0.0375		0.0375	0.0375		591.2739	591.2739	0.0113	0.0108	594.7876
Mobile	1.3017	11.7853	13.3078	0.0504	3.4972	0.0455	3.5427	0.9372	0.0429	0.9801		5,146.0011	5,146.0011	0.2768		5,152.9217
Total	**3.2024**	**12.2782**	**13.7436**	**0.0534**	**3.4972**	**0.0830**	**3.5803**	**0.9372**	**0.0804**	**1.0176**		**5,737.3218**	**5,737.3218**	**0.2883**	**0.0108**	**5,747.7592**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.66**	**1.56**	**1.17**	**2.13**	**0.00**	**15.08**	**0.41**	**0.00**	**15.50**	**1.43**	**0.00**	**3.90**	**3.90**	**1.53**	**28.26**	**3.92**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/29/2021	5/3/2021	5	3	
2	Grading	Grading	5/4/2021	5/11/2021	5	6	
3	Building Construction	Building Construction	5/12/2021	3/15/2022	5	220	
4	Paving	Paving	5/12/2021	3/15/2022	5	220	
5	Architectural Coating	Architectural Coating	5/12/2021	3/15/2022	5	220	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.97

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 108,546; Non-Residential Outdoor: 36,182; Striped Parking Area: 2,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	49.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**1.5908**	**0.7019**	**2.2926**	**0.1718**	**0.6457**	**0.8175**		**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0366	0.0244	0.2247	5.6000e-004	0.0657	4.3000e-004	0.0662	0.0174	4.0000e-004	0.0178		56.1353	56.1353	1.6300e-003		56.1761
Total	**0.0366**	**0.0244**	**0.2247**	**5.6000e-004**	**0.0657**	**4.3000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**56.1353**	**56.1353**	**1.6300e-003**		**56.1761**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	0.3008	1.3034	11.8595	0.0245		0.0401	0.0401		0.0401	0.0401	0.0000	2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**0.3008**	**1.3034**	**11.8595**	**0.0245**	**0.6204**	**0.0401**	**0.6605**	**0.0670**	**0.0401**	**0.1071**	**0.0000**	**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0366	0.0244	0.2247	5.6000e-004	0.0657	4.3000e-004	0.0662	0.0174	4.0000e-004	0.0178		56.1353	56.1353	1.6300e-003		56.1761
Total	**0.0366**	**0.0244**	**0.2247**	**5.6000e-004**	**0.0657**	**4.3000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**56.1353**	**56.1353**	**1.6300e-003**		**56.1761**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.5523**	**0.9158**	**7.4681**	**3.3675**	**0.8425**	**4.2100**		**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0305	0.2809	7.0000e-004	0.0822	5.4000e-004	0.0827	0.0218	4.9000e-004	0.0223		70.1692	70.1692	2.0400e-003		70.2201
Total	**0.0458**	**0.0305**	**0.2809**	**7.0000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**70.1692**	**70.1692**	**2.0400e-003**		**70.2201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	0.2522	1.0927	10.9071	0.0206		0.0336	0.0336		0.0336	0.0336	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**0.2522**	**1.0927**	**10.9071**	**0.0206**	**2.5554**	**0.0336**	**2.5890**	**1.3133**	**0.0336**	**1.3469**	**0.0000**	**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0305	0.2809	7.0000e-004	0.0822	5.4000e-004	0.0827	0.0218	4.9000e-004	0.0223		70.1692	70.1692	2.0400e-003		70.2201
Total	**0.0458**	**0.0305**	**0.2809**	**7.0000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**70.1692**	**70.1692**	**2.0400e-003**		**70.2201**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0631	2.0985	0.4390	5.2200e-003	0.1288	6.2800e-003	0.1351	0.0371	6.0100e-003	0.0431		546.8221	546.8221	0.0262		547.4772
Worker	0.2242	0.1495	1.3762	3.4500e-003	0.4025	2.6300e-003	0.4052	0.1068	2.4300e-003	0.1092		343.8289	343.8289	9.9700e-003		344.0783
Total	**0.2873**	**2.2480**	**1.8152**	**8.6700e-003**	**0.5313**	**8.9100e-003**	**0.5402**	**0.1439**	**8.4400e-003**	**0.1523**		**890.6510**	**890.6510**	**0.0362**		**891.5555**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	3.8705	14.9355	0.0250		0.0352	0.0352		0.0352	0.0352	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**0.3296**	**3.8705**	**14.9355**	**0.0250**		**0.0352**	**0.0352**		**0.0352**	**0.0352**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0631	2.0985	0.4390	5.2200e-003	0.1288	6.2800e-003	0.1351	0.0371	6.0100e-003	0.0431		546.8221	546.8221	0.0262		547.4772
Worker	0.2242	0.1495	1.3762	3.4500e-003	0.4025	2.6300e-003	0.4052	0.1068	2.4300e-003	0.1092		343.8289	343.8289	9.9700e-003		344.0783
Total	**0.2873**	**2.2480**	**1.8152**	**8.6700e-003**	**0.5313**	**8.9100e-003**	**0.5402**	**0.1439**	**8.4400e-003**	**0.1523**		**890.6510**	**890.6510**	**0.0362**		**891.5555**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0586	1.9917	0.4055	5.1700e-003	0.1288	5.4800e-003	0.1343	0.0371	5.2400e-003	0.0423		541.8875	541.8875	0.0253		542.5195
Worker	0.2073	0.1331	1.2458	3.3300e-003	0.4025	2.5300e-003	0.4051	0.1068	2.3300e-003	0.1091		331.6425	331.6425	8.8500e-003		331.8638
Total	**0.2660**	**2.1248**	**1.6513**	**8.5000e-003**	**0.5313**	**8.0100e-003**	**0.5393**	**0.1439**	**7.5700e-003**	**0.1514**		**873.5300**	**873.5300**	**0.0341**		**874.3833**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	3.8705	14.9355	0.0250		0.0352	0.0352		0.0352	0.0352	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**0.3296**	**3.8705**	**14.9355**	**0.0250**		**0.0352**	**0.0352**		**0.0352**	**0.0352**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0586	1.9917	0.4055	5.1700e-003	0.1288	5.4800e-003	0.1343	0.0371	5.2400e-003	0.0423		541.8875	541.8875	0.0253		542.5195
Worker	0.2073	0.1331	1.2458	3.3300e-003	0.4025	2.5300e-003	0.4051	0.1068	2.3300e-003	0.1091		331.6425	331.6425	8.8500e-003		331.8638
Total	**0.2660**	**2.1248**	**1.6513**	**8.5000e-003**	**0.5313**	**8.0100e-003**	**0.5393**	**0.1439**	**7.5700e-003**	**0.1514**		**873.5300**	**873.5300**	**0.0341**		**874.3833**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0749**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**		**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0686	0.0458	0.4213	1.0600e-003	0.1232	8.1000e-004	0.1240	0.0327	7.4000e-004	0.0334		105.2538	105.2538	3.0500e-003		105.3301
Total	**0.0686**	**0.0458**	**0.4213**	**1.0600e-003**	**0.1232**	**8.1000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**105.2538**	**105.2538**	**3.0500e-003**		**105.3301**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2104	0.9117	12.9737	0.0178		0.0281	0.0281		0.0281	0.0281	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2219**	**0.9117**	**12.9737**	**0.0178**		**0.0281**	**0.0281**		**0.0281**	**0.0281**	**0.0000**	**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0686	0.0458	0.4213	1.0600e-003	0.1232	8.1000e-004	0.1240	0.0327	7.4000e-004	0.0334		105.2538	105.2538	3.0500e-003		105.3301
Total	**0.0686**	**0.0458**	**0.4213**	**1.0600e-003**	**0.1232**	**8.1000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**105.2538**	**105.2538**	**3.0500e-003**		**105.3301**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9527**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**		**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0407	0.3814	1.0200e-003	0.1232	7.8000e-004	0.1240	0.0327	7.1000e-004	0.0334		101.5232	101.5232	2.7100e-003		101.5910
Total	**0.0635**	**0.0407**	**0.3814**	**1.0200e-003**	**0.1232**	**7.8000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**101.5232**	**101.5232**	**2.7100e-003**		**101.5910**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2104	0.9117	12.9737	0.0179		0.0281	0.0281		0.0281	0.0281	0.0000	1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2219**	**0.9117**	**12.9737**	**0.0179**		**0.0281**	**0.0281**		**0.0281**	**0.0281**	**0.0000**	**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0407	0.3814	1.0200e-003	0.1232	7.8000e-004	0.1240	0.0327	7.1000e-004	0.0334		101.5232	101.5232	2.7100e-003		101.5910
Total	**0.0635**	**0.0407**	**0.3814**	**1.0200e-003**	**0.1232**	**7.8000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**101.5232**	**101.5232**	**2.7100e-003**		**101.5910**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6557					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**4.8746**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0305	0.2809	7.0000e-004	0.0822	5.4000e-004	0.0827	0.0218	4.9000e-004	0.0223		70.1692	70.1692	2.0400e-003		70.2201
Total	**0.0458**	**0.0305**	**0.2809**	**7.0000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**70.1692**	**70.1692**	**2.0400e-003**		**70.2201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6557					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**4.6854**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0305	0.2809	7.0000e-004	0.0822	5.4000e-004	0.0827	0.0218	4.9000e-004	0.0223		70.1692	70.1692	2.0400e-003		70.2201
Total	**0.0458**	**0.0305**	**0.2809**	**7.0000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**70.1692**	**70.1692**	**2.0400e-003**		**70.2201**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6557					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**4.8602**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0423	0.0272	0.2542	6.8000e-004	0.0822	5.2000e-004	0.0827	0.0218	4.8000e-004	0.0223		67.6822	67.6822	1.8100e-003		67.7273
Total	**0.0423**	**0.0272**	**0.2542**	**6.8000e-004**	**0.0822**	**5.2000e-004**	**0.0827**	**0.0218**	**4.8000e-004**	**0.0223**		**67.6822**	**67.6822**	**1.8100e-003**		**67.7273**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6557					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**4.6854**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0423	0.0272	0.2542	6.8000e-004	0.0822	5.2000e-004	0.0827	0.0218	4.8000e-004	0.0223		67.6822	67.6822	1.8100e-003		67.7273
Total	**0.0423**	**0.0272**	**0.2542**	**6.8000e-004**	**0.0822**	**5.2000e-004**	**0.0827**	**0.0218**	**4.8000e-004**	**0.0223**		**67.6822**	**67.6822**	**1.8100e-003**		**67.7273**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3017	11.7853	13.3078	0.0504	3.4972	0.0455	3.5427	0.9372	0.0429	0.9801		5,146.0011	5,146.0011	0.2768		5,152.9217
Unmitigated	1.3017	11.7853	13.3078	0.0504	3.4972	0.0455	3.5427	0.9372	0.0429	0.9801		5,146.0011	5,146.0011	0.2768		5,152.9217

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	857.85	859.95	624.75	1,567,158	1,567,158
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	857.85	859.95	624.75	1,567,158	1,567,158

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710
Parking Lot	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710
Recreational Swimming Pool	0.525564	0.032657	0.173666	0.133675	0.020482	0.005111	0.020758	0.078919	0.001825	0.001263	0.004259	0.001112	0.000710

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0542	0.4927	0.4139	2.9600e-003		0.0375	0.0375		0.0375	0.0375		591.2739	591.2739	0.0113	0.0108	594.7876
NaturalGas Unmitigated	0.0756	0.6869	0.5770	4.1200e-003		0.0522	0.0522		0.0522	0.0522		824.2849	824.2849	0.0158	0.0151	829.1832

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	7006.42	0.0756	0.6869	0.5770	4.1200e-003		0.0522	0.0522		0.0522	0.0522		824.2849	824.2849	0.0158	0.0151	829.1832
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0756**	**0.6869**	**0.5770**	**4.1200e-003**		**0.0522**	**0.0522**		**0.0522**	**0.0522**		**824.2849**	**824.2849**	**0.0158**	**0.0151**	**829.1832**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	5.02583	0.0542	0.4927	0.4139	2.9600e-003		0.0375	0.0375		0.0375	0.0375		591.2739	591.2739	0.0113	0.0108	594.7876
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0542**	**0.4927**	**0.4139**	**2.9600e-003**		**0.0375**	**0.0375**		**0.0375**	**0.0375**		**591.2739**	**591.2739**	**0.0113**	**0.0108**	**594.7876**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8465	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Unmitigated	1.8465	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2806					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0300e-003	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Total	**1.8465**	**2.0000e-004**	**0.0219**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0468**	**0.0468**	**1.2000e-004**		**0.0499**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2806					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0300e-003	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0468	0.0468	1.2000e-004		0.0499
Total	**1.8465**	**2.0000e-004**	**0.0219**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0468**	**0.0468**	**1.2000e-004**		**0.0499**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment “B”

Biological Resources

Biological Resources Assessment

Hampton Inn and Suites Three Rivers

Tulare County, California

Prepared for:

Ineffable Hospitality, Inc

August 19, 2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

CONTENTS

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LIST OF ACRONYMS AND ABBREVIATIONS

BA	Biological assessment
BCC	Birds of conservation concern
BIOS	Biogeographic Information and Observation System
BO	Biological opinion
BRA	Biological resources assessment
CARI	California Aquatic Resources Inventory
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Community Plan	Three Rivers Community Plan
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Endangered Species Act
MBTA	Migratory Bird Treaty Act
MSL	Mean sea level
NAD	North American Datum
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
Project	Hampton Inn and Suites Three Rivers Project
RMA	Resource Management Agency
RWQCB	Regional Water Quality Control Board
SFEI	San Francisco Estuary Institute
SSC	CDFW Species of Special Concern
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group

1.0 INTRODUCTION

On behalf of Ineffable Hospitality, Inc., ECORP Consulting, Inc. conducted a biological resources assessment (BRA) for the approximately 4.57-acre Hampton Inn and Suites Three Rivers Project (Project) located in the community of Three Rivers in Tulare County, California. The purpose of the BRA was to collect information on the biological resources present or with the potential to occur in the Project Study Area, assess potential biological impacts related to Project activities, and identify potential mitigation measures to inform and support the Project's California Environmental Quality Act (CEQA) documentation for biological resources.

1.1 Project Location

The Project is located in the community of Three Rivers, California east of State Highway 198 (Sierra Drive), approximately 1,000 feet north of the Old Three Rivers Road intersection, and immediately south of the Comfort Inn and Suites (Figure 1. *Project Location and Vicinity*). The site corresponds to a portion of Section 26, Township 17 south, Range 28 (Mount Diablo Base and Meridian) east of the "Kaweah, California" 7.5-minute quadrangles (North American Datum [NAD]27) (U.S. Geological Survey [USGS] 1993). The approximate center of the site is located at latitude 36.424827° (NAD83) and longitude -118.914718° (NAD83) within the Upper Kaweah Watershed (Hydrologic Unit Code #180300007) Watershed (Natural Resources Conservation Service [NRCS] et al. 2019).

1.2 Project Description

The proposed Project entails the development of a 105-room hotel to be located off State Route 198 (Sierra Drive), approximately 1,100 feet north of Old Three Rivers Road.

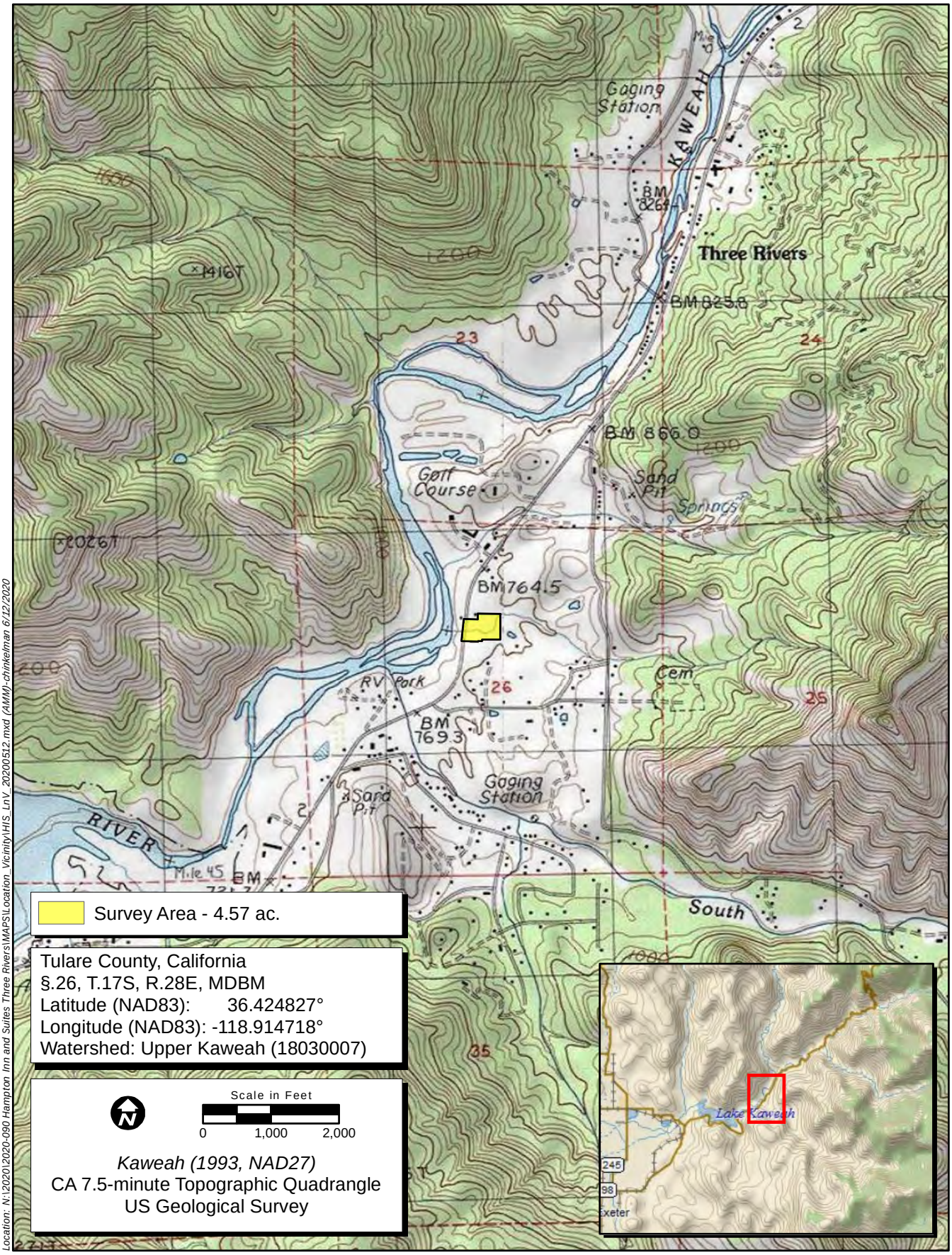
1.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species and their habitats, and sensitive habitats such as wetlands and riparian communities within the Project Study Area. This assessment includes information generated from the reconnaissance-level site assessment and does not include a wetland delineation performed according to U.S. Army Corps of Engineers' (USACE's) standards, nor does it include determinate field surveys for special-status plant and animal species.

This assessment includes a preliminary analysis of impacts on biological resources anticipated to result from the Project as presently defined. The mitigation recommendations presented in this assessment are based on a preliminary impact analysis, a review of existing literature, and the results of the site reconnaissance survey.

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

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);



Location: N:\2020\2020-090 Hampton Inn and Suites Three Rivers\MAPS\Location_Vicinity\HIS_LnV_20200512.mxd (AMM)-chinkelman 6/12/2020

Map Date: 6/12/2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Location and Vicinity

2020-090 Hampton Inn and Suites in Three Rivers

- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under § 15380 of the CEQA Guidelines;
- are identified as a species of special concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- are birds identified as birds of conservation concern (BCC) by the U.S. Fish and Wildlife Service (USFWS);
- are considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California," "plants about which more information is needed," or "plants of limited distribution – a watch list" (i.e., species with a California Rare Plant Rank [CRPR] of 1B, 2, 3, or 4);
- are plants listed as rare under the California Native Plant Protection Act (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).

2.0 REGULATORY SETTING

2.1 Federal Regulations

2.1.1 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 the 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 Code of Federal Regulations [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 the 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 the 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 the 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 the ESA as:

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.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. 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 nongame birds in § 3800, migratory birds in § 3513, and birds of prey in § 3503.5 of the California Fish and Game Code.

2.1.3 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 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 U.S. 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 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).

2.2 State and Local Regulations

2.2.1 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.

2.2.2 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 the CDFW from issuing incidental take permits for fully protected species under the California ESA. The 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.

2.2.3 Native Plant Protection Act

The 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 the NPPA. Plants listed as rare under the 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 the NPPA, referring all listings to the California ESA.

2.2.4 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 non-native 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.

2.2.5 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 the 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." The CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and wildlife resources. The final proposal mutually agreed upon by the CDFW and the applicant is the Lake or Streambed Alternation Agreement.

2.2.6 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. 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.

2.2.7 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 the ESA, the California ESA, and the 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 the ESA, the California ESA, or the NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as SSC by CDFW and plants identified by the 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 the federal ESA, California ESA, or 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.
- 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 for the U.S. (USFWS 2008) The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' 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 2020), 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 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 California Natural Diversity Database (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 of occurrences threatened/moderate degree and immediacy of threat).
- Threat Rank 0.3 – Not very threatened in California (less than 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 2018).

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 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. The reason for this is that 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.

2.2.8 Tulare County General Plan/Three Rivers Community Plan

In 2012, the Tulare County General Plan 2030 Update (Tulare County 2012) was approved. The General Plan provides guidance for the protection of natural and cultural resources and the protection of the health and safety of county residents with an emphasis on enhancing scenic landscapes, reducing pollutants, minimizing the threat of manmade natural hazards, and maintaining adequate water supplies.

The Biological Resources section of the Environmental Resource Management Element of the Tulare County General Plan includes the following goals that are pertinent to development of the Survey Area:

- ERM-1.1 Protection of Rare and Endangered Species, and
- ERM- 1.12 Management of Oak Woodland Communities.

Since 2013, the Tulare County Resource Management Agency (RMA) has intensified outreach efforts and reached out to the Three Rivers community by holding public meetings. Through various meetings, RMA staff has discussed various County policies, programs, processes, and procedures with its residents to further define the Three Rivers Community Plan (Community Plan; Tulare County 2018a). The vision for the Community Plan comprises the multitude of viewpoints from and throughout the community. The vision includes 22 key statements, as included below, which will provide appropriate direction to help guide public and private decisions affecting the community, including provisions for the overall direction, density, type of growth and protection of the natural environment that are consistent with the needs and desires of the Three Rivers community to maintain its rural character. These vision statements intensify what is already recognized throughout the state, that Three Rivers is a unique destination among Tulare County's rural foothill communities.

The purpose of the Community Plan (Tulare County 2018a) is to preserve and protect the values, character and assets of the community, including preservation of its historical rural character and valuable natural resources, while ensuring that economic growth remains vibrant and sustainable, consistent with the desired character of the community. Vision Statement 7 effectuates the desire of the community to "protect and preserve oak, sycamore and cottonwood woodlands." Goal 4 (Protection and Conservation of the Environment) of the Community Plan includes objectives that are pertinent to biological resources, including:

- 4.1.1 Preserving the Natural Environment
- 4.1.2 CEQA Compliance

As part of the Community Plan, a Voluntary Oak Woodlands Management Plan (Tulare County 2018b) has been adopted. If the County determines that a project will result in a significant effect to oak woodlands, the County shall require one or more oak woodland mitigation alternatives to mitigate for the significant effect associated with the conservation of oak woodlands.

3.0 METHODS

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

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the ESA;
- are listed or candidates for future 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 an SSC by the CDFW;
- are plants considered by the California 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).

Only species that fall into one of the above-listed groups were considered for this assessment. Other species tracked by the CNDDB but having no other special status were not considered to be special status and were not included within this analysis.

3.1 Literature Review

The following resources were reviewed to determine the special-status species that have been documented within or in the vicinity of the Study Area. Results of the species searches are included as Attachment A.

- CDFW CNDDB data for the “Kaweah, California” 7.5-minute quadrangle as well as the eight surrounding USGS quadrangles (CDFW 2020a);
- USFWS Information, Planning, and Consultation System Resource Report List for the Project site (USFWS 2020a);

- CNPS' electronic Inventory of Rare and Endangered Plants of California was queried for the "Kaweah, California" 7.5-minute quadrangles and the eight surrounding quadrangles (CNPS 2020);
- CDFW Biogeographic Information and Observation System (BIOS) query of range maps for potentially occurring special-status species (CDFW 2020b); and
- USFWS Threatened & Endangered Species Active Critical Habitat Report (USFWS 2020b).

Additional background information was reviewed regarding the documented or potential occurrence of special-status species within or near the Project site from the following sources:

- The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000-2004 (California Department of Fish and Game [CDFG] 2005);
- California Bird SSC (Shuford and Gardali 2008);
- Amphibian and Reptile SSC in California (Thompson et al. 2016);
- Mammalian SSC in California (Williams 1986);
- California's Wildlife, Volumes I-III (Zeiner, et al. 1988, 1990a, 1990b); and
- A Guide to Wildlife Habitats of California (Mayer and Laudenslayer Jr., eds. 1988).

3.2 Site Reconnaissance

ECORP biologist Hannah Stone conducted a site assessment on May 15, 2020. During the field assessment, meandering transects were walked through the Study Area searching for aquatic resources, potential Waters of the U.S./State, and special-status species or their habitat. The findings of this site assessment have been incorporated into this BRA.

During the field survey, biological communities occurring onsite were characterized and the following biological resource information was collected:

- Vegetation communities within the Project site,
- Plant and animal species directly observed,
- Animal evidence (e.g., scat, tracks),
- Existing active raptor nest locations, and
- Burrows and any other special habitat features.

In addition, soil types were identified using the NRCS Web Soil Survey (NRCS 2020a).

An aquatic resources delineation was conducted within the Study Area on August 13, 2020 to identify any potential waters of the U.S./State. The field delineation was conducted by ECORP biologist Keith Kwan according to the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and

the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Manual) (USACE 2008).

3.3 Special-Status Species Considered for the Project

Special-status plant and animal species that resulted from database searches were evaluated for their potential to occur onsite. Species that are tracked in the CNDDB but do not have any other special status, as defined above, were not included in this assessment. Species' potential to occur within the Project site was assessed based on the following criteria:

- **Present** - Species was observed during the site visit or 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 occur, and/or the species is not known to occur within the vicinity of the Project site based on CNDDB records and other available documentation.
- **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 documentation.

4.0 RESULTS

4.1 Site Characteristics and Land Use

The Study Area is currently undeveloped and is situated at an elevation range of approximately 750 to 775 feet above mean sea level (MSL) in the southern Sierra Nevada foothills subregion of the Sierra Nevada region of the California floristic province (Baldwin et. al. 2012). The Study Area appears to have been historically disturbed as remnant vehicles tracks are found throughout the site. According to Google Earth aerial photographs, an area of oak woodland was present in the eastern portion of the site through 2005 but had been cut down and removed by 2009. Remnants of the root balls can be found onsite in the form of shallow basins.

Representative photographs of the Study Area are provided in Attachment B.

The surrounding lands include undeveloped lands, the Comfort Inn and Suites, and rural residences.

4.2 Vegetation Communities and Land Cover Types

The Project is currently comprised primarily of annual grassland with remnant oak woodland and ruderal roadside areas along the boundaries (Figure 2. *Vegetation Communities and Land Cover Types/Aquatic Resources Delineation*).

Map Features

- Survey Area - 4.57 ac.
- Reference Coordinates

ARD Sample Points

- Upland Sample Point

Vegetation Communities and Land Cover Types

- Annual Grassland
- Oak Woodland
- Ruderal/Developed

Photo Source: NAIP (2018)
Boundary Source: Cooper Aerial Surveys
Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet

[1] *Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Sacramento District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.*

ECORP: N:\2020\2020-090 Hampton Inn and Suites Three Rivers\MAPS\Jurisdictional_Delineation\HIS_PWA_Veg_LC_20200817.mxd (CCH)-chinkelman 8/17/2020

Map Date: 8/17/2020

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Scale in Feet
0 60

Figure 2. Vegetation Communities and Land Cover Types / Aquatic Resources Delineation
2020-090 Hampton Inn and Suites in Three Rivers

4.2.1 Annual Grassland

The annual grassland is dominated by ripgut brome (non-native, *Bromus diandrus*), rancher's fireweed (native, *Amsinckia menziesii*), white-stemmed filaree (non-native, *Erodium brachycarpum*), and yellow star-thistle (non-native, *Centaurea solstitialis*). Other plants found in the annual grassland include contorted primrose (native, *Camissonia strigulosa*), pink spineflower (native, *Chorizanthe membranacea*), cat's ear (non-native, *Hypochaeris* species), and ragweed (native, *Ambrosia* species). Scattered interior live oak (native, *Quercus wislizenii*) and elderberry (native, *Sambucus* sp.) are found within the annual grassland.

Oak Woodland

A small area of oak woodland is located in the southeastern corner of the Study Area. The oak woodland is largely situated on the adjacent property to the south but the dripline of the trees overlaps into the Study Area. The trees within the oak woodland include Valley oak (native, *Quercus lobata*) and interior live oak.

Ruderal/Roadside

The ruderal areas found at the property boundaries include weedy annual grassland species. The roadside along Sierra Drive includes a number of planted cottonwoods (non-native, *Populus* sp. cultivar) trees that have been topped.

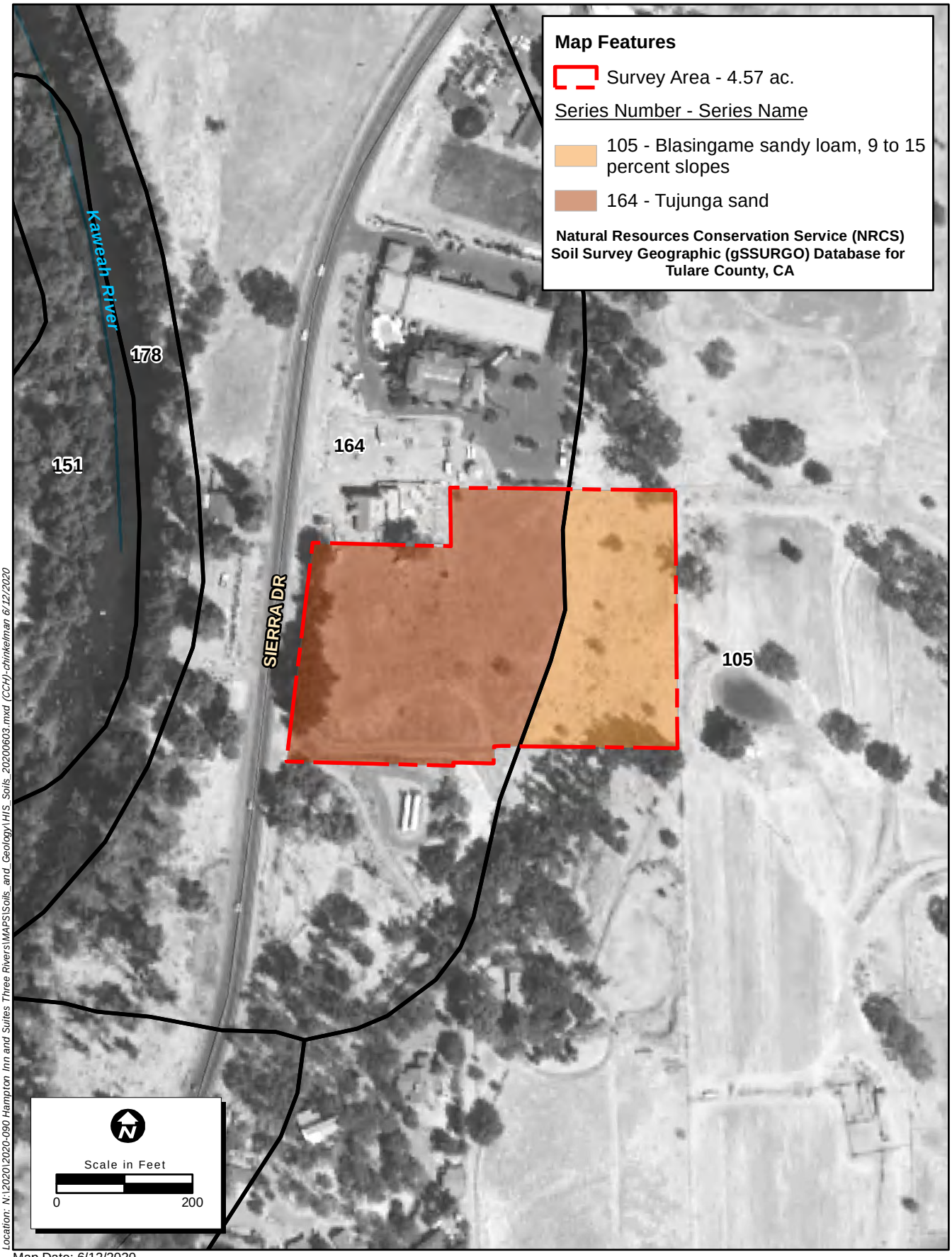
4.3 Soils

According to the *Web Soil Survey* (NRCS 2020a), there are two soil units mapped within the Study Area: (105) Blasingame sandy loam, 9 to 15 percent slopes and (164) Tujunga sand (Figure 3. *Natural Resources Conservation Service Soil Types*). Neither of these soil units are considered hydric (NRCS 2020b).

4.3.1 Potential Aquatic Resources

There are no aquatic features present onsite. An aquatic resources delineation was conducted on August 13, 2020. Three-parameter sample points were collected in the field according to USACE protocol, which confirmed the absence of hydrophytic vegetation, hydric soils, and wetland hydrology (Figure 2) (Attachment C). The sample points documented conditions in low-lying or suspect areas based on aerial photographs.

According to the California Aquatic Resources Inventory (CARI), there is one previously mapped aquatic resource for the Study Area (Figure 4. *California Aquatic Resources Inventory*). A "fluvial natural" linear feature was mapped from the northeastern corner to the southern central portion of the Study Area (San Francisco Estuary Institute [SFEI] 2017). It is worth noting that some CARI data contain "varying levels of detail, vintages, coverage, and classification" (SFEI 2020). Much of these data have not been ground-truthed. During the delineation, this area was dominated by weedy upland plants including ripgut brome and rancher's fireweed with no evidence of wetland soils or wetland hydrology, as documented by Sample Point 2 (Attachment C).



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Map Date: 6/12/2020
Photo (or Base) Source: NAIP (2018)

Figure 3. Natural Resources Conservation Service Soil Types

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Location: N:\2020\2020-090 Hampton Inn and Suites Three Rivers\MAPS\Jurisdictional_Delineation\HIS_CARI_20200603.mxd (CCH)-chinkelman 6/12/2020

Map Date: 6/12/2020
Photo (or Base) Source: NAIP (2018)

Figure 4. California Aquatic Resources Inventory

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4.4 Wildlife

Wildlife use onsite is expected to be minimal due to the close proximity of the Comfort Inn and Suites to the north, the highway to the west, surrounding rural residences and businesses, and the absence of significant onsite woodland or aquatic habitats. Several California ground squirrels (*Otospermophilus beecheyi*) and their burrows were found in scattered locations within the Study Area. Birds observed onsite during the May 2020 site visit included turkey vulture (*Cathartes aura*), acorn woodpecker (*Melanerpes formicivorus*), American crow (*Corvus brachyrhynchos*), tree swallow (*Tachycineta bicolor*), American robin (*Turdus migratorius*), and Brewer's blackbird (*Euphagus cyanocephalus*).

4.5 Evaluation of Special-Status Species Identified in the Literature Search

A list of all special-status plant and wildlife species identified in the literature search as potentially occurring within the Project site is provided in Table 1. This table includes the listing status for each species, a brief habitat description, and a determination on the potential to occur in the Project site. The potential to occur is based upon species' known distribution, the vegetation communities and habitats present onsite, and the site elevation. Following the table is a brief description of each species with potential to occur. One special-status reptile, Blainville's horned lizard (*Phrynosoma blainvillii*), is included in this assessment even though it did not come up on the database searches because the Study Area is located within the known range of this species.

Species that were considered "Absent" included those not known to occur in the region and/or elevation of the Study Area or an absence of suitable habitat. These species are not discussed further in this assessment. The species identified through the database queries that are only tracked by the CNDDB and possess no special status are not included in this assessment. Sensitive habitats that were identified through the database queries that are not located within the Study Area are not discussed in this assessment.

There are no special-status species previously documented within the Study Area, but several special-status species are known to occur within an approximate five-mile radius of the Project (see Attachment A).

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Plants						
Abrams' onion *(Allium abramsii)*	–	–	1B.2	Lower montane coniferous forest, upper montane coniferous forest, on sandy soils derived from disintegrated granite (4,593'–6,562').	May–July	Absent-Suitable habitat is absent.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Call's angelica (*Angelica callii*)	–	–	4.3	Mesic soils in cismontane woodland and lower montane coniferous forest (3,609'–6,562).	June–July	Absent-Suitable habitat is absent.
Kaweah brodiaea (*Brodiaea insignis*)	–	CE	1B.2	Granitic or clay soils in cismontane woodland, meadows and seeps, and valley and foothill grassland (492'–4,594').	April–June	Potential-suitable habitat is present.
Shirley Meadows star-tulip (*Calochortus westonii*)	–	–	1B.2	Granitic soils in broadleafed upland forest, lower montane coniferous forest, and meadows and seeps (4,921'–6,906').	May–June	Absent-Suitable habitat is absent.
Berry's morning-glory (*Calystegia malacophylla* var. *berryi*)	–	–	3.3	Chaparral and lower montane coniferous forest (2,001'–8,005').	July–August	Absent-Suitable habitat is absent.
Bolander's woodreed (*Cinna bolanderi*)	–	–	1B.2	Mesic soils and streamsides within meadows and seeps and upper montane coniferous forests (5,479'–8,005').	July–September	Absent-Suitable habitat is absent.
Springville clarkia (*Clarkia springvillensis*)	FT	CE	1B.2	Granitic soils in chaparral, cismontane woodland, and valley and foothill grassland (803'–4003').	March–July	Potential-suitable habitat is present.
Marsh claytonia (*Claytonia palustris*)	–	–	4.3	Meadows and seeps (mesic), marshes and swamps, and upper montane coniferous forest (3,280'–8,202').	May–October	Absent-Suitable habitat is absent.
Streambank spring beauty *(Claytonia parviflora* ssp. *grandiflora)*	–	–	4.2	Occurs in rocky cismontane woodland (820'–3,937').	February–May	Low Potential-marginally suitable habitat is present.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Jepson's dodder (*Cuscuta jepsonii)*	–	–	1B.2	Upper montane coniferous forest; lower montane coniferous forest; broadleaved upland forest; primary host species are *Ceanothus diversifolius* and *Ceanothus prostratus* (3,937'–7,546).	July–September	Absent-Suitable habitat is absent.
Rose-flowered larkspur *(Delphinium purpusii)*	–	–	1B.3	Rocky, often carbonate soils in chaparral, cismontane woodland, pinyon and juniper woodland (984'–4,396').	April–May	Absent-Suitable habitat is absent.
Recurved larkspur *(Delphinium recurvatum)*	–	–	1B.2	Chenopod scrub, cismontane woodland, and valley and foothill grasslands (10'–2,592').	March–June	Potential-suitable habitat is present.
Calico monkeyflower *(Diplacus pictus)*	–	–	1B.2	Granitic, disturbed areas in broadleaf upland forest and cismontane woodland (328'–4,692').	March–May	Potential-suitable habitat is present.
Pierpoint Springs dudleya (*Dudleya cymosa* ssp. *costatifolia*)	–	–	1B.2	Carbonate soils in chaparral and cismontane woodland (4,708'–5,249').	May–July	Absent-Suitable habitat is absent.
Mouse Buckwheat *(Eriogonum nudum* var. *murinum)*	–	–	1B.2	Sandy soils in chaparral, cismontane woodland, and valley and foothill grassland (1,197'–3,707').	June–November	Potential-suitable habitat is present.
Spiny-sepaled button-celery *(Eryngium spinosepalum)*	–	–	1B.2	Vernal pools and valley and foothill grassland (262'–3,199').	April–June	Absent-Suitable habitat is absent.
Kaweah monkeyflower (*Erythranthe norrisii*)	–	–	1B.3	Carbonate, rocky soils in chaparral and cismontane woodland (1,197'–4,265').	March–May	Absent-Suitable habitat is absent.
Sierra Nevada monkeyflower *(Erythranthe sierrae)*	–	–	4.2	Openings of cismontane woodland and lower montane coniferous forest or dry meadows and seeps (607'–7,497').	March–July	Low Potential-marginally suitable habitat is present.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Striped adobe-lily *(Fritillaria striata)*	–	CT	1B.1	Cismontane woodland, valley and foothill grassland; heavy clay adobe soils in oak grassland (0'–3,281').	February–April	Absent-Suitable habitat is absent.
American manna grass (*Glyceria grandis*)	–	–	2B.3	Bogs and fens, meadows and seeps, and streambanks and lake margins of marshes and swamps (49'–6,496').	June–August	Absent-Suitable habitat is absent. Absent-Suitable habitat is absent.
Winter's sunflower (*Helianthus winteri*)	–	–	1B.2	Openings on relatively steep south-facing slopes, granitic, often rocky, often roadsides in cismontane woodland, and valley and foothill grassland (410'–8,415').	January–December	Absent-Suitable habitat is absent.
Munz's iris (*Iris munzii*)	–	–	1B.3	Cismontane woodland (1,000'–2,625).	March–April	Potential-suitable habitat is present.
Madera leptosiphon (*Leptosiphon serrulatus)*	–	–	1B.2	Cismontane woodland and lower montane coniferous forest (984'–4,265').	April–May	Potential-suitable habitat is present.
San Joaquin Valley Orcutt grass *(Orcuttia inaequalis)*	FT	CE	1B.1	Vernal pools (33'–2,477').	April–September	Absent-Suitable habitat is absent.
San Joaquin adobe sunburst *(Pseudobahia peirsonii)*	FT	CE	1B.1	Adobe clay soils in cismontane woodland and valley and foothill grassland (295'–2,625').	February–April	Low Potential-marginally suitable habitat is present.
Aromatic canyon gooseberry (*Ribes menziesii* var. *nixoderm*)	–	–	1B.2	Chaparral and cismontane woodland (2,001'–3,806').	April	Absent-Suitable habitat is absent.
Sequoia gooseberry (*Ribes tularense*)	–	–	1B.3	Lower montane coniferous forest and upper montane coniferous forest (4,921'–6,808').	May	Absent-Suitable habitat is absent.
Greene's tuctoria *(Tuctoria greenei)*	FE	CR	1B.1	Vernal pools (98'–3,510').	May–July	Absent-Suitable habitat is absent.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Invertebrates						
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	-	-	Vernal pools/wetlands.	November-April	Absent-there is no suitable habitat onsite.
Crotch bumble bee *(Bombus crotchii)*	-	CC	-	Primarily nests underground in open grassland and scrub habitats from the California coast east to the Sierra Cascade and south to Mexico.	March–September	Potential
Western bumble bee *(Bombus occidentalis)*	-	CC	-	Meadows and grasslands with abundant floral resources. Primarily nests underground. Largely restricted to high elevation sites in the Sierra Nevada, although rarely detected on the California coast.	April–November	Potential
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	-	-	Elderberry shrubs.	Any season	Absent-Tulare County is south of the current range of this species.
Fish						
Delta smelt (*Hypomesus transpacificus*)	FT	CE	-	Sacramento-San Joaquin Delta.	N/A	Absent-there is no suitable habitat onsite.
Amphibians						
California red-legged frog (*Rana draytonii*)	FT	-	SSC	Lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Adults must have aestivation habitat to endure summer dry down.	May 1–November 1	Absent-there is no suitable habitat onsite.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
California tiger salamander (Central California DPS) (*Ambystoma californiense*)	FT	CT	SSC	Vernal pools, wetlands (breeding) and adjacent grassland or oak woodland; needs underground refuge (e.g., ground squirrel and/or gopher burrows). Largely terrestrial as adults.	March–May	Absent-there is no suitable habitat onsite.
Foothill yellow-legged frog (*Rana boylii*)	-	CT	SSC	Foothill yellow-legged frogs can be active all year in warmer locations but may become inactive or hibernate in colder climates. At lower elevations, foothill yellow-legged frogs likely spend most of the year in or near streams. Adult frogs, primarily males, will gather along main-stem rivers during spring to breed.	May–October	Absent-there is no suitable habitat onsite.
Mountain yellow-legged frog (*Rana muscosa*)	FE	CE	-	Lakes, ponds, marshes, meadows, and streams at elevations ranging from 4,500 to 12,000 feet, but can occur as low as 3,500 feet.	May 1– November 1	Absent-there is no suitable habitat onsite.
Western spadefoot (*Spea hammondii*)	-	-	SSC	California endemic species of vernal pools, swales, wetlands and adjacent grasslands throughout the Central Valley.	March–May	Absent-there is no suitable habitat onsite.
Reptiles						
Northern legless lizard (*Anniella pulchra*)	-	-	SSC	The most widespread of California's *Anniella* species. Occurs in sandy or loose soils under sparse vegetation from Antioch south coastally to Ventura. Bush lupine is often an indicator plant.	Generally spring, but depends on location and conditions	Low Potential-there is marginally suitable habitat onsite.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Blainville's ("Coast") horned lizard (*Phrynosoma blainvillii*)	-	-	SSC	Formerly a wide-spread horned lizard found in a wide variety of habitats, often in lower elevation areas with sandy washes and scattered low bushes. Also occurs in Sierra Nevada foothills. Requires open areas for basking, but with bushes or grass clumps for cover, patches of loamy soil or sand for burrowing and an abundance of ants (Stebbins and McGinnis 2012). In the northern Sacramento area, this species appears restricted to the foothills between 1,000 to 3,000 feet from Cameron Park (El Dorado County) north and west to Grass Valley and Nevada City.	April-October	Potential-suitable habitat is present onsite.
Western pond turtle (*Actinemys marmorata*)	-	-	SSC	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April–September	Absent-there is no suitable habitat onsite.
Birds						
Clark's grebe *(Aechmophorus clarkii)*	-	-	BCC	Winters on salt or brackish bays, estuaries, sheltered seacoasts, freshwater lakes, and rivers. Breeds on freshwater to brackish marshes, lakes, reservoirs and ponds, with a preference for large stretches of open water fringed with emergent vegetation.	June–August (breeding)	Absent-there is no suitable nesting or foraging habitat onsite.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Black swift *(Cypseloides niger)*	-	-	BCC, SSC	In California, nests from Cascade-Sierra Nevada region south to Tulare and Mono counties; coastal ranges (Santa Cruz south to San Luis Obispo counties), San Gabriel, San Bernardino, and San Jacinto mountains. Nests on ledges or shallow caves on steep rock faces, usually behind waterfalls. Winter range, unknown, but thought to be northern and western South America, and West Indies.	May–September	Absent-there is no suitable nesting habitat onsite.
Costa's hummingbird (*Calypte costae*)	-	-	BCC	In California, breeds in coastal scrub and chaparral communities from Santa Barbara County south into Baja California; from Mexico north into Mojave Desert scrub of Eastern Sierra Nevada;	February–June	Absent-there is no suitable nesting habitat onsite.
Rufous hummingbird *(Selasphorus rufus)*	-	-	BCC	Breeds in British Columbia and Alaska (does not breed in California). Winters in coastal Southern California south into Mexico. Common migrant during March-April in Sierra Nevada foothills and June-August in Lower Conifer to Alpine zone of Sierra Nevada. Nesting habitat includes secondary succession communities and openings, mature forests, parks and residential area.	April–July	Absent-this species does not nest in this region.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
California condor *(Gymnogyps californianus)*	FE	CE	CFP	Nests on cliff ledges and rarely in large tree cavities; foraging occurs over vast expanses of coastline, grassland, meadows, savannahs	Non-migratory; can be observed during any season; nesting: eggs (late January-May), nestlings to fledge (March-December)	Absent-there is no suitable nesting or foraging habitat onsite.
Golden eagle (*Aquila chrysaetos*)	-	-	BCC, CFP	Nesting habitat includes mountainous canyon land, rimrock terrain of open desert and grasslands, riparian, oak woodland/ savannah, and chaparral. Nesting occurs on cliff ledges, riverbanks, trees, and human-made structures (e.g., windmills, platforms, and transmission towers). Breeding occurs throughout California, except the immediate coast, Central Valley floor, Salton Sea region, and the Colorado River region, where they can be found during Winter.	Nest (February-August); winter CV (October-February)	Absent-there is no suitable nesting or foraging habitat onsite.
Northern goshawk *(Accipiter gentilis)*	-	-	SSC	Nesting occurs in mature to old-growth forests composed primarily of large trees with high canopy closure. In California, nests are built primarily in conifer trees in the Sierra Nevada, Cascade and northwestern coastal Ranges.	March–August	Absent-there is no suitable nesting or foraging habitat onsite.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Bald eagle (*Haliaeetus leucocephalus*)	Delisted	CE	CFP, BCC	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands	February–September (nesting); October–March (wintering)	Absent-there is no suitable nesting or foraging habitat onsite.
Lewis' woodpecker (*Melanerpes lewis*)	-	-	BCC	In California, breeds in Siskiyou and Modoc counties, warmer mountains, inner coast ranges from Tehama to San Luis Obispo counties, San Bernardino Mountains, and Big Pine Mountain (Inyo County); nesting habitat includes open ponderosa pine forest, open riparian woodland, logged/burned forest, and oak woodlands. Does not breed on the west side of Sierran crest (Beedy and Pandalfino 2013).	April-September (breeding); September-March (winter in Central Valley).	Absent-this species does not nest in this region.
Nuttall's woodpecker *(Dryobates nuttallii)*	-	-	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	April–July	Potential-suitable nesting habitat is present onsite.
Oak titmouse (*Baeolophus inornatus*)			BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree)	March–July	Potential-suitable nesting habitat is present onsite.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Wrentit (Chamaea fasciata)	-	-	BCC	Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens.	March–August	Absent-there is no suitable nesting or foraging habitat onsite.
California thrasher (*Toxostoma redivivum*)	-	-	BCC	Resident and endemic to coastal and Sierra Nevada-Cascade foothill areas of California. Nests are usually well hidden in dense shrubs, including scrub oak, California lilac, and chamise.	February–July	Absent-there is no suitable nesting or foraging habitat onsite.
Lawrence's goldfinch (*Spinus lawrencei*)	-	-	BCC	Breeds in Sierra Nevada and inner Coast Range foothills surrounding the Central Valley and the southern Coast Range to Santa Barbara County east through southern California to the Mojave Desert and Colorado Desert into the Peninsular Range. Nests in arid and open woodlands with chaparral or other brushy areas, tall annual weed fields, and a water source (e.g., small stream, pond, lake), and to a lesser extent riparian woodland, coastal scrub, evergreen forests, pinyon-juniper woodland, planted conifers, and ranches or rural residences near weedy fields and water.	March–September	Potential-suitable nesting habitat is present onsite.
Song sparrow "Modesto" (*Melospiza melodia heermanni*)	-	-	BCC, SSC	Resident in central and southwest California, including Central Valley; nests in marsh, scrub habitat	April–June	Absent-there is no suitable nesting or foraging habitat onsite.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
San Clemente spotted towhee (*Pipilo maculatus clementae*)	-	-	BCC, SSC	Resident on Santa Catalina and Santa Rosa islands; extirpated on San Clemente Island, California. Breeds in dense, broadleaf shrubby brush, thickets, and tangles in chaparral, oak woodland, island woodland, and Bishop pine forest.	Year-round resident; breeding season is April–July	Absent-this subspecies is only found on the Channel Islands. It does not occur in the Project vicinity.
Tricolored blackbird (*Agelaius tricolor*)	-	CT	BCC, SSC	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta counties south to San Bernardino, Riverside and San Diego counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields.	March–August	Absent-there is no suitable nesting habitat onsite.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	-	-	BCC, SSC	Breeds in salt marshes of San Francisco Bay; winters in San Francisco south along coast to San Diego County	March–July	Absent-this subspecies is only found nesting in the San Francisco Bay area. It does not occur in the Project vicinity.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Mammals						
Spotted bat *(Euderma maculatum)*	-	-	SSC	Roost in cracks, crevices, and caves, usually high in fractured rock cliffs. Found in desert, sub-alpine meadows, desert-scrub, pinyon-juniper woodland, ponderosa pine, mixed conifer forest, canyon bottoms, rims of cliffs, riparian areas, fields, and open pastures.	April–September	Absent-there is no suitable habitat onsite.
Townsend's big-eared bat (*Corynorhinus townsendii*)	-	-	SSC	Caves, mines, buildings, rock crevices, trees.	April–September	Potential-Trees onsite represent potential roosting habitat.
Pallid bat *(Antrozous pallidus*)	-	-	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings.	April–September	Potential-Trees onsite represent potential roosting habitat.
Greater mastiff bat (*Eumops perotis californicus*)	-	-	SSC	Primarily a cliff-dwelling species, found in similar crevices in large boulders and buildings.	April–September	Absent-no suitable habitat is present onsite.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE	CT	-	Grasslands, sagebrush scrub.	April 15–July 15, September 1–December 1	Absent-the Project is east of the known range of San Joaquin Kit Fox. Nearest CNDDB occurrence is 9 miles west of the Project.

Table 1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur Onsite
	FESA	CESA/ NPPA	Other			
Sierra Nevada red fox (*Vulpes vulpes necator*)	FC	CT	-	Found in the Cascades in Siskiyou County, and from Lassen County south to Tulare County, rare in the Sierra Nevada. Sierra Nevada populations may be found in a variety of habitats, including alpine dwarf-shrub, wet meadow subalpine conifer, lodgepole pine, red fir, aspen, montane chaparral, montane riparian, mixed conifer, and ponderosa pine. Most sightings in Sierra Nevada area above 7,000' but range from 3,900' to 11,900'.	Any season	Absent-no suitable habitat is present onsite.
Fisher- West Coast DPS (*Pekania pennanti*)	FPT	CT	SSC	Northern coniferous and mixed forests of Canada and northern United States.	Any season	Absent-no suitable habitat is present onsite.
California wolverine *(Gulo gulo)*	FPT	CT	-	Scarce resident of North Coast mountains and Sierra Nevada. Wide variety of high elevation habitats.	Any season	Absent-no suitable habitat is present onsite.

Status Codes:

FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
FE	FESA listed, Endangered.
FPT	Formally Proposed for FESA listing as Threatened.
FT	FESA listed, Threatened.
Delisted	Formally Delisted (delisted species are monitored for five years).
BCC	USFWS Bird of Conservation Concern (USFWS 2002).
CR	CESA- or NPPA-listed, Rare.
CT	CESA- or NPPA-listed, Threatened.
CC	Candidate for CESA listing as Endangered or Threatened.
CE	CESA or NPPA listed, Endangered.
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians).
SSC	CDFW Species of Special Concern (CDFW, updated July 2017).
1B	CRPR/Rare or Endangered in California and elsewhere.
3	CRPR/Plants About Which More Information is Needed – A Review List.
4	CRPR/Plants of Limited Distribution – A Watch List.
0.1	Threat Rank/Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

4.5.1 Plants

The following is a brief discussion of special-status plants with the potential to occur within the Study Area.

Kaweah Brodiaea

Kaweah brodiaea (*Brodiaea insignis*) is not listed pursuant to the federal ESA but is listed as endangered pursuant to the California ESA and is designated as a CRPR 1B.2 species. This species is a bulbiferous perennial herb that occurs in granitic or clay soils in cismontane woodland, meadows and seeps, and valley and foothill grassland (CNPS 2020). Kaweah brodiaea blooms from April through June and is known to occur at elevations ranging from 492 to 4,594 feet above MSL (CNPS 2020). Kaweah brodiaea is endemic to California; the current range of this species includes Tulare County (CNPS 2020). The nearest CNDDB occurrence is located approximately 0.1 mile north of the Study Area (CNDDB Occurrence #21) (CDFW 2020).

Springville Clarkia

Springville clarkia (*Clarkia springvillensis*) is listed as threatened pursuant to the federal ESA and endangered pursuant to the California ESA and is designated as a CRPR 1B.2 species. This species is an annual herb that occurs in granitic soils within chaparral, cismontane woodland, and valley and foothill grassland (CNPS 2020). Springville clarkia blooms from March through July and is known to occur at elevations ranging from 803 to 4,003 feet above MSL (CNPS 2020). Springville clarkia is endemic to California; the current range of this species includes Tulare county (CNPS 2020). The nearest CNDDB occurrence is located approximately three miles at Case Mountain (CNDDB Occurrence #2) (CDFW 2020).

Streambank Spring Beauty

Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in rocky soils within cismontane woodland (CNPS 2020). Streambank spring beauty blooms from February through May and is known to occur at elevations ranging from 820 to 3,937 feet above MSL (CNPS 2020). Streambank spring beauty is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Placer, Tulare, and Tuolumne counties (CNPS 2020). There are no CNDDB occurrences of this species within the five miles of the Study Area (CDFW 2020).

Recurved Larkspur

Recurved larkspur (*Delphinium recurvatum*) is not listed pursuant to either the federal or California ESAs but is designated a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in alkaline substrates in chenopod scrub, cismontane woodland, and valley and foothill grasslands (CNPS 2020). Recurved larkspur blooms from March through June and is known to occur at elevations ranging from 9 to 2,592 feet above MSL (CNPS 2020). Recurved larkspur is endemic to California; the current range of this species includes Alameda, Butte, Contra Costa, Colusa, Fresno, Glenn, Kings, Kern, Madera, Merced,

Monterey, San Joaquin, San Luis Obispo, Solano, Sutter, and Tulare counties (CNPS 2020). The species is presumed extirpated from Butte and Colusa counties (CNPS 2020).

Calico Monkeyflower

Calico monkeyflower (*Diplacus pictus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in granitic, disturbed areas in broadleaf upland forest and cismontane woodland (CNPS 2020). Calico monkeyflower blooms from March through May and is known to occur at elevations ranging from 328 to 4,692 feet above MSL (CNPS 2020). Calico monkeyflower is endemic to California; its current range includes Kern and Tulare counties (CNPS 2020). There are no CNDDB occurrences of this species within the five miles of the Study Area (CDFW 2020).

Mouse Buckwheat

Mouse buckwheat (*Eriogonum nudum* var. *murinum*) is not listed pursuant to either the federal or California ESAs but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in sandy soils in chaparral, cismontane woodland, and valley and foothill grassland. Mouse buckwheat blooms from June through November and is known to occur at elevations ranging from 1,197 to 3,707 feet above MSL (CNPS 2020). Mouse buckwheat is endemic to California; its current range includes Tulare County (CNPS 2020). The nearest CNDDB occurrence is located approximately 0.7 mile east of the Study Area at Blossom Peak (CNDDB Occurrence #3) (CDFW 2020).

Sierra Nevada Monkeyflower

Sierra Nevada monkeyflower (*Erythranthe sierrae*) is not listed pursuant to either the federal or California ESAs but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in openings of cismontane woodland and lower montane coniferous forest or dry meadows and seeps, usually granitic, usually sandy, sometimes gravelly, vernally wet depressions, swales, and streambanks (CNPS 2020). Sierra Nevada monkeyflower blooms from March through July and is known to occur at elevations ranging from 607 to 7,497 feet above MSL (CNPS 2020). Sierra Nevada monkeyflower is endemic to California; the current range of this species is only in the southern portion of the Sierra Nevada mountain range in Fresno, Kern, and Tulare counties.

Munz's Iris

Munz's iris (*Iris munzii*) is not listed pursuant to either the federal or California ESAs but is designated as a CRPR 1B.3 species. This species is a perennial rhizomatous herb that occurs in cismontane woodland (CNPS 2020). Munz's iris blooms from March through April and is known to occur at elevations ranging from 1,000 to 2,625 feet above MSL (CNPS 2020). Munz's iris is endemic to California; the current range of this species includes Tulare county (CNPS 2020). The nearest CNDDB occurrence is located approximately three miles northeast of the Study Area near Hammond (CNDDB Occurrence #13) (CDFW 2020).

Madera Leptosiphon

Madera leptosiphon (*Leptosiphon serrulatus*) is not listed pursuant to either the federal or California ESAs but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in cismontane woodland and lower montane coniferous forest (CNPS 2020). Madera leptosiphon blooms between April and May and is known to occur at elevations ranging from 984 to 4,265 feet above MSL (CNPS 2020). Madera leptosiphon is endemic to California; its current range includes Fresno, Kern, Madera, Mariposa, and Tulare counties (CNPS 2020). There is one CNDDB record (Occurrence #16) of this species within five miles of the Study Area and is described as an unknown location near the community of Three Rivers from 1928 (CDFW 2020).

San Joaquin Adobe Sunburst

San Joaquin adobe sunburst (*Pseudobahia peirsonii*) is listed as threatened pursuant to the federal ESA, endangered pursuant to the California ESA, and is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs on adobe clay in cismontane woodlands and valley and foothill grasslands (CNPS 2020). San Joaquin adobe sunburst blooms from February through April and is known to occur at elevations ranging from 295 to 2,625 feet above MSL (CNPS 2020). San Joaquin adobe sunburst is endemic to California; the current range of this species includes Fresno, Kern, and Tulare counties (CNPS 2020). There are no CNDDB occurrences of this species within the five miles of the Study Area (CDFW 2020).

4.5.2 Reptiles

The following is a brief discussion of special-status reptiles with the potential to occur within the Study Area.

Northern California Legless Lizard

The Northern California legless lizard (*Anniella pulchra*) is not listed and protected under either federal or California ESAs but is considered a CDFW SSC. The Northern California legless lizard has the largest range of all California *Anniella,* ranging from sites in and around Antioch in the east bay, south to northern San Luis Obispo County. Two distinct segments of this species range occur: one in the eastern foothills of Tulare and Fresno counties, and another at the western edge of the Antelope Valley in Kern and Los Angeles counties. They are found in sparsely vegetated areas with loose, moist soil such as beach dunes, chaparral, pin-oak woodlands, desert scrub, sandy washes, and stream terraces. The grassland and oak woodland onsite represent marginally suitable habitat for this species.

Blainville's Horned Lizard

Blainville's horned lizard is not listed and protected under either California or federal ESAs but is considered a CDFW SSC. This diurnal species can occur within a variety of habitats including scrubland, annual grassland, valley-foothill woodlands and coniferous forests, though it is most common along lowland desert sandy washes and chaparral (Stebbins 2003). In the Central Valley, the species ranges from southern Tehama County southward. In the Sierra Nevada it occurs from Butte County south to Tulare

County, and in the Coast Ranges it occurs from Sonoma County south into Baja California (CDFG 1988). It occurs from sea level to 8,000 feet MSL and an isolated population occurs in Siskiyou County (Stebbins 2003). The grassland and oak woodland onsite represent potential habitat for this species.

4.5.3 Birds

The following is a brief discussion of special-status birds with the potential to occur within the Study Area.

Nuttall's Woodpecker

Nuttall's woodpecker (*Dryobates nuttallii*) is not listed and protected under either federal or California ESAs but is considered a USFWS BCC. They are resident from Siskiyou County south to Baja California. Nuttall's woodpeckers nest in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands (Lowther et al. 2020). Breeding occurs during April through July. The trees onsite represent potential nesting habitat for this species.

Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) are not listed and protected under either the federal or California ESAs but are considered a USFWS BCC. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (Cicero et al. 2020). They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands (Cicero et al. 2020). Nesting occurs during March through July. The trees onsite represent potential nesting habitat for this species.

Lawrence's Goldfinch

The Lawrence's goldfinch (*Spinus lawrencei*) is not listed pursuant to either the federal or California ESAs but is currently a BCC according to the USFWS. Lawrence's goldfinch breed west of the Sierra Nevada-Cascade axis from Tehama, Shasta, and Trinity counties south into the foothills surrounding the Central Valley to Kern County; and on the Coast Range from Contra Costa County to Santa Barbara County (Watt et al. 2020). Lawrence's goldfinch nest in arid woodlands usually with brushy areas, tall annual weeds, and a local water source (Watt et al. 2020). Nesting occurs during March through September. Weeds and small trees onsite represent potential nesting habitat for this species.

Migratory Bird Treaty Act Protected Birds

While not considered species status as previously defined, the Study Area supports potential nesting habitat for other, more common bird species that are protected under the MBTA and the Fish and Game Code of California. These could include common species such as northern mockingbird and house finch, among others. Trees, shrubs, and annual grassland onsite represents potential nesting habitat for protect birds.

4.5.4 Mammals

The following is a brief discussion of special-status mammals with the potential to occur within the Study Area.

Townsend's Big-eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. Townsend's big-eared bat is a fairly large bat with prominent bilateral nose lumps and large rabbit-like ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. This species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet. Habitats used include coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. This species is readily detectable when roosting due to their habit of roosting pendant-like on open surfaces. Townsend's big-eared bat is a moth specialist with over 90 percent of its diet composed of Lepidopterans. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (Western Bat Working Group [WBWG] 2020).

The trees onsite represent marginally suitable roosting habitat for this species.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (above 7,000 feet). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges, and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. Although this species utilizes echolocation to locate prey, often they use only passive acoustic cues. This species is not thought to migrate long distances between summer and winter sites (WBWG 2020).

The trees onsite represent marginally suitable roosting habitat for this species.

4.6 Sensitive Natural Communities

No sensitive natural communities were found onsite during the field assessment.

4.7 Wildlife Movement/Corridors

Woodland habitat that was once found within the Study Area has been removed (circa 2005-2009). The Study Area is adjacent to an existing hotel and State Highway 198/Sierra Drive within a matrix of rural residences and farms. There are no signification habitat features (e.g., wetlands) within or adjacent to the Study Area. Project development is not expected to impact wildlife movement. The Survey Area does not support known nursery sites or mule deer fawning areas (CDFW 2020). No nursery sites were identified during the field assessment.

4.8 Critical Habitat

There is no designated Critical Habitat within the Project.

5.0 RECOMMENDATIONS

5.1 Waters of the U.S. and State

There are no aquatic resources onsite. Therefore, there are no recommendations pertaining to potential waters of the U.S./State.

5.2 Special-Status Species

5.2.1 Plants

The Survey Area supports potentially suitable habitat for special-status plants, including Kaweah brodiaea, Springville clarkia, recurved larkspur, streambank spring beauty, calico monkeyflower, mouse buckwheat, Sierra Nevada monkeyflower, Munz's iris, Madera leptosiphon, and San Joaquin adobe sunburst. The following measures are recommended to minimize potential impacts to special-status plants:

- Perform focused plant surveys according to USFWS, CDFW, and CNPS protocols. Surveys should be timed according to the blooming period for target species and known reference populations, if available, and/or local herbaria should be visited prior to surveys to confirm the appropriate phenological state of the target species.
- If special-status plant species are found during surveys within the Project and avoidance of the species is not possible, seed collection, transplantation, and/or other mitigation measures may be developed in consultation with appropriate resource agencies to reduce impacts to special-status plant populations.
- If no special-status plants are found within the Project Area, no further measures pertaining to special-status plants are necessary.

5.2.2 Invertebrates

The Project site does not provide suitable habitat for any special-status invertebrates species. No measures are recommended for special-status invertebrates.

5.2.3 Fish

The Project site does not provide suitable habitat for any special-status fish species. No measures are recommended for special-status fish species.

5.2.4 Amphibians

The Project site does not provide suitable habitat for any special-status amphibian species. No measures are recommended for special-status amphibian species.

5.2.5 Reptiles

The Study Area supports potentially suitable habitat for Northern California legless lizard and Blainville's horned lizard. To ensure that there are no impacts to special-status reptiles, the following mitigation measure is recommended:

- A Northern California legless lizard and Blainville's horned lizard pre-construction survey will be conducted by a qualified biologist within 14 days prior to the initiation of ground disturbance (e.g., tree/vegetation removal, mass grading). The survey will consist of the entire Project footprint, including accessible areas within 100 feet.
- If individuals of either of these two special-status reptiles are found during the pre-construction survey, a qualified biologist with a CDFW Scientific Collecting Permit shall relocate the individuals, with the concurrence of CDFW, to a site with suitable habitat. Relocation methods shall be approved by CDFW.

5.2.6 Birds and Migratory Bird Treaty Act Protected Birds (including Raptors)

The Survey Area supports suitable nesting and foraging habitat for a variety of special-status birds and birds protected under the MBTA. To minimize impacts to protected bird and active nests during construction, the following mitigation measure is recommended:

- Conduct a pre-construction nesting raptor and bird survey of all suitable habitat on the Project site within 14 days of the commencement ground disturbance (e.g., tree/vegetation removal, mass grading) during the nesting season (February 1 – August 31). Where accessible, surveys should be conducted within 300 feet of the Project site for nesting raptors, and 100 feet of the Project site for other nesting birds.
- If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist, in consultation with CDFW. 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.

5.2.7 Mammals

The Project site provides potential habitat for several special-status bats. To minimize potential impacts to special-status bats, the following measure is recommended.

- A qualified biologist will conduct a bat habitat assessment of all suitable roosting habitat (i.e., suitable trees) prior to the initiation of site disturbance (e.g., tree removal, mass grading). If the assessment identifies suitable roosting habitat, a qualified biologist will conduct an evening bat emergence survey that may include acoustic monitoring to determine whether or not bats are present. If special-status bats are found, consult with CDFW to develop avoidance and/or exclusion methods.
- If no suitable roosting habitat is found, or if no bats are not found during the emergence surveys, no further measures are necessary.

5.2.8 Oak Woodlands

There are two isolated small oak trees located within the annual grassland. The oaks that make up the oak woodland mapped in the Study Area are located on the adjacent property with only the dripline overlapping into the Study Area. Although direct impacts to the oak woodland is not anticipated, indirect impacts may occur. If impacts are considered significant, one or more of the following measures should be implemented to reduce the impact to oak woodlands (per the *Three Rivers Voluntary Oak Woodland Plan*):

- If feasible, avoid/conserve oak woodlands.
- If oak woodlands are proposed for impact, plant an appropriate number of trees, including maintain planting and replacing dead or diseased trees; this requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted; mitigation pursuant to this paragraph shall not fulfill more than half of the mitigation requirements for the Project; the requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands.
- Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of the Section 1363 of the California Fish and Game Code. A project applicant who contributes funds under this paragraph shall not receive a grant from the Oak Woodland Woodlands Conservation Fund as part of the mitigation for the Project.

and/or

- Other mitigation measures developed by Tulare County.

5.3 Sensitive Natural Communities

There are no sensitive natural communities onsite. No measures are recommended.

5.4 Wildlife Movement/Corridors and Nursery Sites

Wildlife have potential to use the Project site for localized wildlife movement. However, Project development would not constitute a significant loss of the available wildlife habitat in the area. No measures are recommended.

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LIST OF ATTACHMENTS

ATTACHMENT A

Special-Status Species Searches
(9-Quad CNPS Search, CNNDB Search, and Study Area IPaC Search)

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

27 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3611951, 3611858, 3611857, 3611941, 3611848, 3611847, 3611931 3611838 and 3611837;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Angelica callii	Call's angelica	Apiaceae	perennial herb	Jun-Jul	4.3	S3	G3
Brodiaea insignis	Kaweah brodiaea	Themidaceae	perennial bulbiferous herb	Apr-Jun	1B.2	S1	G1
Calochortus westonii	Shirley Meadows star-tulip	Liliaceae	perennial bulbiferous herb	May-Jun	1B.2	S3	G3
Calystegia malacophylla var. berryi	Berry's morning-glory	Convolvulaceae	perennial rhizomatous herb	Jul-Aug	3.3	S2	G4G5T2Q
Cinna bolanderi	Bolander's woodreed	Poaceae	perennial herb	Jul-Sep	1B.2	S2S3	G2G3
Clarkia springvillensis	Springville clarkia	Onagraceae	annual herb	(Mar)Apr-Jul	1B.2	S2	G2
Claytonia palustris	marsh claytonia	Montiaceae	perennial herb	May-Oct	4.3	S4	G4
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Delphinium purpusii	rose-flowered larkspur	Ranunculaceae	perennial herb	(Mar)Apr-May	1B.3	S3	G3
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Diplacus pictus	calico monkeyflower	Phrymaceae	annual herb	Mar-May	1B.2	S2	G2
Dudleya cymosa ssp. costatifolia	Pierpoint Springs dudleya	Crassulaceae	perennial herb	May-Jul	1B.2	S1	G5T1
Eriogonum nudum var. murinum	mouse buckwheat	Polygonaceae	perennial herb	Jun-Nov	1B.2	S2	G5T2
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual / perennial herb	Apr-Jun	1B.2	S2	G2
Erythranthe norrisii	Kaweah monkeyflower	Phrymaceae	annual herb	Mar-May	1B.3	S2	G2
Erythranthe sierrae	Sierra Nevada monkeyflower	Phrymaceae	annual herb	Mar-Jul	4.2	S2	G2
Glyceria grandis	American manna grass	Poaceae	perennial rhizomatous herb	Jun-Aug	2B.3	S3	G5

Helianthus winteri	Winter’s sunflower	Asteraceae	perennial shrub	Jan-Dec	1B.2	S2?	G2?
Iris munzii	Munz's iris	Iridaceae	perennial rhizomatous herb	Mar-Apr(May)	1B.3	S2	G2
Leptosiphon serrulatus	Madera leptosiphon	Polemoniaceae	annual herb	Apr-May	1B.2	S3	G3
Meesia triquetra	three-ranked hump moss	Meesiaceae	moss	Jul	4.2	S4	G5
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss		4.3	S4	G5
Orthotrichum holzingeri	Holzinger's orthotrichum moss	Orthotrichaceae	moss		1B.3	S2	G3
Pseudobahia peirsonii	San Joaquin adobe sunburst	Asteraceae	annual herb	Feb-Apr	1B.1	S1	G1
Ribes menziesii var. ixoderme	aromatic canyon gooseberry	Grossulariaceae	perennial deciduous shrub	Apr	1B.2	S1	G4T1
Ribes tularense	Sequoia gooseberry	Grossulariaceae	perennial deciduous shrub	May	1B.3	S1	G1
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	1B.1	S1	G1

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 19 May 2020].

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The Consortium of California Herbaria
CalPhotos

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rareplants@cnps.org

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Auckland (3611951) OR Shadequarter Mtn. (3611858) OR Giant Forest (3611857) OR Woodlake (3611941) OR Kaweah (3611848) OR Case Mountain (3611847) OR Rocky Hill (3611931) OR Chickencoop Canyon (3611838) OR Dennison Peak (3611837))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAD02140	***Batrachoseps regius*** Kings River slender salamander	None	None	G2	S2S3	
AAAAD02200	***Batrachoseps altasierrae*** Greenhorn Mountains slender salamander	None	None	G4	S3S4	
AAABF02020	***Spea hammondii*** western spadefoot	None	None	G3	S3	SSC
AAABH01050	***Rana boylii*** foothill yellow-legged frog	None	Candidate Threatened	G3	S3	SSC
AAABH01330	***Rana muscosa*** southern mountain yellow-legged frog	Endangered	Endangered	G1	S1	WL
ABNGA04010	***Ardea herodias*** great blue heron	None	None	G5	S4	
ABNKA03010	***Gymnogyps californianus*** California condor	Endangered	Endangered	G1	S1	FP
ABNKC10010	***Haliaeetus leucocephalus*** bald eagle	Delisted	Endangered	G5	S3	FP
ABNKC12060	***Accipiter gentilis*** northern goshawk	None	None	G5	S3	SSC
ABNUA01010	***Cypseloides niger*** black swift	None	None	G4	S2	SSC
ABPBXB0020	***Agelaius tricolor*** tricolored blackbird	None	Threatened	G2G3	S1S2	SSC
AMACC01070	***Myotis evotis*** long-eared myotis	None	None	G5	S3	
AMACC01090	***Myotis thysanodes*** fringed myotis	None	None	G4	S3	
AMACC01140	***Myotis ciliolabrum*** western small-footed myotis	None	None	G5	S3	
AMACC07010	***Euderma maculatum*** spotted bat	None	None	G4	S3	SSC
AMACC08010	***Corynorhinus townsendii*** Townsend's big-eared bat	None	None	G3G4	S2	SSC
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G5	S3	SSC
AMACD02011	***Eumops perotis californicus*** western mastiff bat	None	None	G5T4	S3S4	SSC
AMAJA03012	***Vulpes vulpes necator*** Sierra Nevada red fox	Candidate	Threatened	G5T1T2	S1	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AMAJA03041	***Vulpes macrotis mutica*** San Joaquin kit fox	Endangered	Threatened	G4T2	S2	
AMAJF01021	***Pekania pennanti*** fisher - West Coast DPS	None	Threatened	G5T2T3Q	S2S3	SSC
AMAJF03010	***Gulo gulo*** California wolverine	Proposed Threatened	Threatened	G4	S1	FP
ARAAD02030	***Emys marmorata*** western pond turtle	None	None	G3G4	S3	SSC
ARACC01020	***Anniella pulchra*** northern California legless lizard	None	None	G3	S3	SSC
CARA2443CA	***Central Valley Drainage Hardhead/Squawfish Stream*** Central Valley Drainage Hardhead/Squawfish Stream	None	None	GNR	SNR	
CTT44120CA	***Northern Claypan Vernal Pool*** Northern Claypan Vernal Pool	None	None	G1	S1.1	
CTT62100CA	***Sycamore Alluvial Woodland*** Sycamore Alluvial Woodland	None	None	G1	S1.1	
CTT84250CA	***Big Tree Forest*** Big Tree Forest	None	None	G3	S3.2	
ICBRA03030	***Branchinecta lynchi*** vernal pool fairy shrimp	Threatened	None	G3	S3	
ICMAL01210	***Bowmanasellus sequoiae*** Sequoia cave isopod	None	None	G1	S1	
IICOL48011	***Desmocerus californicus dimorphus*** valley elderberry longhorn beetle	Threatened	None	G3T2	S2	
IICOL4C020	***Lytta moesta*** moestan blister beetle	None	None	G2	S2	
IICOL4C040	***Lytta morrisoni*** Morrison's blister beetle	None	None	G1G2	S1S2	
IICOL58010	***Atractelmis wawona*** Wawona riffle beetle	None	None	G1G3	S1S2	
IIHYM24250	***Bombus occidentalis*** western bumble bee	None	Candidate Endangered	G2G3	S1	
IIHYM24380	***Bombus caliginosus*** obscure bumble bee	None	None	G4?	S1S2	
IIHYM24480	***Bombus crotchii*** Crotch bumble bee	None	Candidate Endangered	G3G4	S1S2	
IIHYM72010	***Chrysis tularensis*** Tulare cuckoo wasp	None	None	G1G2	S1S2	
IITRI11030	***Cryptochia denningi*** Denning's cryptic caddisfly	None	None	G1G2	S1S2	
ILARA98020	***Talanites moodyae*** Moody's gnaphosid spider	None	None	G1G2	S1S2	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
ILARAU8090	***Calicina cloughensis*** Clough Cave harvestman	None	None	G1	S1	
NBMUS4Q022	***Mielichhoferia elongata*** elongate copper moss	None	None	G5	S3S4	4.3
NBMUS560E0	***Orthotrichum holzingeri*** Holzinger's orthotrichum moss	None	None	G3G4	S2	1B.3
PDAPI0Z0Y0	***Eryngium spinosepalum*** spiny-sepaled button-celery	None	None	G2	S2	1B.2
PDAST4N260	***Helianthus winteri*** Winter's sunflower	None	None	G2?	S2?	1B.2
PDAST7P030	***Pseudobahia peirsonii*** San Joaquin adobe sunburst	Threatened	Endangered	G1	S1	1B.1
PDCON040K2	***Calystegia malacophylla var. berryi*** Berry's morning-glory	None	None	G4G5T2Q	S2	3.3
PDCRA040A2	***Dudleya cymosa ssp. costatifolia*** Pierpoint Springs dudleya	None	None	G5T1	S1	1B.2
PDCUS011T0	***Cuscuta jepsonii*** Jepson's dodder	None	None	G1	S1	1B.2
PDGRO02104	***Ribes menziesii var. ixoderme*** aromatic canyon gooseberry	None	None	G4T1	S1	1B.2
PDGRO021L0	***Ribes tularense*** Sequoia gooseberry	None	None	G1	S1	1B.3
PDONA05120	***Clarkia springvillensis*** Springville clarkia	Threatened	Endangered	G2	S2	1B.2
PDPGN08495	***Eriogonum nudum var. murinum*** mouse buckwheat	None	None	G5T2	S2	1B.2
PDPLM09130	***Leptosiphon serrulatus*** Madera leptosiphon	None	None	G3	S3	1B.2
PDRAN0B1G0	***Delphinium purpusii*** rose-flowered larkspur	None	None	G3	S3	1B.3
PDRAN0B1J0	***Delphinium recurvatum*** recurved larkspur	None	None	G2?	S2?	1B.2
PDSCR1B240	***Diplacus pictus*** calico monkeyflower	None	None	G2	S2	1B.2
PDSCR1B2Y0	***Erythranthe norrisii*** Kaweah monkeyflower	None	None	G2	S2	1B.3
PMIRI090M0	***Iris munzii*** Munz's iris	None	None	G2	S2	1B.3
PMLIL02360	***Allium abramsii*** Abrams' onion	None	None	G3	S3	1B.2
PMLIL0C060	***Brodiaea insignis*** Kaweah brodiaea	None	Endangered	G1	S1	1B.2

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PMLIL0D1M0	***Calochortus westonii*** Shirley Meadows star-tulip	None	None	G3	S3	1B.2
PMLIL0V0K0	***Fritillaria striata*** striped adobe-lily	None	Threatened	G1	S1	1B.1
PMPOA1H040	***Cinna bolanderi*** Bolander's woodreed	None	None	G2G3	S2S3	1B.2
PMPOA2Y080	***Glyceria grandis*** American manna grass	None	None	G5	S3	2B.3
PMPOA4G060	***Orcuttia inaequalis*** San Joaquin Valley Orcutt grass	Threatened	Endangered	G1	S1	1B.1
PMPOA6N010	***Tuctoria greenei*** Greene's tuctoria	Endangered	Rare	G1	S1	1B.1

Record Count: 67

IPaC **U.S. Fish & Wildlife Service**

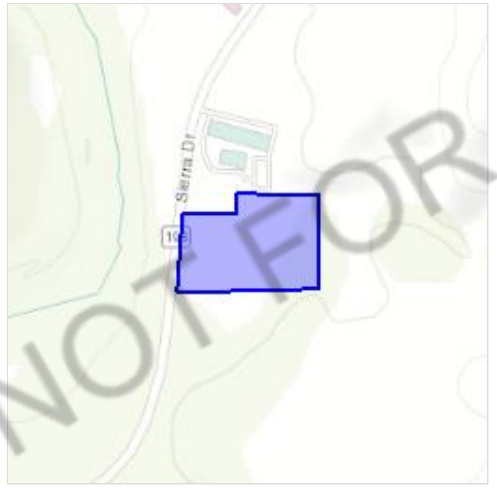
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Tulare County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

San Joaquin Kit Fox Vulpes macrotis mutica — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2873

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES

THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Swift Cypseloides niger — Breeds Jun 15 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8878

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

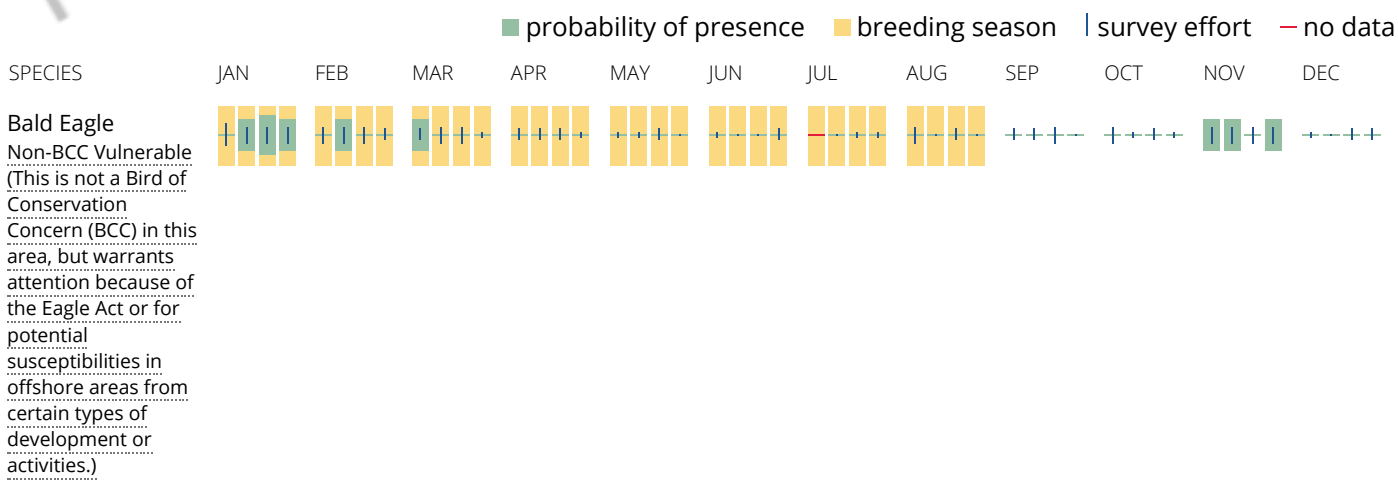
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

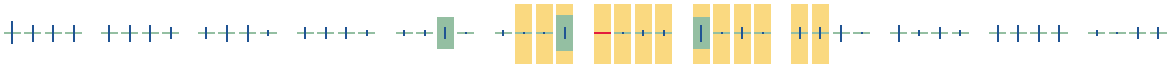
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

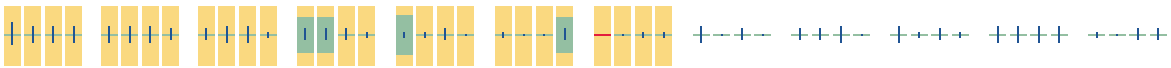
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



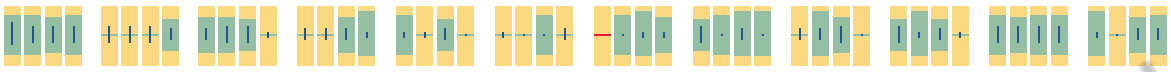
Black Swift
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



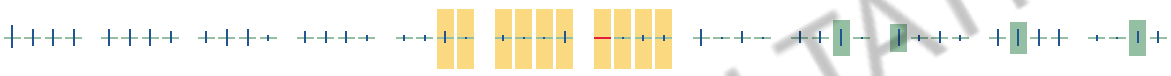
California Thrasher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Costa's Hummingbird
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

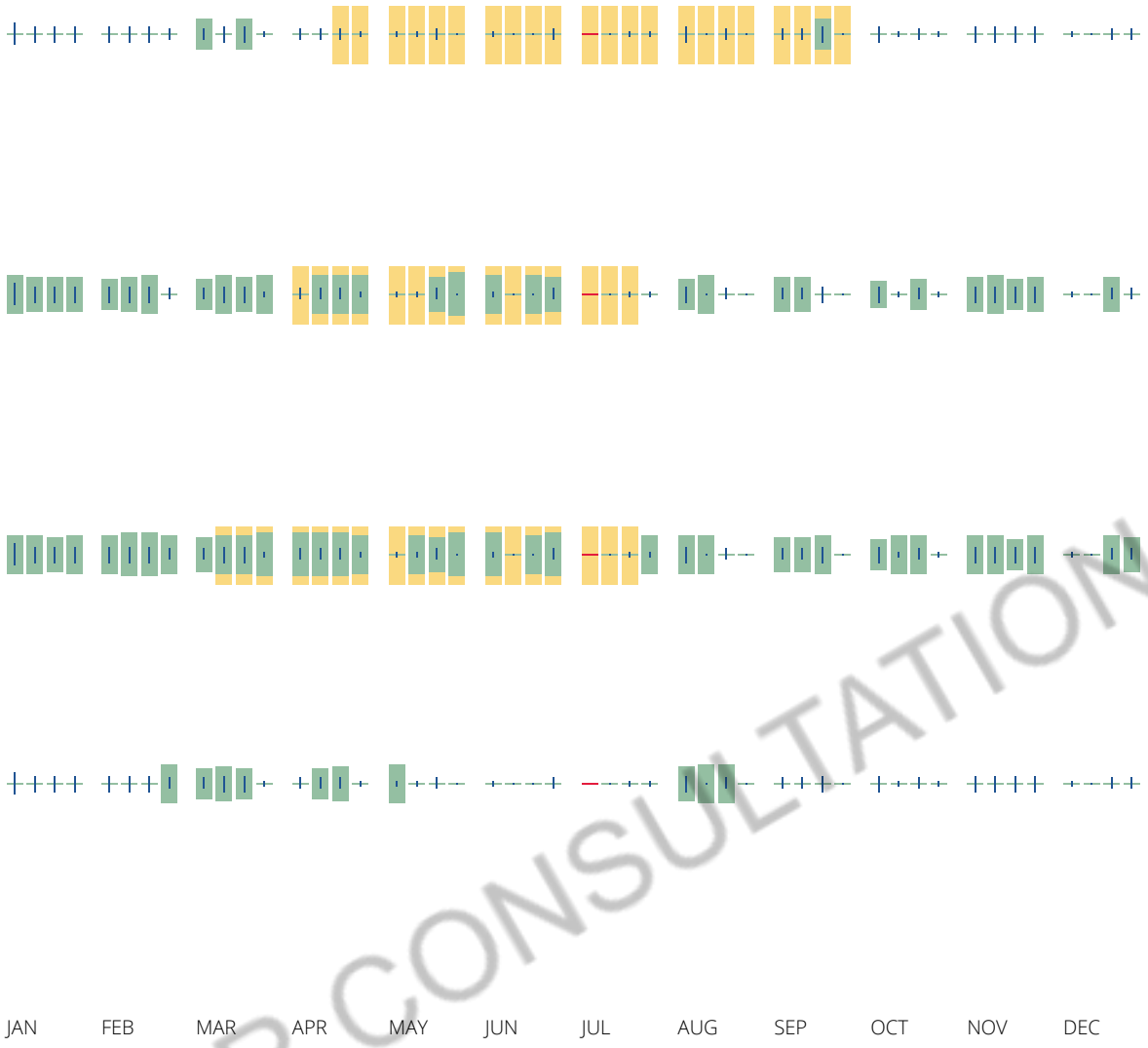
Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Lewis's Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

PFOA

RIVERINE

R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters.

Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

ATTACHMENT B

Representative Site Photos

Photo1. Oak woodland in SE corner of Survey Area, facing SW.

Photo 2. Oak woodland, annual grassland and elderberries, facing SSE.

Photo 3. Representative photo of annual grassland, facing W.

Photo 4. Ruderal area, topped cottonwoods on W side of Survey Area, facing SSW.

Photo 5. Ruderal area, access road on southern property boundary, facing W.

Photo 6. Delineation Sample Point 1 location in NE corner of property, facing N.

Photo 7. NE corner of Survey Area, facing NNE.

Photo 8. Elderberry in SE portion of property, facing West.

ATTACHMENT C

Aquatic Resources Delineation Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Hampton Inn & Suites in Three Rivers City/County: Tulare Sampling Date: 8/13/2020

Applicant/Owner: Ineffable Hospitality, Inc. State: CA Sampling Point: 1

Investigator(s): Keith Kwan Section, Township, Range: Section 26, T.17 South, R.28 East

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): C Lat: 36.425129 Long: -118.913574 Datum: NAD83

Soil Map Unit Name: 105 - Blasingame sandy loam, 9 to 15 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

shallow swale with no evidence of wetland characteristics or an ordinary high water mark

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. Anthriscus caucalis	2	no	N/L
2. Bromus diandrus	15	yes	N/L
3. Carduus pycnocephalus	5	no	N/L
4. Galium aparine	1	no	FACU
5.			
6.			
7.			
8.			
	23 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

many Ca. ground squirrel diggings present

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR3/3	100						sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

shallow swale with no evidence of an OHWM

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Hampton Inn & Suites in Three Rivers City/County: Tulare Sampling Date: 8/13/2020

Applicant/Owner: Ineffable Hospitality, Inc. State: _____ Sampling Point: 2

Investigator(s): Keith Kwan Section, Township, Range: Section 26, T.17 South, R.28 East

Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 36.424787 Long: -118.913852 Datum: NAD83

Soil Map Unit Name: 105 - Blasingame sandy loam, 9 to 15 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

shallow swale with no evidence of wetland characteristics or an ordinary high water mark

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. Bromus diandrus	30	yes	N/L
2. Centaurea solstitialis	15	yes	N/L
3. Carduus pycnocephalus	5	no	N/L
4. Amsinckia sp.	1	no	N/L
5.			
6.			
7.			
8.			
	51 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR3/3	100						sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

July 6, 2020

Haren-deep Sanghera,
Ineffable Hospitality, Inc.
6473 E. Hatch Road
Hughson, California 95326

RE: Hampton Inn and Suites, Three Rivers, Tulare County, California – Special-Status Plant Survey

Dear Mr. Sanghera:

On behalf of Ineffable Hospitality, Inc., ECORP Consulting, Inc. conducted a special-status plant survey for the Hampton Inn and Suites in Three Rivers, Tulare County, California (Survey Area) (Figure 1. *Survey Area Location and Vicinity*). The ±4.57-acre Survey Area is located adjacent to the community of Three Rivers east of State Highway 198 (Sierra Drive), approximately 1,000 feet north of the Old Three Rivers Road intersection, and immediately south of the Comfort Inn and Suites. The site corresponds to a portion of Section 26, Township 17 South, Range 28 East (Mount Diablo Base and Meridian) of the "Kaweah, California" 7.5-minute quadrangle (North American Datum [NAD] 27) (U.S. Geological Survey [USGS] 1993). The approximate center of the site is located at latitude 36.424827° (NAD83) and longitude -118.914718° (NAD83) within the Upper Kaweah Watershed (Hydrologic Unit Code#18030007)(Natural Resources Conservation Service [NRCS] et al. 2019). The purpose of the survey was to identify and map the locations of special-status plant species, if found, within the Survey Area.

Prior to conducting the survey, background information was collected on the potential presence of special-status plants within or near the Survey Area from a variety of sources, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CDFW 2020), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation tool (USFWS 2020), and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPS 2020). Each special-status plant species with potential to occur in the vicinity of the Survey Area was evaluated for its potential to occur onsite, and a list of target species was determined. The following 12 species were included as targets for the survey:

- Kaweah brodiaea (*Brodiaea insignis*)
- Springville clarkia (*Clarkia springvillensis*)
- Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*)
- Recurved larkspur (*Delphinium recurvatum*)
- Calico monkeyflower (*Diplacus pictus*)
- Mouse buckwheat (*Eriogonum nudum* var. *murinum*)
- Spiny-sepaled button-celery (*Eryngium spinosepalum*)

2525 Warren Drive ● Rocklin, CA 95677 ● Tel: (916) 782-9100 ● Fax: (916) 782-9134 ● www.ecorpconsulting.com

- Sierra Nevada monkeyflower (*Erythranthe sierrae*)
- American manna grass (*Glyceria grandis*)
- Munz's iris (*Iris munzii*)
- Madera leptosiphon (*Leptosiphon serrulatus*)
- San Joaquin adobe sunburst (*Pseudobahia peirsonii*)

Reference populations, where available, were visited to assess phenology and observe morphology for target species. When reference populations were not available, herbaria specimens, Calflora (Calflora 2020), Calphotos (Calphotos 2020), and *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012) were used as a reference. Observation of the reference populations and review of other reference sources confirmed that the survey coincided with optimal identifiable periods for all target species.

ECORP biologist Hannah Stone conducted the special-status plant survey on April 15, 2020 and June 30, 2020. The survey was conducted in accordance with guidelines promulgated by USFWS (USFWS 2000), CDFW (CDFW 2018), and CNPS (CNPS 2001). The biologist walked meandering transects throughout the Survey Area, including all suitable habitat for target species. A list of all plant species observed within the Survey Area is included in Attachment A. No special-status plant species were observed during the survey.

If you have any questions, please call me at (916) 782-9100.

Sincerely,

Chris Stabenfeldt
Senior Environmental Planner/Project Manager
ECORP Consulting, Inc.

REFERENCES

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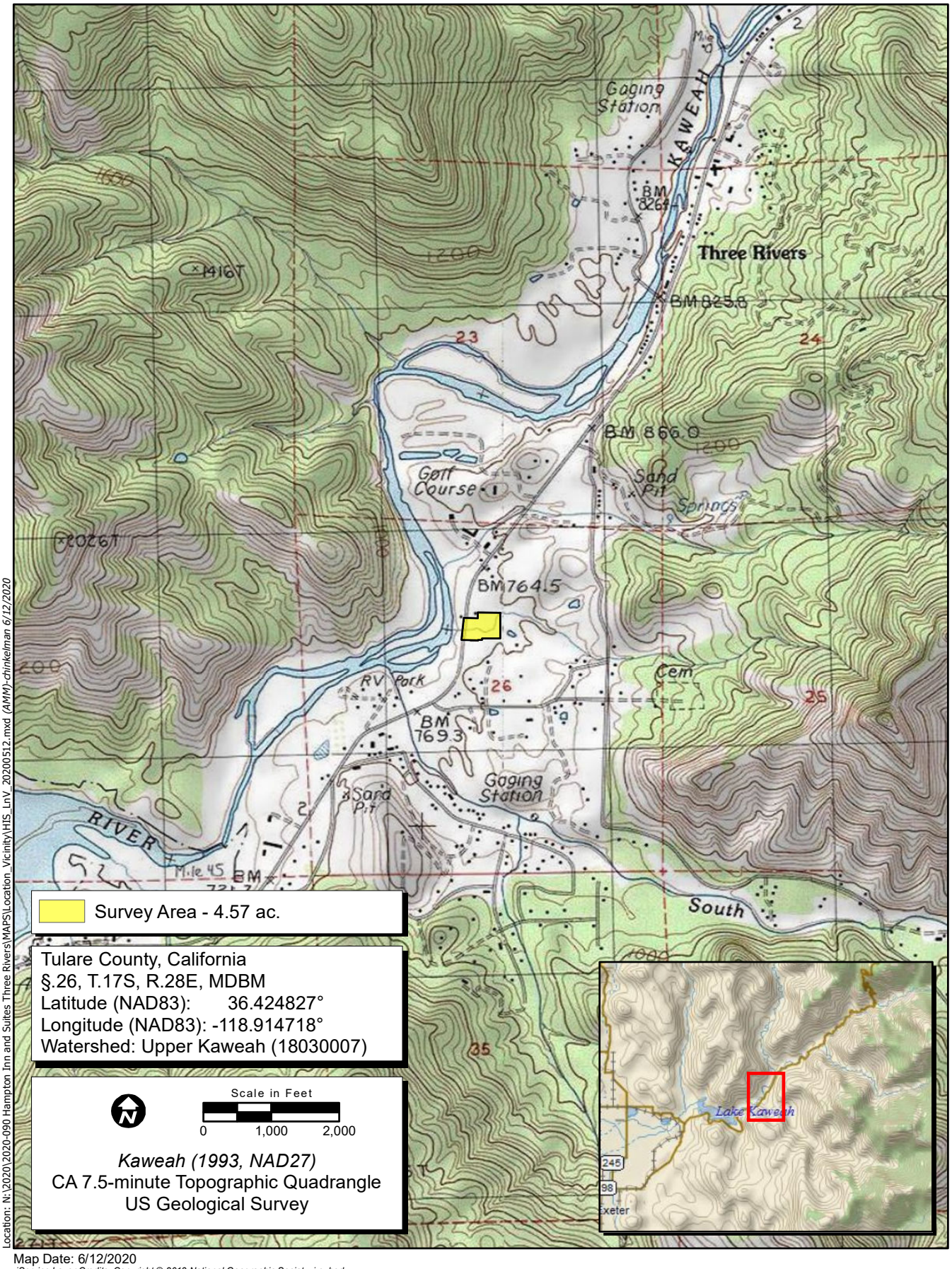
LIST OF FIGURES



Location: N:\2020\2020-090 Hampton Inn and Suites Three Rivers\MAPS\Location_Vicinity\HIS_LnV_20200512.mxd (AMM)-chinkelman 6/12/2020

Map Date: 6/12/2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Survey Area Location and Vicinity

2020-090 Hampton Inn and Suites in Three Rivers

ATTACHMENT A

Plant Species Observed Onsite (April 15, 2020 and June 30, 2020)

Hampton Inn and Suites Three Rivers Project
Plant Species Observed (April 15, 2020 and June 30, 2020)

SCIENTIFIC NAME	COMMON NAME
ADOXACEAE	**MUSKROOT FAMILY**
Sambucus nigra subsp. *caerulea*	Blue elderberry
AMARANTHACEAE	**AMARANTH FAMILY**
*Amaranthus albus**	Pigweed amaranth
APIACEAE	**CARROT FAMILY**
*Anthriscus caucalis**	Bur chervil
*Conium maculatum**	Poison hemlock
*Torilis arvensis**	Field hedge parsley
ARACEAE	**ARUM FAMILY**
Lemna sp.	Duckweed
ASTERACEAE	**SUNFLOWER FAMILY**
Ambrosia psilostachya	Western ragweed
*Carduus pycnocephalus**	Italian thistle
*Centaurea melitensis**	Tocalote
*Centaurea solstitialis**	Yellow star-thistle
Erigeron canadensis	Canada horseweed
Helianthus annuus	Common sunflower
Heterotheca grandiflora	Telegraph weed
Holocarpha virgata	Narrow tarplant
*Hypochaeris glabra**	Smooth cat's-ear
*Hypochaeris radicata**	Rough cat's-ear
*Lactuca serriola**	Prickly lettuce
*Pseudognaphalium luteoalbum**	Jersey cudweed
*Silybum marianum**	Milk thistle
BORAGINACEAE	**BORAGE FAMILY**
Amsinckia sp.	Fiddleneck
BRASSICACEAE	**MUSTARD FAMILY**
Boechera sp.	Rockcress
*Capsella bursa-pastoris**	Shepherd purse
*Hirschfeldia incana**	Shortpod mustard
*Sisymbrium officinale**	Hedge mustard

Hampton Inn and Suites Three Rivers Project
Plant Species Observed (April 15, 2020 and June 30, 2020)

SCIENTIFIC NAME	COMMON NAME
CARYOPHYLLACEAE	**PINK FAMILY**
*Stellaria media**	Common chickweed
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
*Chenopodium album**	White goosefoot
EUPHORBIACEAE	**SPURGE FAMILY**
Croton setiger	Turkey mullein
FABACEAE	**LEGUME FAMILY**
Acmispon americanus	Spanish clover
Lupinus bicolor	Bicolored lupine
*Vicia villosa**	Hairy vetch
*Wisteria sinensis**	Chinese wisteria
FAGACEAE	**OAK FAMILY**
Quercus lobata	Valley oak
Quercus wislizeni	Interior live oak
GERANIACEAE	**GERANIUM FAMILY**
*Erodium brachycarpum**	Short fruited filaree
*Erodium cicutarium**	Red-stemmed filaree
LAMIACEAE	**MINT FAMILY**
*Marrubium vulgare**	Common horehound
MELIACEAE	**MAHOGANY FAMILY**
*Melia azedarach**	China berry tree
MYRSINACEAE	**MYRSINE FAMILY**
*Lysimachia arvensis**	Scarlet pimpernel
ONAGRACEAE	**EVENING PRIMROSE FAMILY**
Camissonia strigulosa	Contorted primrose
Epilobium sp.	Willow-herb
PHRYMACEAE	**LOPSEED FAMILY**
Erythranthe floribunda	Many flowered monkey flower
PLANTAGINACEAE	**PLANTAIN FAMILY**
*Veronica persica**	Bird's eye speedwell

An asterisk (*) indicates a non-native species.

Hampton Inn and Suites Three Rivers Project
Plant Species Observed (April 15, 2020 and June 30, 2020)

SCIENTIFIC NAME	COMMON NAME
POACEAE	**GRASS FAMILY**
*Avena fatua**	Wild oat
*Bromus diandrus**	Ripgut brome
*Bromus hordeaceus**	Soft brome
Distichlis spicata	Saltgrass
*Elymus caput-medusae**	Medusahead grass
Elymus glaucus	Blue wild-rye
Elymus triticoides	Creeping wild-rye
*Festuca perennis**	Italian Ryegrass
Hordeum murinum ssp. *glaucum**	Foxtail barley
POLYGONACEAE	**BUCKWHEAT FAMILY**
Chorizanthe membranacea	Pink spineflower
*Rumex crispus**	Curly dock
PORTULACEAE	**PURSLANE FAMILY**
Claytonia parviflora ssp. *parviflora*	Streambank springbeauty
ROSACEAE	**ROSE FAMILY**
*Rubus armeniacus**	Himalayan blackberry
RUBIACEAE	**MADDER FAMILY**
Galium aparine	Common bedstraw
SALICACEAE	**WILLOW FAMILY**
*Populus deltoides**	Eastern cottonwood
Populus fremontii	Fremont's cottonwood
Salix lasiolepis	Arroyo willow
SCROPHULARIACEAE	**FIGWORT FAMILY**
*Verbascum thapsus**	Common mullein
SIMAROUBACEAE	**QUASSIA FAMILY**
*Ailanthus altissima**	Tree-of-heaven
SOLANACEAE	**NIGHTSHADE FAMILY**
*Datura stramonium**	Jimson weed
Datura wrightii	Sacred thornapple
Solanum americanum	Comon nightshade

Hampton Inn and Suites Three Rivers Project
Plant Species Observed (April 15, 2020 and June 30, 2020)

SCIENTIFIC NAME	COMMON NAME
URTICACEAE	**NETTLE FAMILY**
Urtica dioica	Stinging nettle
VITACEAE	**GRAPE FAMILY**
Vitis californica	California wild grape
ZYGOPHYLLACEAE	**CALTROP FAMILY**
*Tribulus terrestris**	Puncture vine

Attachment “C”

Cultural and Tribal Cultural Resources

CULTURAL RESOURCES ASSESSMENT

This report contains confidential information exempt from public disclosure pursuant to:

54 USC § 307103 (National Historic Preservation Act), and/or

16 USC § 470hh (Archaeological Resources Protection Act), and/or

16 USC § 470aaa (Paleontological Resources Preservation Act), and/or

36 CFR § 296.18 (Confidentiality of Archaeological Resource Information), and/or

Gov. Code § 6254(r): California Public Records, Records exempt from disclosure requirements, Native American grave, cemetery and sacred place records, and/or

Gov. Code § 6254.10: California Public Records Act, Disclosure of records relating to archaeological site information and specified reports not required, and/or

14 CCR §15120(d): CEQA Guidelines, Contents of Environmental Impact Reports.

Attachment “D”

Noise

Noise Impact Assessment

Three Rivers Hampton Inn and Suites Project

Tulare County, California

Prepared For:

Ineffable Hospitality, Inc.

August 2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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LIST OF ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CNEL	Community Noise Equivalent Level
County	County of Tulare
dB	Decibel
dBA	A-weighted decibels
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Hz	Hertz
I-8	Interstate 8
L_{dn}	Day-night average sound level
L_{eq}	Measure of ambient noise
L_{max}	The maximum A-weighted noise level during the measurement period.
L_{min}	The minimum A-weighted noise level during the measurement period.
OPR	Office of Planning and Research
PPV	Peak particle velocity
Project	Three Rivers Hampton Inn & Suites Project
RMS	Root mean square
RS	Residential Single Unit
sf	Square foot

LIST OF ACRONYMS AND ABBREVIATIONS

STC	Sound Transmission Class
WEAL	Western Electro-Acoustic Laboratory, Inc.

1.0 INTRODUCTION

This report documents the results of a Noise Impact Assessment completed for the Three Rivers Hampton Inn and Suites Project (Project), which includes the development a 105-room hotel with 108 parking spaces in the community of Three Rivers in the County of Tulare (County). This assessment was prepared to assess the land use compatibility of the Proposed Project within the existing noise environment affecting the Project area. This assessment compares the predicted Project noise levels to noise standards promulgated by the County of Tulare General Plan Health and Safety Element.

1.1 Project Location and Description

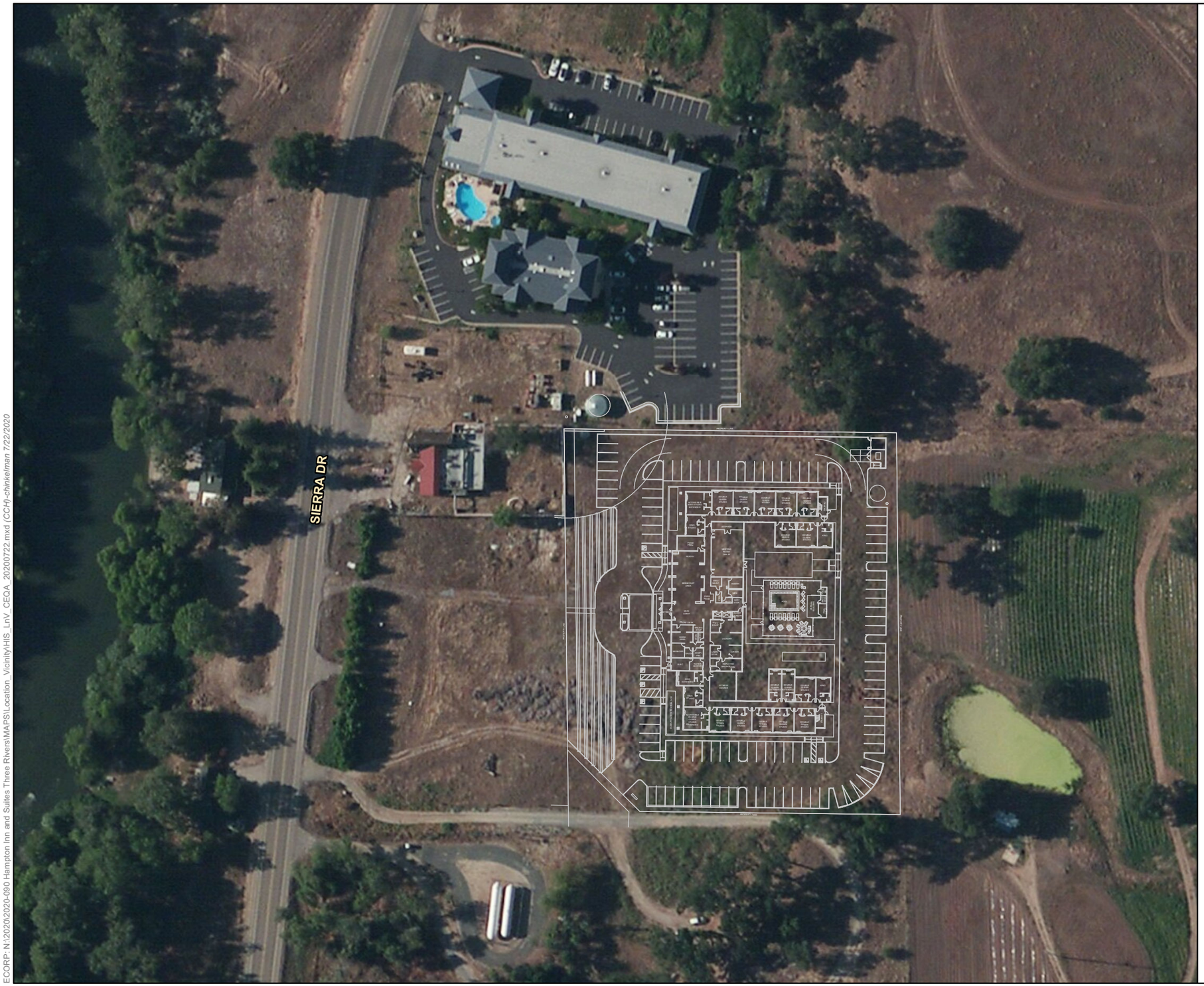
The Project site is located within the County of Tulare, in the community of Three Rivers. Three Rivers is located in the northern portion of the County of Tulare, bordered by Fresno, Inyo, and Kings Counties. The Project site is located on approximately 2.8 acres, just east of State Highway 198 (see Figure 1. Project Location). The Project is the development of a Hampton Inn on an irregularly shaped and currently undeveloped site. The Project site is surrounded by a Comfort Inn and Suites hotel to the north, a vacant commercial building to the west, and farmland and rural housing to the east, south, and west.

The Project is the development of a 105-room hotel with 108 parking spaces. The hotel is proposed to be three stories. Aside from the 105 guest rooms, the hotel is proposed to contain a meeting room, lobby, breakfast and food preparation areas, laundry, an employee breakroom, and more rooms typical of a moderate to high-end hotel. Other onsite infrastructure would include a swimming pool, two water tanks and wells, and a trash enclosure.

The Project is anticipated to generate 860 additional one-way vehicle trips per day on Saturdays, 625 additional one-way vehicle trips per day on Sundays, and 858 additional one-way vehicle trips per day on weekdays.

A construction period of approximately one year is anticipated, with construction likely to begin in summer of 2021. Project construction is anticipated to include site preparation, grading, building construction, paving, and painting of buildings and parking space and road lines.

The Proposed Project site is designated for *Urban Development* in the Tulare County General Plan.



Map Features

Site Plan

Sources: ESRI, USGS

ECORP: N:\2020\2020-090 Hampton Inn and Suites Three Rivers\MAPS\Location_Vicinity\HIS_LnV_CEQA_20200722.mxd (CCH)-chinkelman 7/22/2020

Map Date: 7/22/2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 50 100

Figure 1. Project Location and Vicinity

2020-090 Hampton Inn and Suites Three Rivers

2.0 ENVIRONMENTAL NOISE

2.1 Fundamentals of Noise and Environmental Sound

2.1.1 Addition of Decibels

The decibel (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 three dB higher than one source under the same conditions (Federal Transit Administration [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 three dB). Under the decibel scale, three sources of equal loudness together would produce an increase of five dB.

Typical noise levels associated with common noise sources are depicted in Figure 2. *Common Noise Levels*.

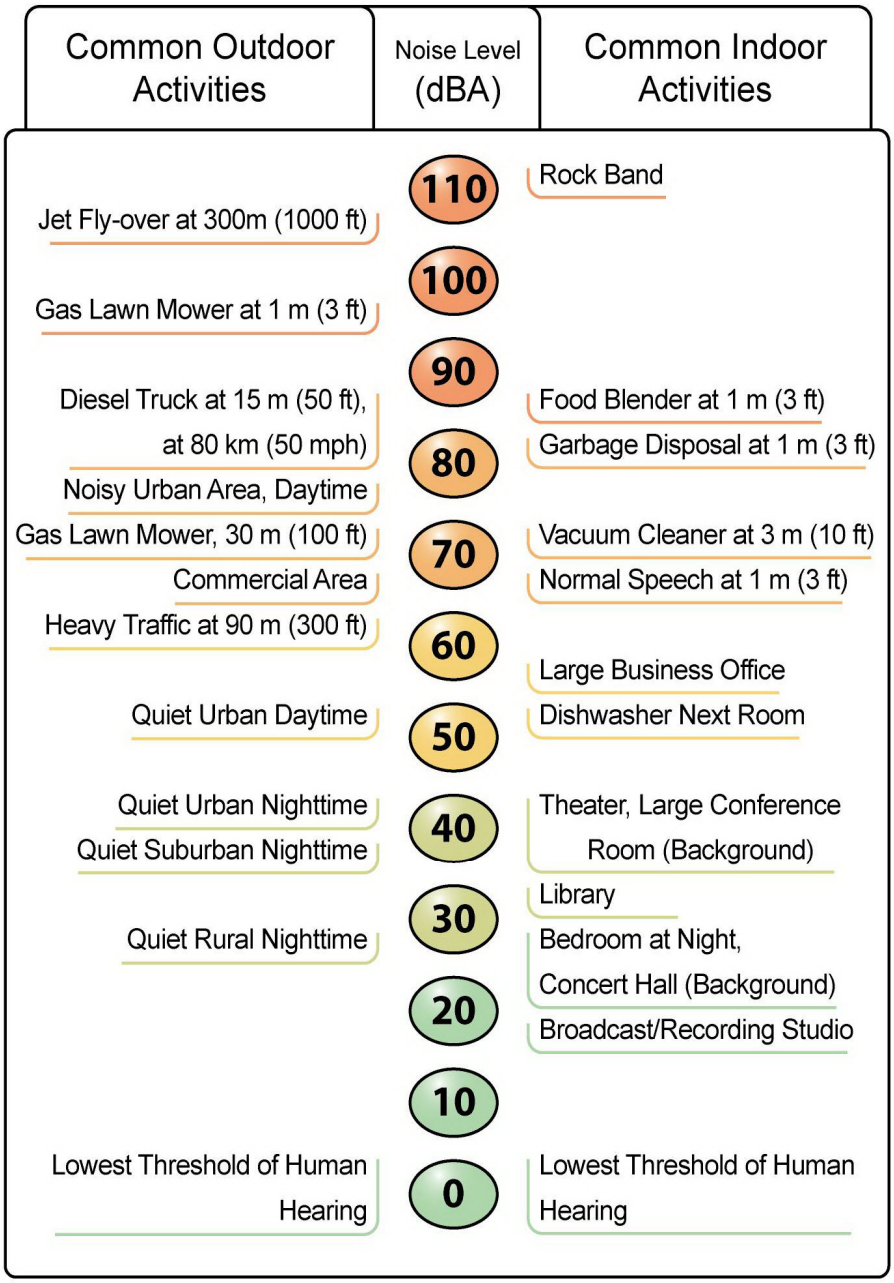


Figure 2. Common Noise Levels

Source: California Department of Transportation Caltrans 2012)

2.1.2 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 six 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 three dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [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 three 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 five 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 lengthwise 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 (Caltrans 2002). The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 2006). Generally, in exterior noise environments ranging from 60 dBA Community Noise Equivalent Level (CNEL) to 65 dBA CNEL, interior noise levels can typically be maintained below 45 dBA, a typically residential interior noise standard, with the incorporation of an adequate forced air mechanical ventilation system in each residential building, and standard thermal-pane residential windows/doors with a minimum rating of Sound Transmission Class (STC) 28. (STC is an integer rating of how well a building partition attenuates airborne sound. In the U.S., it is widely used to rate interior partitions, ceilings, floors, doors, windows, and exterior wall configurations.) In exterior noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments less than 75 dBA CNEL with proper wall construction techniques following California Building Code methods, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

2.1.3 Noise Descriptors

The dB 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 are measures of community noise. Each is applicable to this analysis and defined in Table 2-1.

Table 2-1. 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 one pascal is the pressure resulting from a force of one newton exerted over an area of one 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, Hertz (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 one percent, 10 percent, 50 percent, and 90 percent 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 five 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.
Intrusive	That noise that 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.

The dBA 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 ±one 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 ±one to two dBA.

2.1.4 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 dBA, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of one dBA cannot be perceived by humans.
- Outside of the laboratory, a three-dBA change is considered a just-perceivable difference.
- A change in level of at least five dBA is required before any noticeable change in community response would be expected. An increase of five 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.

2.1.5 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 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.

2.2 Fundamentals of Environmental Groundborne Vibration

2.2.1 Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) 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.

2.2.2 Vibration Sources and Characteristics

Table 2-2 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 as 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.

For the purposes of this analysis, the PPV descriptor with units of inches per second is used to evaluate construction-generated vibration for building damage and human complaints.

Table 2-2. 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, yet threshold at which there is a risk of architectural damage to fragile buildings
0.2	94	Vibrations may begin to annoy people	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	Architectural damage and possibly minor structural damage

Source: Caltrans 2020

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 2-2 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 earthmoving that requires the use of heavy-duty earthmoving equipment.

3.0 EXISTING ENVIRONMENTAL NOISE SETTING

3.1 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 considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The Project site is generally surrounded by farmland and rural residential development, with commercial development concentrated along State Route (SR) 198. The nearest noise-sensitive receptors to the Project site are the Comfort Inn and Suites hotel building, located approximately 113 feet north of the Project site, a vacant commercial building located approximately 96 feet west of the Project site at the nearest point, and a residence located across State Highway 198 from the site at approximately 270 feet to the west. The distances to the Comfort Inn and Suites and the vacant commercial building were measured from the property line of the Proposed Project to the physical building. The parking lot and outdoor area associated with hotels and commercial uses are not considered sensitive receptors. Noise-sensitive hotel activities, such as sleeping and resting, would be performed indoors.

3.2 Existing Ambient Noise Environment

The primary noise source in the Project vicinity is traffic. Existing roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) (see Attachment B) and traffic volumes from the Project's Traffic Impact Study (VRPA Technologies, Inc. 2020). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along these roadway segments are presented in Table 2-3.

Table 2-3. Existing (Baseline) Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway
SR 198		
South of Old Three Rivers Road	Residential and Commercial	58.4
Between Old Three River Road & Project Driveway	Residential and Commercial	58.4
North of Project Driveway	Residential and Commercial	58.4
Old Three Rivers Road		
East of SR 198	Residential	48.7

Source: Traffic noise levels were calculated by ECORP using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by VRPA Technologies, Inc. (2020). Refer to Attachment B for traffic noise modeling assumptions and results.
Note: A total of two intersections were analyzed in the Traffic Impact Study; roadway segments that impact sensitive receptors were included.

As shown, the existing traffic-generated noise level on Project-vicinity roadways currently ranges from 48.7 to 58.4 dBA CNEL. As previously described, CNEL is 24-hour average noise level 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 community of Three Rivers in the County of Tulare, which encompasses the Project site, is impacted by various noise sources. It is subject to both typical urban and rural noise, such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities as well as noise generated from the various land uses (i.e., residential, commercial, and agricultural) throughout Three Rivers that generate stationary source noise. Mobile sources of noise, especially cars and trucks, are the most common source of noise in the community. The ambient noise environment in the County of Tulare is largely influenced by roadway noise. The Project site is located directly off SR 198, identified by the Tulare General Plan as one of two major regional state highways which traverse the County. The General Plan states that SR 198 connects from U.S. Highway 101 on the west and continues eastward to the County of Tulare, passing through the City of Visalia and into Sequoia National Park (Tulare 2012).

4.0 REGULATORY FRAMEWORK

4.1 State

4.1.1 State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting noise-sensitive land uses, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines, published by the Office of Planning and Research (OPR 2003), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State OPR Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

4.2 Local

4.2.1 County of Tulare General Plan Health and Safety Element

The Health and Safety Element of the General Plan provides policy direction for minimizing noise impacts in the County and for establishing noise control measures for construction and operation of land use

projects. By identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noise, noise considerations will influence the general distribution, location, and intensity of future land use. The result is that effective land use planning and mitigation can alleviate the majority of noise problems.

The most basic planning strategy to minimize adverse impacts on new land uses due to noise is to avoid designating certain land uses at locations within the County that would negatively affect noise sensitive land uses. Uses such as schools, hospitals, childcare, senior care, congregate care, churches, and all types of residential use should be located outside of any area anticipated to exceed acceptable noise levels as defined by the Land Use Compatibility for Community Noise Environments table and pertinent goals and policies. Additionally, these uses should be protected from excess noise through sound attenuation measures such as site and architectural design and sound walls.

The County of Tulare has adopted these guidelines as a basis for planning decisions based on noise considerations. The land use compatibility guidelines are shown in Table 2-4. In the case that the noise levels identified at a proposed project site fall within levels considered normally acceptable, the project is considered compatible with the existing noise environment. The General Plan also identifies noise goals and policies set to minimize noise impacts within the County.

Table 2-4. Land Use Compatibility for Community Noise Environments				
Land Use Category	**Community Noise Exposure (Ldn or CNEL, dB)**			
	Normally Acceptable	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**
Residential - Low Density Single Family, Duplex, Mobile Homes	≤ 60	55 - 70	70 -75	≥ 75
Residential – Multi-Family	≤ 65	60 - 70	70 -75	≥ 75
Transient Lodging – Motels, Hotels	≤ 65	60 - 70	70 - 80	≥ 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	≤ 70	60 - 70	70 - 80	≥ 80
Auditoriums, Concerts Halls, Amphitheaters	NA	≤ 70	NA	≥ 65
Sports Arenas, Outdoor Spectator Sports	NA	≤ 75	NA	≥ 70
Playgrounds, Neighborhood Parks	≤ 70	NA	68-75	≥ 73
Golf Courses, Riding Stables, Water Recreation, Cemeteries	≤ 75	NA	70 – 80	≥ 80
Office Buildings, Business Commercial and Professional	≤ 70	68 – 78	≥ 75	NA
Industrial, Manufacturing, Utilities, Agriculture	≤ 75	70 - 80	≥ 75	NA

Source: County of Tulare General Plan Health and Safety Element
Notes:
NA: Not Applicable; CNEL: Community Noise Equivalent Level
Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.
Clearly Unacceptable – New construction or development should generally not be undertaken.

The Public Health and Safety Element also contains goals and policies that must be used to guide decisions concerning land uses that are common sources of excessive noise levels. The following relevant and applicable goals and policies from the County's Health and Safety Element have been identified for the Project.

Goal HS-8: To protect County residents and visitors from the harmful effects of excessive noise while promoting the County economic base.

- **Policy HS-8.1 Economic Base Protection:** The County shall protect its economic base by preventing the encroachment of incompatible land uses on known noise-producing industries, railroads, airports, and other sources.
- **Policy HS-8.2 Noise Impacted Areas:** The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB Ldn (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.

- **Policy HS-8.3 Noise Sensitive Land Uses:** The County shall not approve new noise sensitive uses unless effective mitigation measures are incorporated into the design of such projects to reduce noise levels to 60 dB Ldn (or CNEL) or less within outdoor activity areas and 45 dB Ldn (or CNEL) or less within interior living spaces.
- **Policy HS-8.4 Airport Noise Contours:** The County shall ensure new noise sensitive land uses are located outside the 60 CNEL contour of all public use airports.
- **Policy HS-8.5 State Noise Standards:** The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC). Title 24 requires that interior noise levels not exceed 45 dB Ldn (or CNEL) with the windows and doors closed within new developments of multi-family dwellings, condominiums, hotels, or motels. Where it is not possible to reduce exterior noise levels within an acceptable range the County shall require the application of noise reduction technology to reduce interior noise levels to an acceptable level.
- **Policy HS-8.6 Noise Level Criteria:** The County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC).
- **Policy HS-8.8 Adjacent Uses:** The County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County.
- **Policy HS-8.11 Peak Noise Generators:** The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.
- **Policy HS-8.13 Noise Analysis:** The County shall require a detailed noise impact analysis in areas where current or future exterior noise levels from transportation or stationary sources have the potential to exceed the adopted noise policies of the Health and Safety Element, where there is development of new noise sensitive land uses or the development of potential noise generating land uses near existing sensitive land uses. The noise analysis shall be the responsibility of the project applicant and be prepared by a qualified acoustical engineer (i.e., a Registered Professional Engineer in the State of California, etc.). The analysis shall include recommendations and evidence to establish mitigation that will reduce noise exposure to acceptable levels (such as those referenced in Table 10-1 of the Health and Safety Element).
- **Policy HS-8.14 Sound Attenuation Features:** The County shall require sound attenuation features such as walls, berming, heavy landscaping, between commercial, industrial, and residential uses to reduce noise and vibration impacts.
- **Policy HS-8.15 Noise Buffering:** The County shall require noise buffering or insulation in new development along major streets, highways, and railroad tracks.
- **Policy HS-8.16 State Noise Insulation:** The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code.

- **Policy HS-8.17 Coordinate with Caltrans**: The County shall work with Caltrans to mitigate noise impacts on sensitive receptors near State roadways, by requiring noise buffering or insulation in new construction.
- **Policy HS-8.18 Construction Noise:** The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.
- **Policy HS-8.19 Construction Noise Control:** The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise impacts on surrounding land uses.

5.0 IMPACT ASSESSMENT

5.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act Guidelines Appendix G thresholds of significance. The Project would result in a significant noise-related impact if it would meet any of the following criteria:

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 expose people residing or working in the project area to excessive noise levels.

For purposes of this analysis and where applicable, the County noise standards were used for evaluation of Project-related noise impacts.

5.2 Methodology

This analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. In order to estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Model (2006). Offsite transportation noise was calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels, coupled with traffic levels calculated by VRPA Technologies, Inc (2020). Onsite operational noise levels are addressed qualitatively with reference measurements previously taken by ECORP Consulting, Inc. Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from the Caltrans guidelines set forth above. Potential groundborne vibration

impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby land uses.

5.2.1 Impact Analysis

Would the Project Result in Short-Term Construction-Generated Noise in Excess of County Noise Standards?

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 onsite 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., building construction, paving). Noise generated by construction equipment, including earthmovers, 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 sensitive receptors in the vicinity of the construction site.

The nearest noise receptors to the Project site are the Comfort Inn and Suites located approximately 113 feet north of the Project site, a vacant commercial building located approximately 96 feet west of the Project parking lot at the nearest point, and a residence located across State Highway 198 from the site at approximately 270 feet to the west. Consistent with the recommendations of the FTA (2018) for assessing construction noise, such noise is measured from the center of the Project site to the nearest receptor. As previously described, per General Plan Safety Element policy HS-8.18, construction activity is exempted provided that noise generating activity does not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday. As mandated by General Plan policy HS-8.11, no peak noise generating activities shall be allowed to occur outside of normal business hours without County approval. In addition, General Plan Policy HS-8.19 requires construction noise control best practices to be implemented to minimize construction noise impacts.

To estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, the construction equipment noise levels were calculated using the Roadway Noise Construction Model for the site preparation, grading and building construction, paving and architectural coating. The anticipated short-term construction noise levels generated for the necessary equipment is presented in Table 2-5.

For comparison purposes, Project construction noise is compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by the National Institute for Occupational Safety and Health (NIOSH). A division of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per

day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors. Since this construction-related noise level threshold represents the energy average of the noise source over a given time period, the noise level is expressed in L_{eq}. As stated previously, the nearest noise-sensitive receptor is located approximately 190 feet from the center of the Project site. As shown in Table 2-5, the predicted maximum eight-hour noise levels at the vacant commercial building to the west could potentially reach approximately 74.4 dBA L_{eq}, which is below the NIOSH threshold of 85 dBA. Thus, construction noise would reach even lower levels at the Comfort Inn and Suites and the nearest residence.

Table 2-5. Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level @ Nearest Residence (dBA L_{eq})	NIOSH Construction Noise Standards (dBA L_{eq})	Exceeds Standard at Nearest Sensitive Receptor?
Site Preparation			
Grader	69.4	*85*	**No**
Scraper	68.0	*85*	**No**
Tractor/ Loader/ Backhoe	62.0	*85*	
Combined Site Preparation Equipment	**72.2**	*85*	**No**
Grading			
Rubber Tired Dozers	66.1	*85*	**No**
Graders	69.4	*85*	**No**
Tractors/Loaders/Backhoes (2)	62.0 (each)	*85*	**No**
Combined Grading Equipment	**72.0**	*85*	**No**
Building Construction/ Paving/ Architectural Coating			
Crane	61.0	*85*	**No**
Forklifts (2)	63.5 (each)	*85*	**No**
Generator Set	66.0	*85*	**No**
Tractors/Loaders/Backhoes (2)	62.0 (each)	*85*	**No**
Welders (3)	58.4	*85*	**No**
Cement and Mortar Mixer	63.2	*85*	
Paver	62.6	*85*	**No**
Rollers (2)	61.4 (each)	*85*	**No**
Paving Equipment	62.6	*85*	**No**
Air Compressors	66.3	*85*	**No**
Combined Building Equipment	**74.4**	*85*	**No**

Source: Construction noise levels were calculated by ECORP Consulting, Inc. using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment A for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters. The distance to the nearest sensitive receptor was calculated from the center of the Project site consistent with FTA (2018) recommendations (approximately 190 feet). Building construction, paving and architectural coating are assumed to occur simultaneously.

As shown, no individual piece of construction equipment or cumulative construction equipment would exceed the NOISH threshold of 85 dBA at the closest residence.

Therefore, Project construction activities would not expose persons to and generate noise levels in excess of NOISH standards and all construction activities would occur during the times permitted by the County.

Would the Project Result in a Substantial Permanent Increase in Ambient Noise Levels in Excess of County Standards During Operations?

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise sensitive and may warrant unique measures for protection from intruding noise. The nearest noise receptors to the Project site are the Comfort Inn and Suites located approximately 113 feet north of the Project site, a vacant commercial building located approximately 96 feet west of the Project site, and a residence located across State Highway 198 at approximately 270 feet to the west. Distance to the adjacent hotel and vacant commercial building was measured to the nearest point of each physical building from the Project property line.

Project Operational Offsite Traffic Noise

Future traffic noise levels throughout the Project vicinity (i.e., vicinity roadway segments that traverse noise sensitive residential land uses) were modeled using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) and based on the traffic volumes identified by VRPA Technologies, Inc. (2020) to determine the noise levels along Project vicinity roadways. Table 2-6 shows the calculated offsite roadway noise levels under existing traffic levels compared to existing traffic levels plus the Project. The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the operational noise standards in the County General Plan (Policy HS-8.3). In the case that the existing ambient noise levels already exceed the applicable numeric noise threshold, an increase of more than 5 dBA over the existing ambient noise level is considered significant. As previously described, a change in level of at least 5 dBA is required before any noticeable change in community response would be expected.

Table 2-6. Existing Plus Project Conditions - Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		Noise Standard (dBA CNEL)	Exceed Standard/ Significant Impact?
		Existing Conditions	Existing + Project Conditions		
SR 198					
South of Old 3 Rivers Road	Residential and Commercial	58.4	58.6	60	**No**
Between Old 3 Rivers Road and Project Driveway	Residential and Commercial	58.4	58.5	60	**No**
North of Project Driveway	Residential and Commercial	58.4	58.4	60	**No**
Old Three River Road					
East of SR 198	Residential	48.7	48.7	60	**No**

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels in conjunction with the trip generation rate identified by VRPA Technologies, Inc. 2020. Refer to Attachment B for traffic noise modeling assumptions and results.

Notes: A total of 2 intersections were analyzed in the Traffic Impact Study; however, all roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown in Table 2-6, predicted increase in traffic noise levels associated with the Project would be less than the County noise standards.

Operational Stationary Noise

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Hotel uses, such as those proposed by the Project, are not typically associated with excessive, ongoing operations-related noise that would lead to substantial permanent increases in ambient noise levels. Instead, much of the operational stationary noise generated by the Project would be voices and maneuvering vehicles as hotel guests move in and out of the parking lot. Parking lot noise will be the focus of the operational noise analysis due to their proximity to the existing residences and hotel.

The loudest source of noise associated with the proposed hotel would be parking lot noise. Previous measurements were taken by ECORP staff during a weekday in the middle of a parking lot serving a large grocery store identified noise levels reaching 61.1 dBA at approximately 5 feet distant. These measurements were taken with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute 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. The proposed hotel would not be expected to generate noise levels at the same intensity as a large grocery store and therefore this reference noise applied to the Project is conservative.

The Project is proposing the development of a 105-room hotel. As stated previously, the parking lot would be the main source of stationary noise. Based on prior parking lot noise measurements taken by ECORP staff, the Project parking lot is conservatively estimated to reach a maximum noise level of 61.1 dBA, as explained above.

As previously stated, the two nearest noise receptors to the Project site are the Comfort Inn and Suites hotel building, located approximately 113 feet north of the Project site and the vacant commercial building, located approximately 96 feet west of the Project parking lot at the nearest point. The vacant commercial building is located in close proximity to the Proposed Project boundary. However, as previously stated, noise attenuates a rate of approximately six dB for each doubling of distance from a stationary or point source (FHWA 2011). Considering the conservative parking lot noise measurement of 61.1 dBA at approximately five feet distant, the nearest noise-sensitive receptor, the vacant commercial building located 96 feet away from the Proposed Project Parking lot, would experience operational stationary noise levels of below 35.5 dBA. This falls below the County of Tulare operational noise threshold of 60 dBA (Policy HS-8.8).

As previously stated, the manner in which older homes and buildings for lodging in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). Thus, exterior noise levels of 37.1 could be expected to at least 20 dBA less in interior.

Thus, the Proposed Project would not result in noise levels in excess of County noise standards. The Project would have a less than significant impact in this area.

Land Use Compatibility

The County of Tulare provides a Land Use Compatibility Table to gauge the compatibility of new land uses (the Proposed Project) relative to existing noise levels. As shown in Table 2-4 above, the General Plan identifies normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses; including hotels and motels such as that proposed by the Project. In the case that the noise levels identified at the Project site fall within levels considered normally acceptable, the Project is considered compatible with the existing noise environment. As shown in Table 2-4, a clearly compatible noise level for locating hotel uses is anything 65 dBA and under. Additionally, General Plan Health and Safety Element Policy HS-8.5 limits exterior noise levels at hotels to 60 dBA CNEL and interior noise level within hotels to 45 dBA CNEL.

The predominate noise source in the Project vicinity is generated by traffic on SR 198. As shown in Table 2-6 above, traffic noise would not exceed 60 dBA under existing plus Project conditions.

Furthermore, the primary stationary noise source emitted from the adjacent hotel and vacant commercial building (if use was to resume) would be parking lot noise. As mentioned previously, previous measurements were taken by ECORP staff during a weekday in the middle of a parking lot serving a large grocery store identified noise levels reaching 61.1 dBA at approximately 5 feet distant. Considering the attenuation of sound with distance and the reduction of exterior-to-interior noise levels provided by

building walls, the noise experienced inside the proposed new hotel would be significantly less than 61.1 dBA. Thus, noise emitted from the adjacent hotel and commercial building would not exceed 65 dBA.

Therefore, the Project is considered a compatible land use with the adjacent hotel and vacant commercial building, both in terms of commercial land use class and in terms of noise falling in the normally compatible range for hotels and motels. Thus, the proposed and existing land uses are considered compatible.

Would the Project Expose Structures to Substantial Groundborne Vibration During Construction?

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Once operational, the Project would not be a source of groundborne vibration. 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. Pile drivers are not anticipated to be necessary for Project construction in the case of the Proposed Project. 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 typical construction equipment are summarized in Table 2-7.

The County of Tulare does not regulate construction vibration. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020) recommended standard of 0.2 inch per second PPV with respect to the prevention of structural damage for normal buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

Table 2-7. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 20 Feet (inches per second)
Large Bulldozer	0.124
Caisson Drilling	0.124
Loaded Trucks	0.106
Rock Breaker	0.115
Jackhammer	0.049
Small Bulldozer/Tractor	0.004

Source: FTA 2018; Caltrans 2020

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structure of concern to the construction site is a vacant commercial building with the closest physical building being approximately 20 feet away from the Project site boundary. Based on the vibration levels presented in Table 2-7, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.124 inch per second PPV at 20 feet. Thus, the nearby structures would not be negatively affected.

Would the Project Expose Structures to Substantial Groundborne Vibration During Operations?

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels.

Would the Project Expose People Residing or Working in the Project area to Excessive Airport Noise?

The Project site is located approximately 10.22 miles east of the City of Woodlake Airport, located in the City of Woodlake. Although aircraft flight patterns may cover Three Rivers, noise from aircrafts is not a significant issue in the community. As shown in the Tulare General Plan, the community of Three Rivers is well outside of the airport zone. Aircraft noise does not significantly impact the community of Three Rivers and the Proposed Project would not expose people visiting or working on the Project site to excess airport noise levels.

5.2.2 Cumulative Noise Impacts?

Cumulative Construction Noise

Construction activities associated with the Proposed Project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the Proposed Project was determined to be less than significant following compliance with the County General Plan's construction timing and construction noise control guidelines. Per the General Plan, construction is to be limited to the hours of 7 am to 7 pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors. Further, the County requires noise construction control per policy HS 8.19. In addition, the individual Project would not exceed the NOISH construction noise standard prior to implementation of construction noise control.

Cumulative development in the vicinity of the Project site could result in elevated construction noise levels at sensitive receptors in the Project area. However, each project would be required to comply with the applicable County General Plan limitations on allowable hours of construction and the NOISH construction noise limits. Therefore, the Project would not contribute to cumulative impacts and impacts in this regard are not cumulatively considerable.

Cumulative Operational Noise

Cumulative long-term noise sources associated with 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. The Project is the construction of a hotel. Operations of the Proposed Project would not result in any substantial changes in the noise environment due to onsite sources. Noise increase as a result of the Project would not exceed County standards. In addition, with implementation of the measures required by Policies HS- 8.14, HS 8.15, HS 8.16, HS 8.17, HS 8.18, and HS 8.19 of the General Plan, Project noise would be further controlled. Therefore, the Project would not contribute to cumulative impacts during operations.

6.0 REFERENCES

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WEAL. 2000. *Sound Transmission Sound Test Laboratory Report No. TL 96-186*.

LIST OF ATTACHMENTS

ATTACHMENT A

Federal Highway Administration Roadway Construction Noise Model Outputs – Project Construction Noise

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/10/2020
Case Description: Site Prep

Description	**Land Use**
Residence / small l	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**	**Estimated Shielding (dBA)**
Grader	No	40	85		160	0
Scraper	No	40		83.6	160	0
Backhoe	No	40		77.6	160	0

Results

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Grader		74.9	**70.9**
Scraper		73.5	**69.5**
Backhoe		67.5	**63.5**
	Total	74.9	**73.7**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/10/2020
Case Description: Grading

Description	**Land Use**
Reidence / Small Business	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**	**Estimated Shielding (dBA)**
Dozer	No	40		81.7	160	0
Grader	No	40	85		160	0
Backhoe	No	40		77.6	160	0
Backhoe	No	40		77.6	160	0

Results

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Dozer		71.6	**67.6**
Grader		74.9	**70.9**
Backhoe		67.5	**63.5**
Backhoe		67.5	**63.5**
	Total	74.9	**73.5**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/10/2020
Case Description: Const. / Paving / Arch. Coating

Description	**Land Use**
Residence / Small Business	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**	**Estimated Shielding (dBA)**
Crane	No	16		80.6	160	0
Front End Loader	No	40		79.1	160	0
Generator	No	50		80.6	160	0
Front End Loader	No	40		79.1	160	0
Backhoe	No	40		77.6	160	0
Backhoe	No	40		77.6	160	0
Welder / Torch	No	40		74	160	0
Welder / Torch	No	40		74	160	0
Welder / Torch	No	40		74	160	0
Concrete Mixer Truck	No	40		78.8	160	0
Paver	No	50		77.2	160	0
Roller	No	20		80	160	0
Roller	No	20		80	160	0
Paver	No	50		77.2	160	0
Pumps	No	50		80.9	160	0

Results

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Crane	70.4	**62.5**

Front End Loader		69	**65**
Generator		70.5	**67.5**
Front End Loader		69	**65**
Backhoe		67.5	**63.5**
Backhoe		67.5	**63.5**
Welder / Torch		63.9	**59.9**
Welder / Torch		63.9	**59.9**
Welder / Torch		63.9	**59.9**
Concrete Mixer Truck		68.7	**64.7**
Paver		67.1	**64.1**
Roller		69.9	**62.9**
Roller		69.9	**62.9**
Paver		67.1	**64.1**
Pumps		70.8	**67.8**
	Total	70.8	**75.9**

*Calculated Lmax is the Loudest value.

ATTACHMENT B

Federal Highway Administration Roadway Traffic Noise Model Outputs – Project Traffic Noise

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2020-090
Project Name: Hampton Inn & Suites Project

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: VRPA 2020
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition				Design		Vehicle Mix		Distance from Centerline of Roadway						Traffic Volumes		
		Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour				Calc	Day	Eve	Night
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL	Dist			
Existing																
SR 198																
South of Old Three Rivers Rd.	2	0	5,153	45	0.5	1.8%	0.7%	**58.4**	-	36	78	167	100	4,003	654	495
Between Old Three River Rd. & Project Driveway	2	0	5,202	45	0.5	1.8%	0.7%	**58.4**	-	36	78	168	100	4,042	661	499
North of Project Driveway	2	0	5,211	45	0.5	1.8%	0.7%	**58.4**	-	36	78	169	100	4,049	662	500
Old Three Rivers Rd.																
East of SR 198	2	0	558	45	0.5	1.8%	0.7%	**48.7**	-	-	-	38	100	434	71	54

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2020-090
Project Name: Hampton Inn & Suites Project

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: VRPA 2020
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition				Design		Vehicle Mix		Distance from Centerline of Roadway						Traffic Volumes		
Roadway, Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL	Calc Dist	Day	Eve	Night
Existing + Project																
SR 198																
South of Old Three Rivers Rd.	2	0	5,481	45	0.5	1.8%	0.7%	**58.6**	-	38	81	174	100	4,259	696	526
Between Old Three River Rd. & Project Driveway	2	0	5,337	45	0.5	1.8%	0.7%	**58.5**	-	37	79	171	100	4,147	678	512
North of Project Driveway	2	0	5,270	45	0.5	1.8%	0.7%	**58.4**	-	37	79	170	100	4,094	669	506
Old Three Rivers Rd.																
East of SR 198	2	0	558	45	0.5	1.8%	0.7%	**48.7**	-	-	-	38	100	434	71	54

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2020-090
Project Name: Hampton Inn & Suites Project

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: VRPA 2020
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
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Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition				Design		Vehicle Mix		Distance from Centerline of Roadway					Traffic Volumes			
Roadway, Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL	Calc Dist	Day	Eve	Night
Buildout NO Project																
SR 198																
South of Old Three Rivers Rd.	2	0	7,295	45	0.5	1.8%	0.7%	**59.9**	-	45	98	211	100	5,668	926	700
Between Old Three River Rd. & Project Driveway	2	0	6,894	45	0.5	1.8%	0.7%	**59.6**	-	44	94	203	100	5,357	876	662
North of Project Driveway	2	0	7,448	45	0.5	1.8%	0.7%	**60.0**	-	46	99	214	100	5,787	946	715
Old Three Rivers Rd.																
East of SR 198	2	0	1,899	45	0.5	1.8%	0.7%	**54.0**	-	-	40	86	100	1,476	241	182

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2020-090
Project Name: Hampton Inn & Suites Project

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: VRPA 2020
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition				Design		Vehicle Mix		Distance from Centerline of Roadway						Traffic Volumes		
		Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour				Calc	Day	Eve	Night
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL	Dist			
Buildout with Project																
SR 198																
South of Old Three Rivers Rd.	2	0	7,614	45	0.5	1.8%	0.7%	**60.0**	-	47	101	217	100	5,916	967	731
Between Old Three River Rd. & Project Driveway	2	0	7,124	45	0.5	1.8%	0.7%	**59.8**	-	45	96	208	100	5,535	905	684
North of Project Driveway	2	0	7,511	45	0.5	1.8%	0.7%	**60.0**	-	46	100	215	100	5,836	954	721
Old Three Rivers Rd.																
East of SR 198	2	0	1,899	45	0.5	1.8%	0.7%	**54.0**	-	-	40	86	100	1,476	241	182

Attachment “E”

Traffic

Three Rivers Hampton Inn & Suites

Traffic Impact Study Report
June 2020

Prepared by:
VRPA Technologies, Inc.
4630 W. Jennifer, Suite 105
Fresno, CA 93722
Project Manager: Jason Ellard

Three Rivers Hampton Inn & Suites Traffic Impact Study

Study Team

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Executive Summary

This Traffic Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the Three Rivers Hampton Inn & Suites Development (Project). The Project seeks to develop a 105-room hotel to be located off of State Route (SR) 198 (Sierra Drive), approximately 1,100 feet north of Old 3 Rivers Road in the Three Rivers Community.

Three Rivers is located in the Kaweah River canyon, just above Lake Kaweah, approximately 28 miles east of the City of Visalia. Three Rivers' name comes from its location near the junction of the North, Middle, and South Forks of the Kaweah River. The surrounding terrain is marked by oak woodland forest and foothills. Three Rivers is located in the northern portion of Tulare County at an elevation of 825 feet above sea level with a total area of 45.4 square miles. Three Rivers is the gateway town for the Ash Mountain Main Entrance to Sequoia-Kings Canyon National Park, home of the Giant Sequoia trees.

IMPACTS

Intersections

Table E-1 shows the anticipated level of service conditions at study intersections for the Existing through the Cumulative Year 2042 Plus Project scenarios. Results of the analysis show that levels of service at the SR 198 (Sierra Drive) and Project Driveway and SR 198 (Sierra Drive) and Old 3 Rivers Road intersections will not exceed target LOS 'D' for all the study scenarios. Therefore, no mitigation measures are required to achieve acceptable levels of service. It should be noted that the Project Driveway along SR 198 (Sierra Drive) must meet Tulare County and Caltrans standards.

Table E-1
Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR		EXISTING		EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 WITHOUT PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
					DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
1. SR 198 (Sierra Drive) / Project Driveway	One-Way Stop Sign	D	Saturday	Midday	11.2	B	13.1	B	13.8	B	13.0	B	16.5	C
				PM	9.8	A	16.0	C	17.8	C	10.5	B	22.4	C
			Sunday	Midday	12.9	B	12.9	B	13.7	B	15.6	C	15.4	C
				PM	11.1	B	13.5	B	14.5	B	11.8	B	14.6	B
2. SR 198 (Sierra Drive) / Old 3 Rivers Road	One-Way Stop Sign	D	Saturday	Midday	14.3	B	15.0	C	20.5	C	22.8	C	24.8	C
				PM	13.5	B	14.0	B	27.6	D	31.1	D	33.9	D
			Sunday	Midday	14.8	B	15.4	C	18.1	C	21.2	C	22.4	C
				PM	12.3	B	12.7	B	18.1	C	18.9	C	19.9	C

DELAY is measured in seconds
LOS = Level of Service
For one-way controlled intersections, delay results show the delay for the worst movement.

CEQA Environmental Checklist

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. Implementation of the Project result in a significant impact if it would:

- ✓ Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant **-** An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County RMA and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs. Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of "D" on the County roadway system (both segments and intersections). Caltrans' SR-198 Transportation Concept Report (TCR) identifies the 2040 concept as LOS "D".

Results of the analysis show that the proposed Project will not exceed the minimum LOS standard of "D" as shown in Tables 2-1 and 3-2.

The Project does not conflict with any applicable adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Tulare County Area Transit (TCaT) Route 30 (Northeast County Route) operates between the Three Rivers Memorial Building and the Visalia Transit Center in downtown Visalia. Route 30 provides 4 roundtrips to the Visalia Transit Center on weekdays and 1 roundtrip on the weekend, all at 4-hour intervals. Implementation of the Project will not hinder the operation of Route 30 in the Three Rivers Community.

Caltrans' SR 198 TCR indicated that bicycles are permitted along the SR 198 corridor in the Three Rivers Community. The proposed Project will not prohibit the use of bicycles along SR 198. The SR 198 TCR also indicates that pedestrian facilities are nonexistent in the Three Rivers community. The Project will comply with Tulare County General Plan goals, which include Bicycle/Pedestrian Trail System (TC-5.1) and Consideration of Non-Motorized Modes in Planning and Development (TC-5.2).

Therefore, the Project will not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Therefore, no mitigation is needed.

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

Less Than Significant Impact **-** In the fall of 2013, Senate Bill 743 (SB 743) was passed by the

legislature and signed into law by the governor. For California, this legislation will eventually change the way that transportation studies are conducted for environmental documents. Delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, new performance measures such as vehicle miles travelled (VMT) or other similar measures will be used.

July 1, 2020 is the statewide implementation date and agencies may opt-in use of new metrics prior to that date. Therefore, the traffic analysis currently follows current practice regarding state and local guidance as of the date of preparation.

Tourism is the largest and most important industry in the Three Rivers area, as the town is situated near Sequoia National Forest, which receives over 1.2 million annual visitors, and Kings Canyon National Park, which receives nearly 700,000 annual visitors. The industries and businesses surrounding Three Rivers are almost all related to visitors passing through, en route to the Sequoia National Forest and Kings Canyon National Park. The Three Rivers Community and surrounding area features a multitude of boutique lodging facilities, restaurants, and small retail shops to support the area's small population and transient travelers.

The Feasibility Study prepared for the Project forecasts an unaccommodated demand equivalent to 7.3% of the base-year demand, resulting from the analysis of monthly and weekly peak demand and sell-out trends. Unaccommodated demand refers to individuals who are unable to secure accommodations in the market because all the local hotels are filled. These travelers must settle for less desirable accommodations or stay in properties located outside the market area. Seeking accommodations outside of the desired market area increases VMT since travelers would be forced to travel longer distances to secure accommodations. The development of the Project would reduce the unaccommodated demand, thus reducing VMT in the market area. Therefore, no mitigation is needed.

- ✓ Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (eg., farm equipment)?

Less Than Significant Impact **-** The Project would not result in hazards due to design features, since all proposed improvements (Project Driveway) would be built to County design standards. Access to the proposed Project will be provided at one (1) driveway along SR 198 (Sierra Drive), which is an existing driveway within Tulare County jurisdiction. Internal traffic and parking operations will be designed in accordance with Tulare County design standards. The proposed Project seeks to utilize a plot of relatively undeveloped land for a hotel with approximately 105 rooms in a rural area surrounded by rural/agricultural residences. The Project would not increase the use of farm equipment on streets and roads in the Three Rivers Community. As a result, the Project will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, no mitigation is needed.

✓ Result in inadequate emergency access?

Less Than Significant Impact **-** The Project would not result in any degradation of emergency access within the community. Congestion at an intersection or along a roadway can adversely impact emergency access. Results of the traffic analysis shows that all of the study intersections and roadway segments will meet Tulare County's and Caltrans' LOS "D" criteria through the year 2042. As a result, the Project will not result in inadequate emergency access. Therefore, no mitigation is needed.

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1.0 Introduction

1.1 Description of the Region/Project

This Traffic Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the Three Rivers Hampton Inn & Suites Development (Project). The Project seeks to develop a 105-room hotel to be located off of State Route (SR) 198 (Sierra Drive), approximately 1,100 feet north of Old 3 Rivers Road in the Three Rivers Community.

Three Rivers is located in the Kaweah River canyon, just above Lake Kaweah, approximately 28 miles east of the City of Visalia as shown in Figure 1-1. Three Rivers' name comes from its location near the junction of the North, Middle, and South Forks of the Kaweah River. The surrounding terrain is marked by oak woodland forest and foothills. Three Rivers is located in the northern portion of Tulare County at an elevation of 825 feet above sea level with a total area of 45.4 square miles. Three Rivers is the gateway town for the Ash Mountain Main Entrance to Sequoia-Kings Canyon National Park, home of the Giant Sequoia trees.

1.1.1 *Project Access*

The Project will have one (1) driveway along SR 198, approximately 1,100 feet to the north of Old 3 Rivers Road.

1.1.2 *Study Area*

The Project location is shown in Figure 1-2 and the Project site plan is provided in Appendix A. The following intersections analyzed in this TIS are shown in Figure 1-2 and include:

Intersections

- ✓ SR 198 (Sierra Drive) and Project Driveway
- ✓ SR 198 (Sierra Drive) and Old 3 Rivers Road

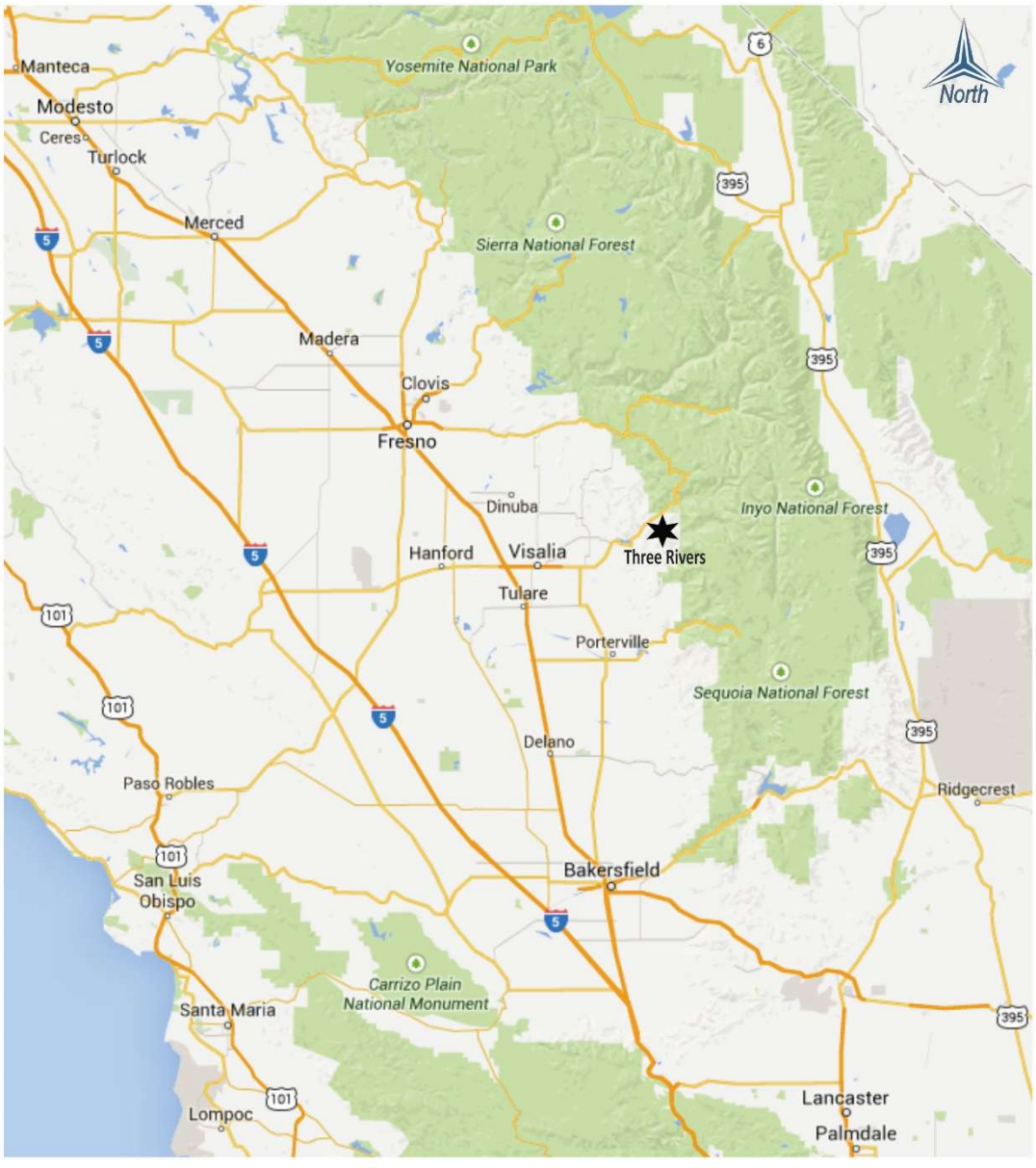
1.1.3 *Study Scenarios*

The TIS completed for the proposed Project includes level of service (LOS) analysis for the following traffic scenarios:

- ✓ Existing
- ✓ Existing Plus Project
- ✓ Near-Term Plus Project
- ✓ Cumulative Year 2042 Without Project
- ✓ Cumulative Year 2042 Plus Project

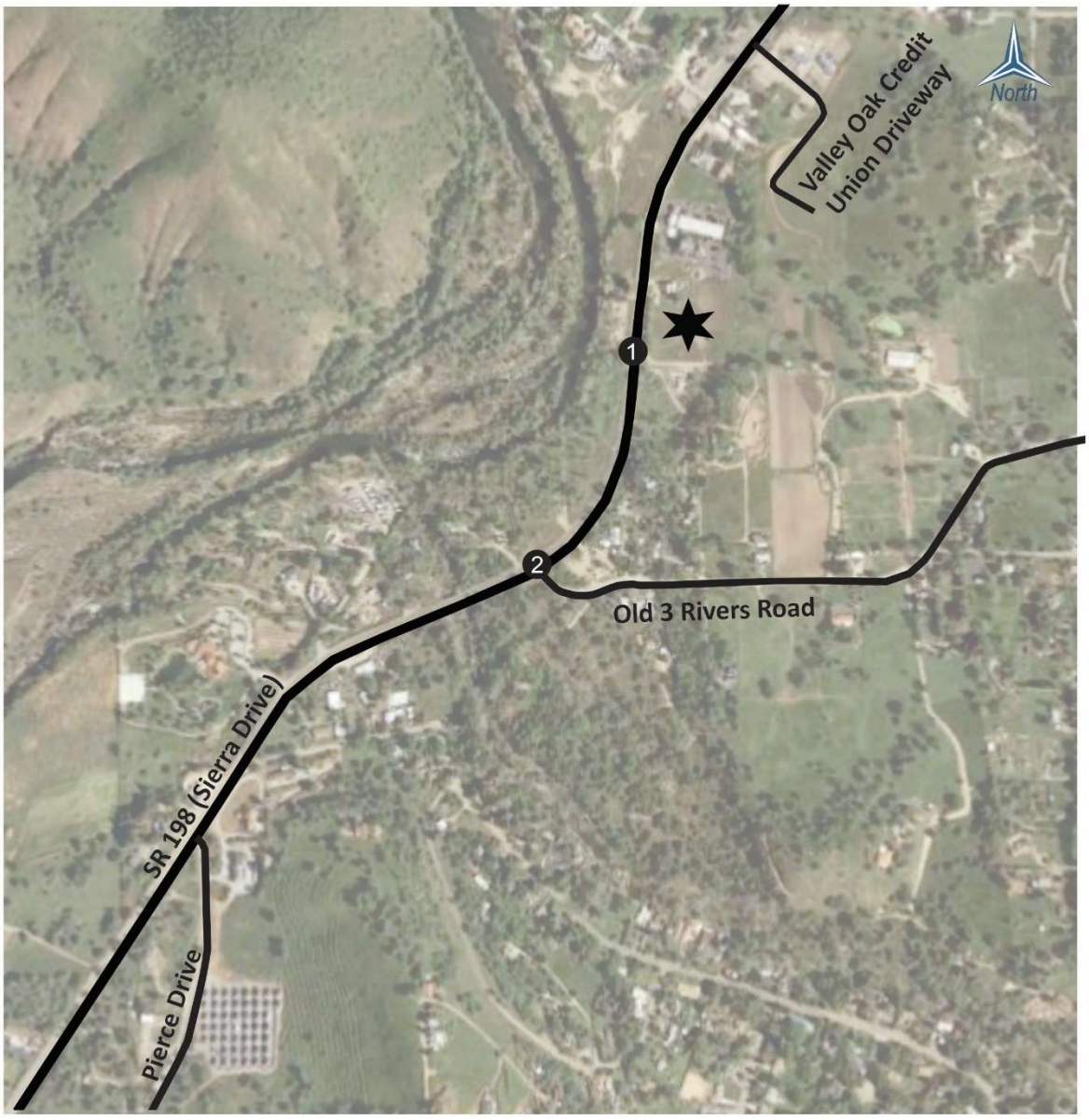
Three Rivers Hampton Inn & Suites
Regional Location

Figure 1-1



Three Rivers Hampton Inn & Suites
Project Location

Figure 1-2



1.2 Methodology

When preparing a TIS, guidelines set by affected agencies are followed. In analyzing street and intersection capacities the Level of Service (LOS) methodologies are applied. LOS standards are applied by transportation agencies to quantitatively assess a street and highway system's performance. In addition, safety concerns are analyzed to determine the need for appropriate mitigation resulting from increased traffic near sensitive uses and other evaluations such as the need for signalized intersections or other improvements.

1.2.1 *Intersection Analysis*

Intersection LOS analysis was conducted using the Synchro 10 software program. Synchro 10 supports the Highway Capacity Manual (HCM) 6th Edition methodologies and is an acceptable program by Tulare County and Caltrans staff for assessment of traffic impacts. Levels of Service can be determined for both signalized and unsignalized intersections. The existing study intersections are currently unsignalized.

Tables 1-1 indicates the ranges in the amounts of average delay for a vehicle at unsignalized intersections for the various levels of service ranging from LOS "A" to "F".

Intersection turning movement counts and roadway geometrics used to develop LOS calculations were obtained from field review findings and count data provided from the traffic count sources identified in Section 2.1.

When an unsignalized intersection does not meet acceptable LOS standards, the investigation of the need for a traffic signal shall be evaluated. The California Manual on Uniform Traffic Control Devices (California MUTCD) introduces standards for determining the need for traffic signals. The California MUTCD indicates that the satisfaction of one or more traffic signal warrants does not in itself require the installation of a traffic signal. In addition to the warrant analysis, an engineering study of the current or expected traffic conditions should be conducted to determine whether the installation of a traffic signal is justified. The California MUTCD Peak Hour Warrant (Warrant 3) will be used, as necessary, to determine if a traffic signal is warranted at the unsignalized intersection that falls below current LOS standards.

1.3 Policies to Maintain Level of Service

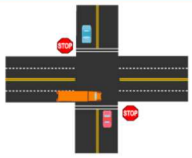
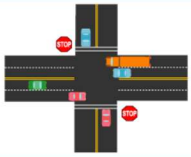
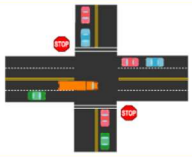
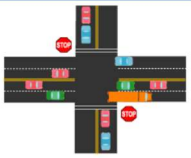
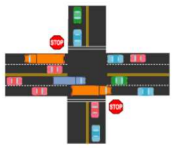
An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs.

Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of D on the County roadway system (both segments and intersections).

Based on guidance from Caltrans, the LOS for operating State highway facilities is based on Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadways segments, and intersections is "D". For undeveloped or not densely developed locations, the goal may be to achieve LOS "C".

Given the LOS standards of the various agencies in the Project area, the goal of the Project is to provide LOS results that meet the minimum LOS "C" for Caltrans facilities and LOS "D" for County facilities for all intersections and segments. However, due to the location of the Kaweah River and topographical challenges, Caltrans' SR-198 Transportation Concept Report (TCR) identifies the 2040 concept as LOS "D". This target level of service is consistent with the Tulare County General Plan minimum LOS standard of "D". Caltrans District 6 staff confirmed by email on September 6, 2016 that "reference to the 2040 concept with a LOS D means that Caltrans will accept LOS "D" on this segment of SR 198 in 2040". This TIS, therefore, will utilize a minimum LOS standard of "D" for the County and Caltrans on SR 198 in the Three Rivers Urban Development Boundary (UDB).

Table 1-1
Unsignalized Intersections
Level of Service Definitions
(Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION	AVERAGE TOTAL DELAY (sec/veh)
A	No delay for stop-controlled approaches. 	0 - 10.0
B	Describes operations with minor delay. 	> 10.0 - 15.0
C	Describes operations with moderate delays. 	> 15.0 - 25.0
D	Describes operations with some delays. 	> 25.0 - 35.0
E	Describes operations with high delays and long queues. 	> 35.0 - 50.0
F	Describes operations with extreme congestion, with very high delays and long queues unacceptable to most drivers. 	> 50.0

2.0 Existing Conditions

2.1 Existing Traffic Counts and Roadway Geometrics

The first step toward assessing Project traffic impacts is to assess existing traffic conditions. Typically, existing peak hour counts are collected in the study area for purposes of evaluating existing conditions. However, the present COVID-19 pandemic has altered travel patterns in the State of California, especially with the closure of the Sequoia-Kings Canyon National Park. As a result, existing traffic counts would be skewed and wouldn't reflect typical travel patterns in the study area. 2018 Traffic counts in the study area were used to evaluate existing traffic conditions in this traffic analysis. Intersection turning movement counts conducted for the Saturday and Sunday peak hour periods on February 3, 2018 and February 4, 2018, were used and are provided in Appendix B.

Due to the Project's proximity to Sequoia National Park, a seasonal adjustment factor was applied to the traffic counts as described above. The region sees significantly larger volumes of traffic during the summer months due to tourists/visitors of Sequoia National Park. In consultation with Caltrans staff, a seasonal growth factor of 1.76 was applied to the existing traffic counts to account for the increase in traffic in Three Rivers during the summer months. In addition, a growth rate of 1.3% per year was applied to the counts to estimate Year 2020 traffic volumes in the study area. Historical growth in Tulare County is approximately 1.3% based on population trends as forecasted in the Tulare County General Plan 2030 Update.

2.2 Existing Functional Roadway Classification System

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the type of service they are intended to provide. Fundamental to this process is the recognition that individual streets and highways do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads.

The following are general descriptions of the roadway types shown in the Three Rivers Community:

- ✓ **State Freeways and Highways** – There is one state facility serving the Three Rivers Community Area, State Highway 198. The segment of State Highway 198 (Sierra Drive), which passes through the Planning Area, is classified as a principal arterial.

- ✓ **Collectors** – Five (5) roads within the Three Rivers Community area are currently designated as county collector roads. Those roads include, North Fork Drive, Dinely Drive, Kaweah Drive, South Fork Drive, Mineral King Road. The primary function of collector roads is to collect and distribute traffic between local streets and the arterial roadway system. They generally provide access and movement between residential, commercial, and industrial areas.

- ✓ **Local Streets** – Roadways which provide access to individual homes and businesses. Local streets have one lane in each direction. Local streets connect single family homes and other uses to the arterial-collector network. All of the roadways in the Three Rivers Community that are not listed above would be classified as local streets.

2.3 Affected Streets and Highways

Major street and highway intersections and segments in the Three Rivers Community were analyzed to determine levels of service utilizing HCM-based methodologies described previously. The study intersections and street and highway segments included in this TIS are listed below.

Intersections

- ✓ SR 198 (Sierra Drive) and Project Driveway
- ✓ SR 198 (Sierra Drive) and Old 3 Rivers Road

The existing lane geometry at study area intersections are shown in Figure 2-1. Existing study intersections are currently unsignalized. Figure 2-2 shows existing traffic volumes for the Saturday and Sunday Midday and PM peak hours in the study area.

2.4 Level of Service

2.4.1 *Intersection Capacity Analysis*

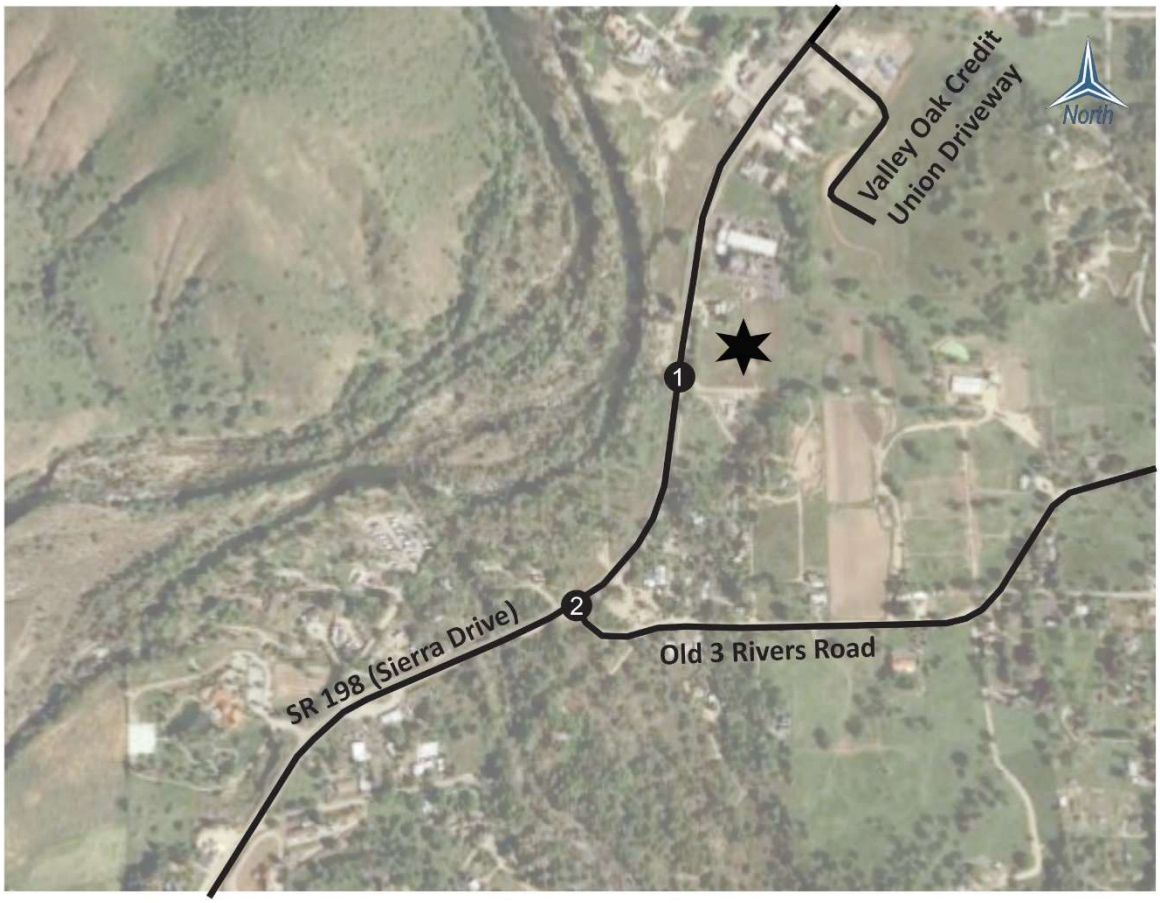
All intersection LOS analyses were estimated using the Synchro 10 software program. Various roadway geometrics, traffic volumes, and properties (peak hour factors, storage pocket length, etc.) were input into the Synchro 10 software program in order to accurately determine the travel delay and LOS for each Study scenario. The intersection LOS and delays reported represent the HCM 6th Edition outputs. Synchro assumptions, listed below, show the various Synchro inputs and methodologies used in the analysis.

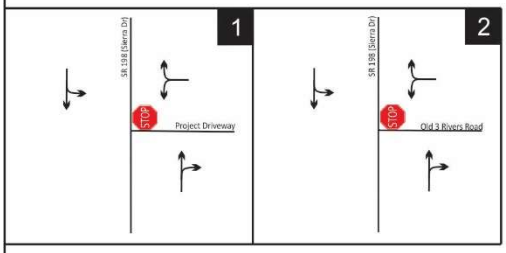
- ✓ **Traffic Conditions**
  - The peak hour factor (PHF) used for Existing, Existing Plus Project, and Near-Term Plus Project conditions was determined from the existing counts. The HCM peak hour default value of 0.92 was used for the Cumulative Year 2042 scenarios unless the existing PHF is above 0.92.
  - Heavy vehicle percentages were applied as follows and are based on the HCM default, traffic counts, or Caltrans' parameters:
    - State Highway 198 – 9% (Caltrans' TCR shows 9% truck trips in the study area except between Mineral King Road and Sequoia Park, which is 6%)
    - All other roadways – 3%

Results of the analysis show that all of the study intersections are currently operating at acceptable levels of service during the Saturday and Sunday peak hours. Table 2-1 shows the intersection LOS for the existing conditions. Synchro 10 (HCM 6th Edition) Worksheets are provided in Appendix C.

Three Rivers Hampton Inn & Suites
Existing Lane Geometry

Figure 2-1





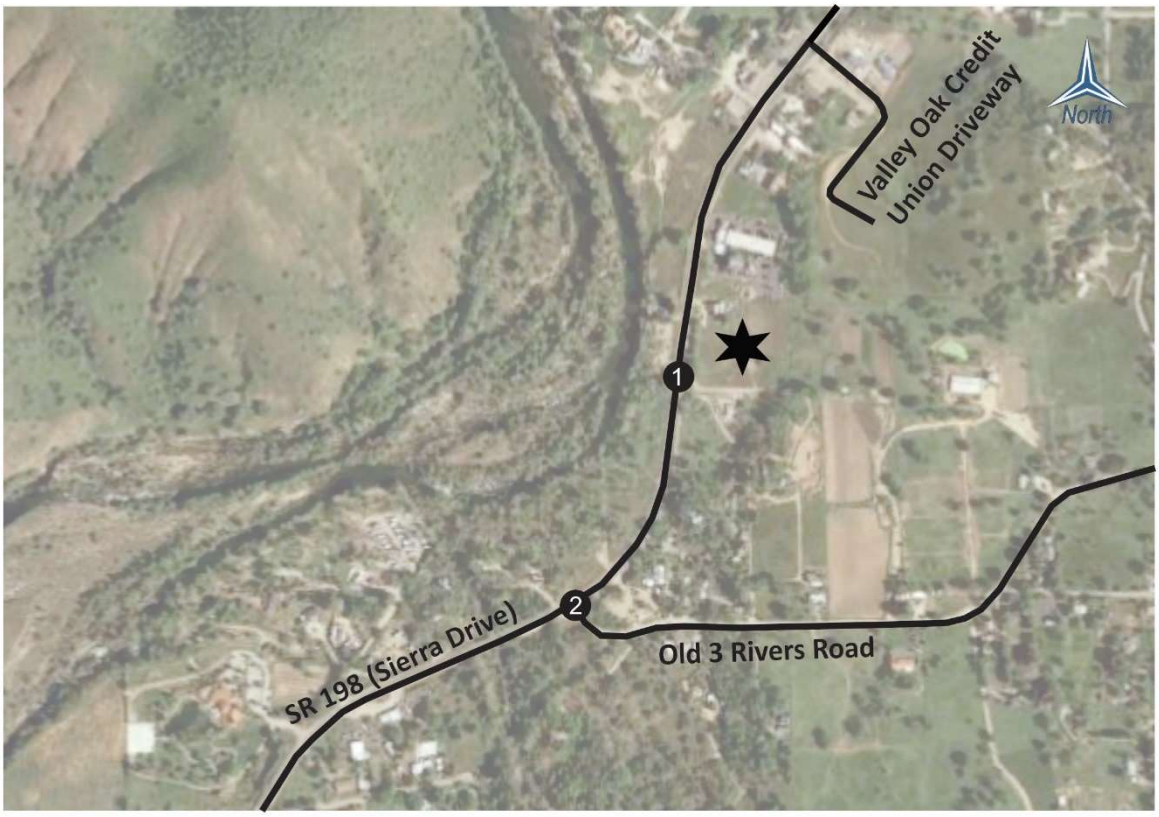
LEGEND

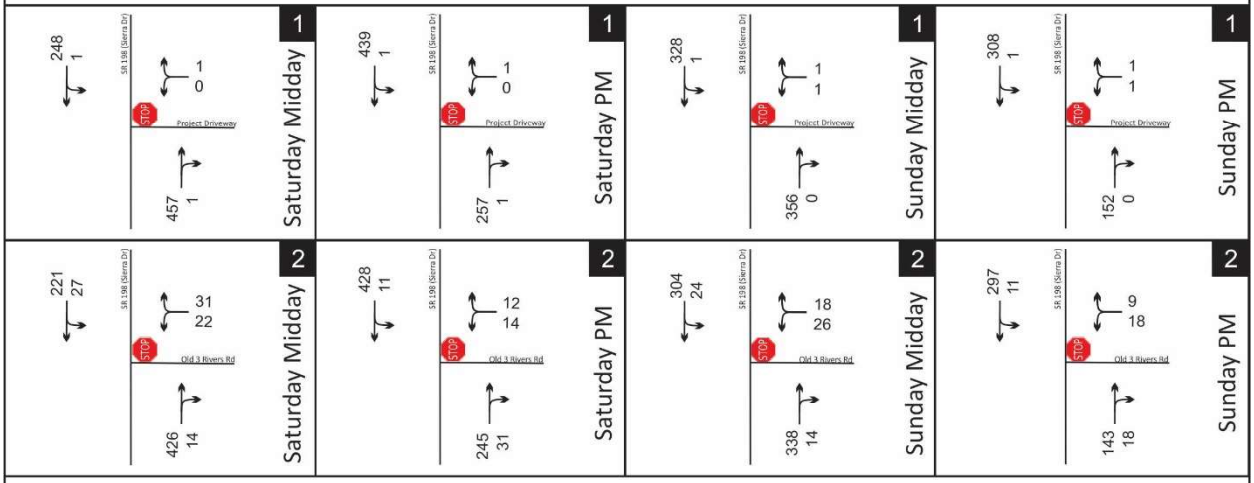
# Study Intersections	STOP Stop Sign
Intersection Lane Geometry	Project Location

VRPA TECHNOLOGIES, INC.

Three Rivers Hampton Inn & Suites
Existing Peak Hour Traffic

Figure 2-2





2.4.2 *Queuing Analysis*

Table 2-2 provides a queue length summary for study intersections for the Existing scenario. Traffic queue lengths at an intersection or along a roadway segment assist in the determination of a roadways overall performance. Excessive queuing at an intersection increases vehicle delay and reduces capacity. The queuing analyses is based upon methodology presented in Chapter 400 of Caltrans' Highway Design Manual (HDM), which is included in Appendix D. The queue results shown in Table 2-2 represent the approximate queue lengths for the respective lane movements.

Table 2-1
Existing Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR		EXISTING	
					DELAY	LOS
1. SR 198 (Sierra Drive) / Project Driveway	One-Way Stop Sign	D	Saturday	Midday	11.2	B
				PM	9.8	A
			Sunday	Midday	12.9	B
				PM	11.1	B
2. SR 198 (Sierra Drive) / Old 3 Rivers Road	One-Way Stop Sign	D	Saturday	Midday	14.3	B
				PM	13.5	B
			Sunday	Midday	14.8	B
				PM	12.3	B

DELAY is measured in seconds
LOS = Level of Service
For one-way controlled intersections, delay results show the delay for the worst movement.

Table 2-2
Existing Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		EXISTING CONDITIONS			
			SATURDAY		SUNDAY	
			MIDDAY Queue	PM Queue	MIDDAY Queue	PM Queue
1. SR 198 (Sierra Drive) / Project Driveway	WB Approach	--	1	1	2	2
2. SR 198 (Sierra Drive) / Old 3 Rivers Road	WB Approach	325	44	22	37	23

Queue is measured in feet

2.5 Public Transit and Active Transport Systems

While the private automobile is the dominant mode of travel within Three Rivers, as it is throughout Tulare County, other modes of transportation are important. Data available from the American Community Survey (ACS) indicates that the average commute time for Three Rivers Community residents is about 23 minutes. About two-third of commuters drive alone to work, while one-third use other means: 21 percent carpool or vanpool, 1 percent walked, and 13 percent worked at home.[1] The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips but tend to be less concentrated in peak traffic periods. The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips but tend to be less concentrated in peak traffic periods. Off-peak trips also tend to have a greater proportion of shared ride and active (walk and bike) trips.

While congestion is not a major issue in the Three Rivers Community, overreliance on automobiles creates other costs for both society and households and means that many in the community who cannot drive (the young, the old, the disabled, the poor) must rely on those who can drive for their mobility. For this reason, it is important to encourage public transit systems and increased use of active modes of transportation, including bicycles and walking. The public transit system alternative for Three Rivers is a fixed route public transit system.

Investment in bikeways provides an inexpensive environment-friendly transportation opportunity. Bicycling is considered an effective alternative mode of transportation that can help to improve air quality and reduce the number of vehicles traveling along existing highways, especially within the cities and unincorporated communities. While the numbers of cyclists are

1 Source: US Census American Community Survey, via datausa.io/profile/geo/three-rivers-ca/

small in comparison to the amount of auto traffic, the size of the Three Rivers Community means that most trips within the community can be comparable to using an automobile. Caltrans' SR-198 Transportation Concept Report, dated June 2016, indicates that bike use is permitted along SR-198 throughout the Three Rivers Community. However, it should be noted that roadway shoulders along SR-198 are generally between 4 - 8 feet.

Tulare County Area Transit (TCaT) Route 30 (Northeast County Route) operates between the Three Rivers Memorial Building and the Visalia Transit Center in downtown Visalia. Route 30 provides 4 roundtrips to the Visalia Transit Center on weekdays and 1 roundtrip on the weekend, all at 4-hour intervals. At the Visalia Transit Center, transfers can be made to connect to remainder of Visalia, as well as the City of Tulare, and the smaller cities and communities in the County served by the TCaT fixed route transit system. Visalia transit vehicles are wheelchair accessible and all full-size buses include bike racks.

The Sequoia Shuttle, which operates from May to September, offers approximately five (5) daily trips to the Sequoia National Park. The shuttle departs from various convenient locations throughout Visalia, Exeter, and Three Rivers, Ca.

3.0 Traffic Impacts

This chapter provides an assessment of the traffic the Project is expected to generate and the impact of that traffic on the surrounding street system.

3.1 Trip Generation

To assess the impacts that the Project may have on the surrounding street and highway segments and intersections, the first step is to determine Project trip generation. Project trip generation was determined using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). Trips associated with the Project were derived from the Hotel (310) Land Use in the ITE Trip Generation Manual.

The considerations described above led to the recommended trip generation for both Saturday and Sunday Midday and PM peak hours shown in Table 3-1. The peak hour trips for Saturday and Sunday identified in Table 3-1 below were applied to the Midday and PM peak hour time periods.

Table 3-1
Project Trip Generation

LAND USE	Quantity	SATURDAY DAILY TRIP ENDS	(ADT)	SATURDAY PEAK HOUR OF GENERATOR					SUNDAY DAILY TRIP ENDS	(ADT)	SUNDAY PEAK HOUR OF GENERATOR				
		RATE	VOLUME	RATE	IN:OUT SPLIT	VOLUME			RATE	VOLUME	RATE	IN:OUT SPLIT	VOLUME		
						IN	OUT	TOTAL					IN	OUT	TOTAL
Hotel (310)	105 Rooms	8.19	860	0.72	56:44	43	33	76	5.95	625	0.56	46:54	27	32	59
TOTAL TRIP GENERATION			**860**			**43**	**33**	**76**		**625**			**27**	**32**	**59**

Source: Generation factors from ITE Trip Generation Manual, 10th Edition.
Trip ends are one-way traffic movements, entering or leaving.
The numbers in parenthesis are ITE land use codes.

3.2 Trip Distribution

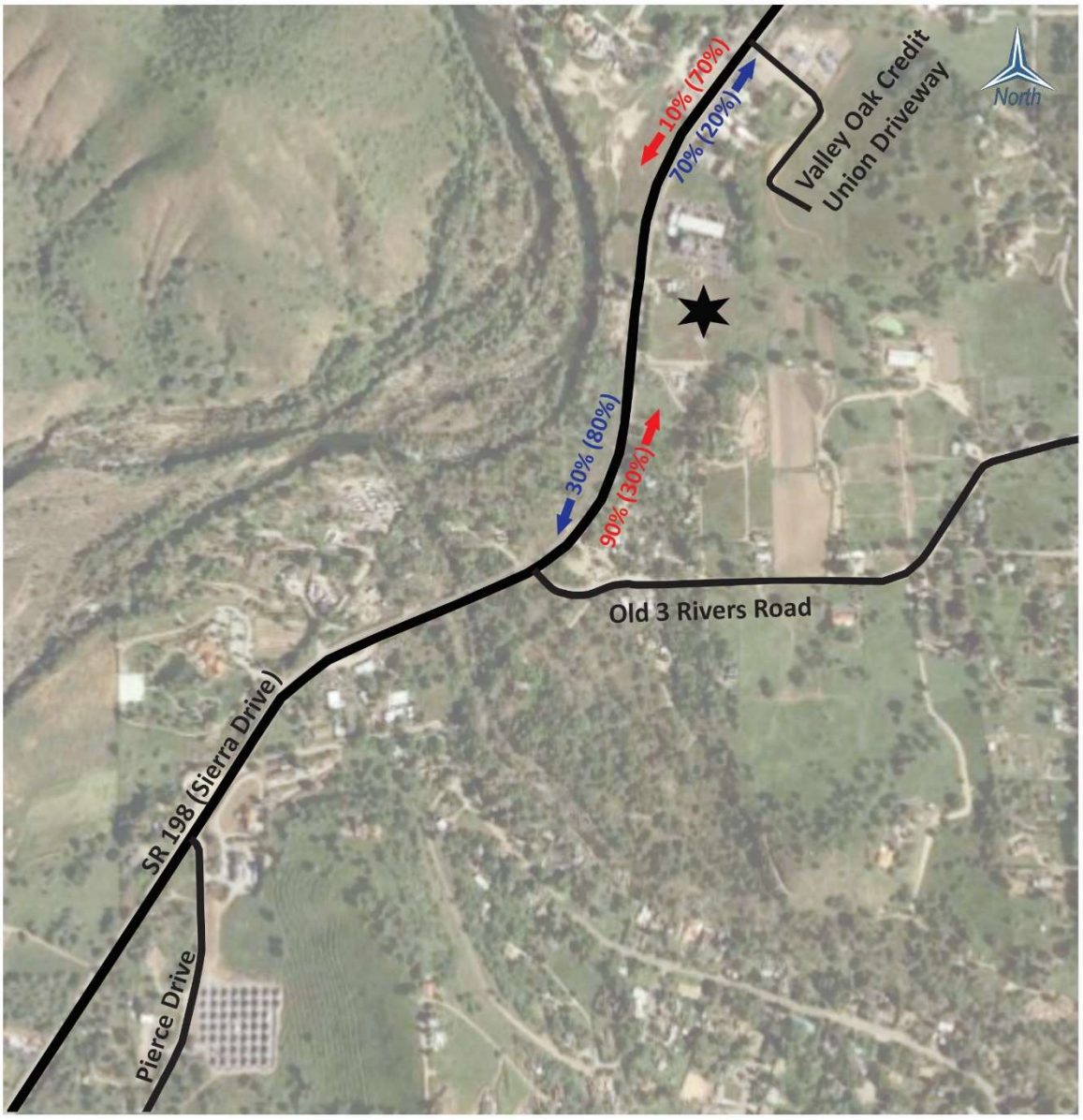
Project trip distribution is shown in Figure 3-1 and is based upon engineering judgement, prevailing traffic patterns in the study area, complementary land uses, major routes, population centers, and a review of data available in the Tulare County General Plan. The Project will have one (1) driveway along SR 198 (Sierra Drive), approximately 1,100 feet to the north of Old 3 Rivers Road.

3.3 Project Traffic

Project traffic as shown in Table 3-1 was distributed to the roadway system using the trip distribution percentages shown in Figure 3-1. A graphical representation of the resulting noon and PM peak hour Project trips used is shown in Figure 3-2.

Three Rivers Hampton Inn & Suites
Project Trip Distribution

Figure 3-1



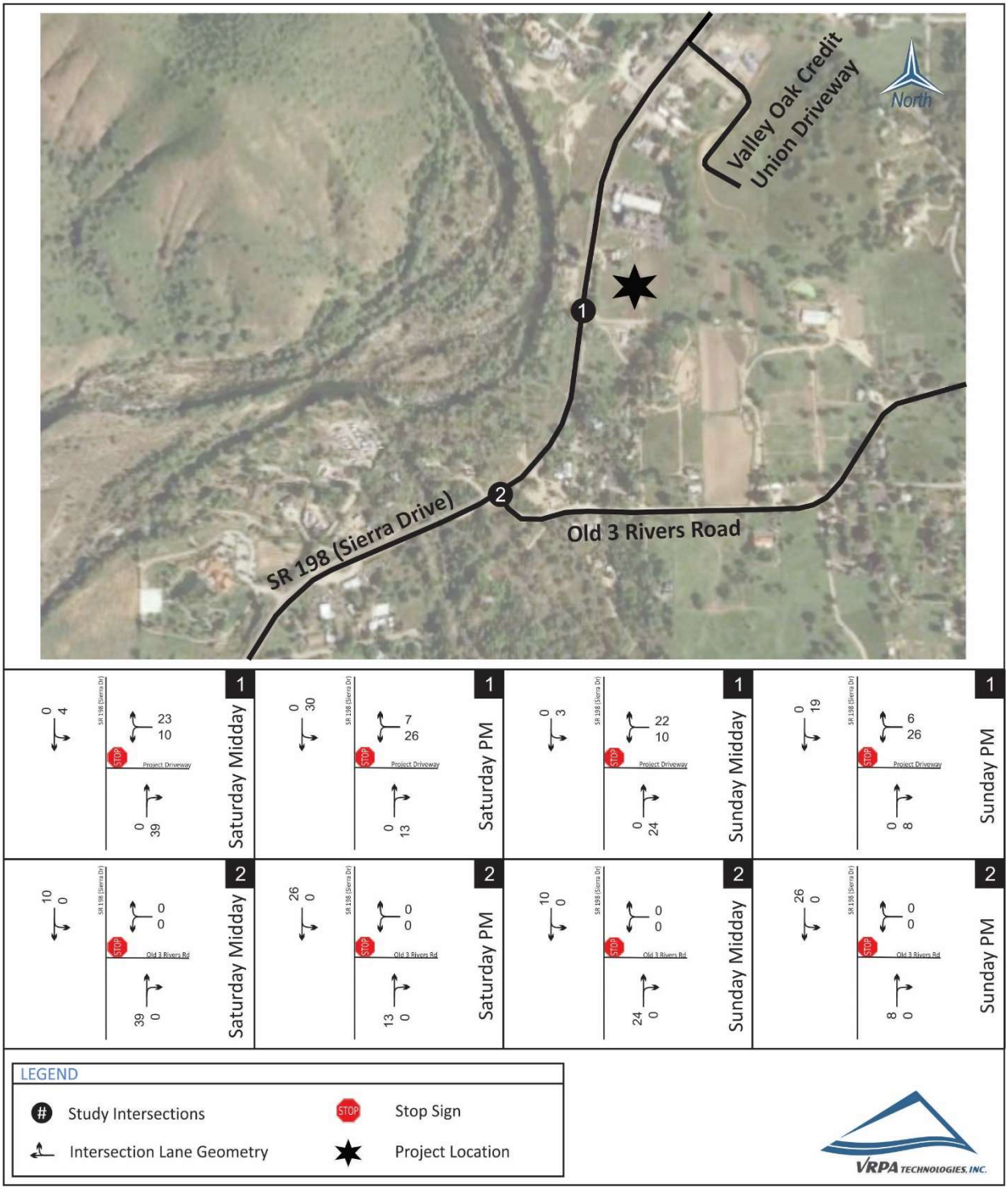
LEGEND

★	Project Location		
XX%	Midday Trip Distribution Inbound	(XX%)	PM Trip Distribution Inbound
XX%	Midday Trip Distribution Outbound	(XX%)	PM Trip Distribution Outbound

VRPA TECHNOLOGIES, INC.

Three Rivers Hampton Inn & Suites
Peak Hour Project Traffic

Figure 3-2



3.4 Existing Plus Project Traffic Conditions

An Existing Plus Project Scenario was analyzed to include existing traffic plus traffic generated by development of the Project. The resulting traffic is shown in Figure 3-3.

3.5 Approved/Pending Project Traffic

Traffic impact analyses typically require the analysis of approved or pending developments that have not yet been built in the vicinity of the Project in addition to the proposed Project. The approved or pending developments identified for use in this traffic analysis included a proposed 200-room hotel located along Old 3 Rivers Road, approximately 700 feet to the east of SR 198 (Sierra Drve). Trip generation and distribution information for the development was based on information found in its corresponding TIS report. Trip generation and distribution information is provided in Appendix D. The peak hour trips for the approved or pending project traffic was applied to the Near-Term and Cumulative Year 2042 traffic conditions discussed later in the report.

3.6 Near-Term Plus Project Traffic Conditions

Traffic conditions with the Project in the Year 2022 were estimated by applying a growth rate of 1.3% per year to the existing traffic volumes. Historical growth in Tulare County is approximately 1.3% based on population trends as forecasted in the Tulare County General Plan 2030 Update. In consultation with Tulare County RMA and Caltrans staff it was determined that a growth rate of 1.3% was consistent with the overall growth in the study area and should be used to evaluate Near-Term conditions. The resulting traffic is shown in Figure 3-4.

3.7 Cumulative Year 2042 Without Project Traffic Conditions

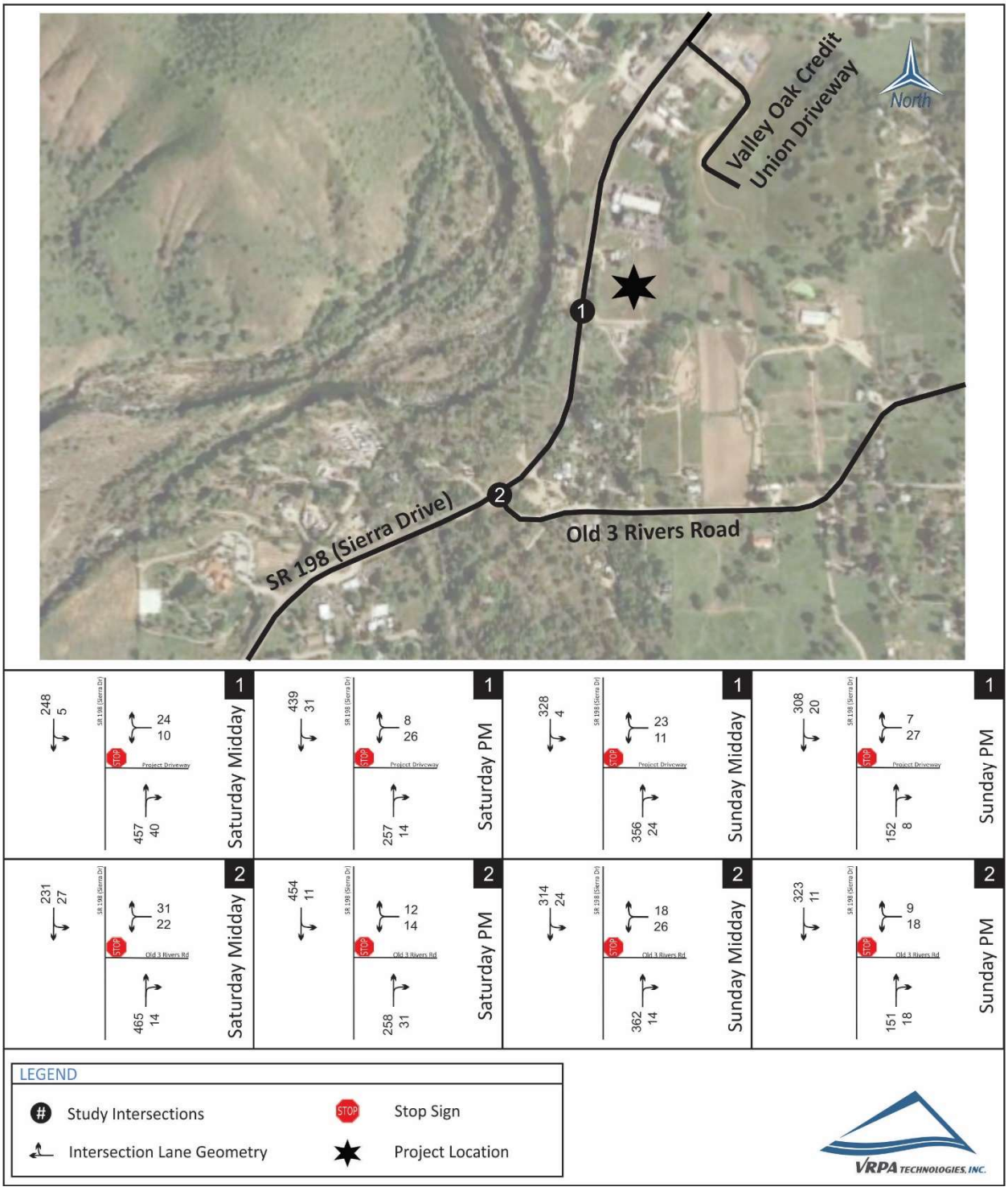
The impacts of the Project were analyzed considering future traffic conditions in the year 2042. The levels of traffic expected in 2042 relate to the cumulative effect of traffic increases resulting from the implementation of the General Plans of local agencies, including Tulare County. Traffic conditions without the Project in the Year 2042 were estimated by applying a 1.3% per year growth factor to existing roadway segment volumes in the study area (ambient growth). The resulting traffic volumes were compared and evaluated against cumulative development in the area and adjusted as necessary. The resulting traffic is shown in Figure 3-5.

3.8 Cumulative Year 2042 Plus Project Traffic Conditions

The addition of Project trips, as shown in Figure 3-2 (Section 3.3), were added to Cumulative Year 2042 Without Project traffic volumes. This leads to the Cumulative Year 2042 Plus Project Peak Hour Traffic Volumes shown in Figure 3-6.

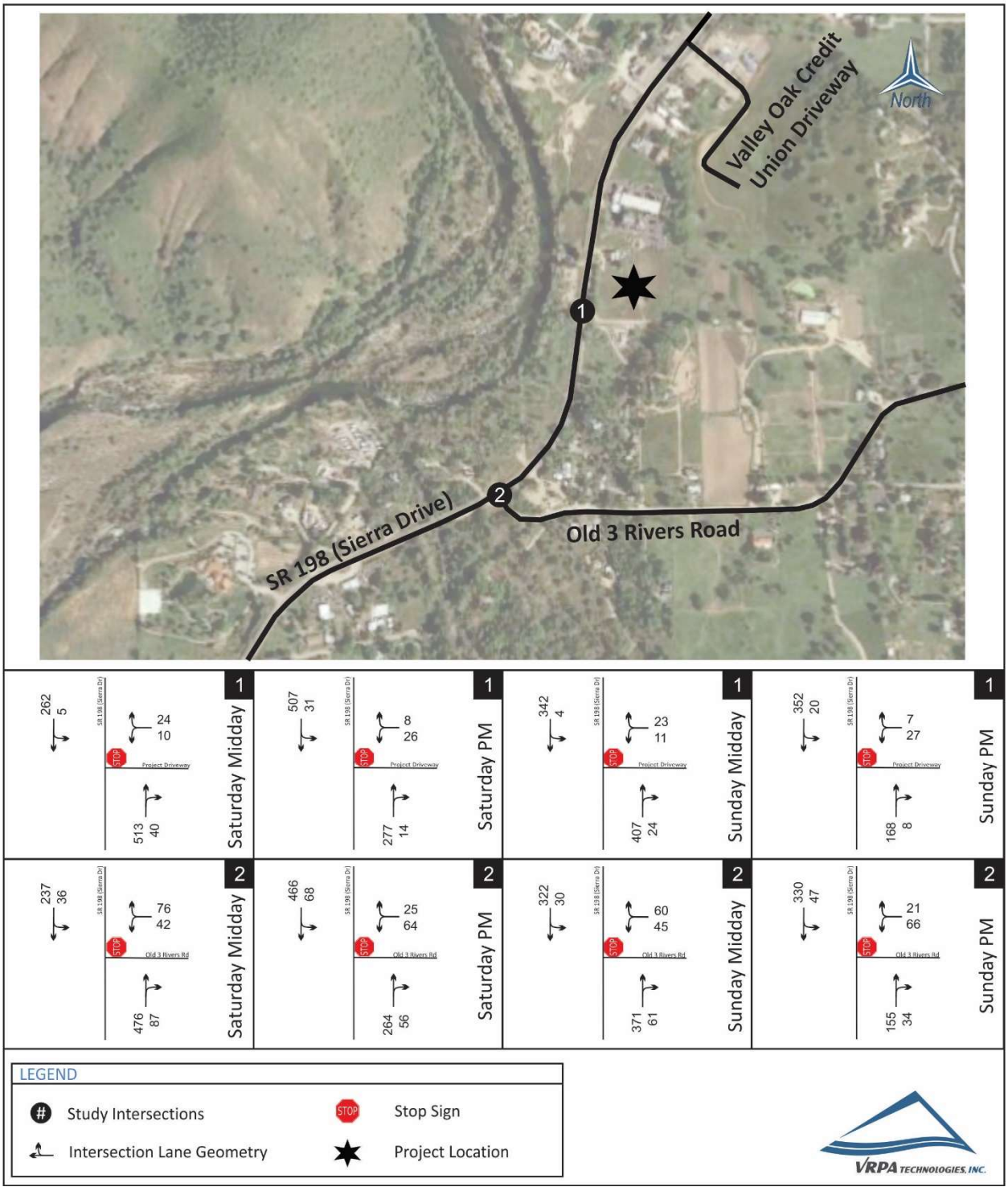
Three Rivers Hampton Inn & Suites
Existing Plus Project Peak Hour Traffic

Figure 3-3



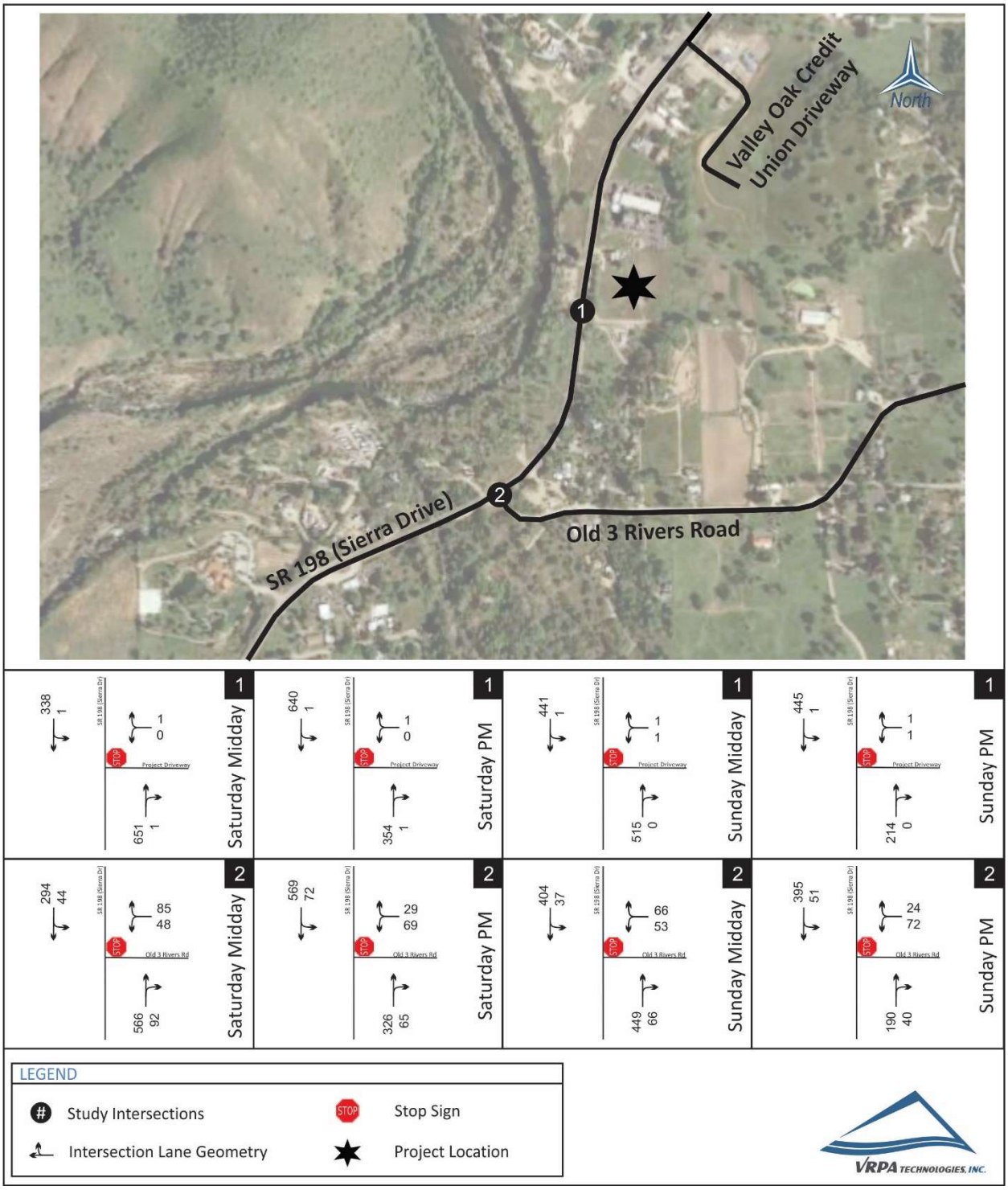
Three Rivers Hampton Inn & Suites
Near-Term Peak Hour Traffic

Figure 3-4



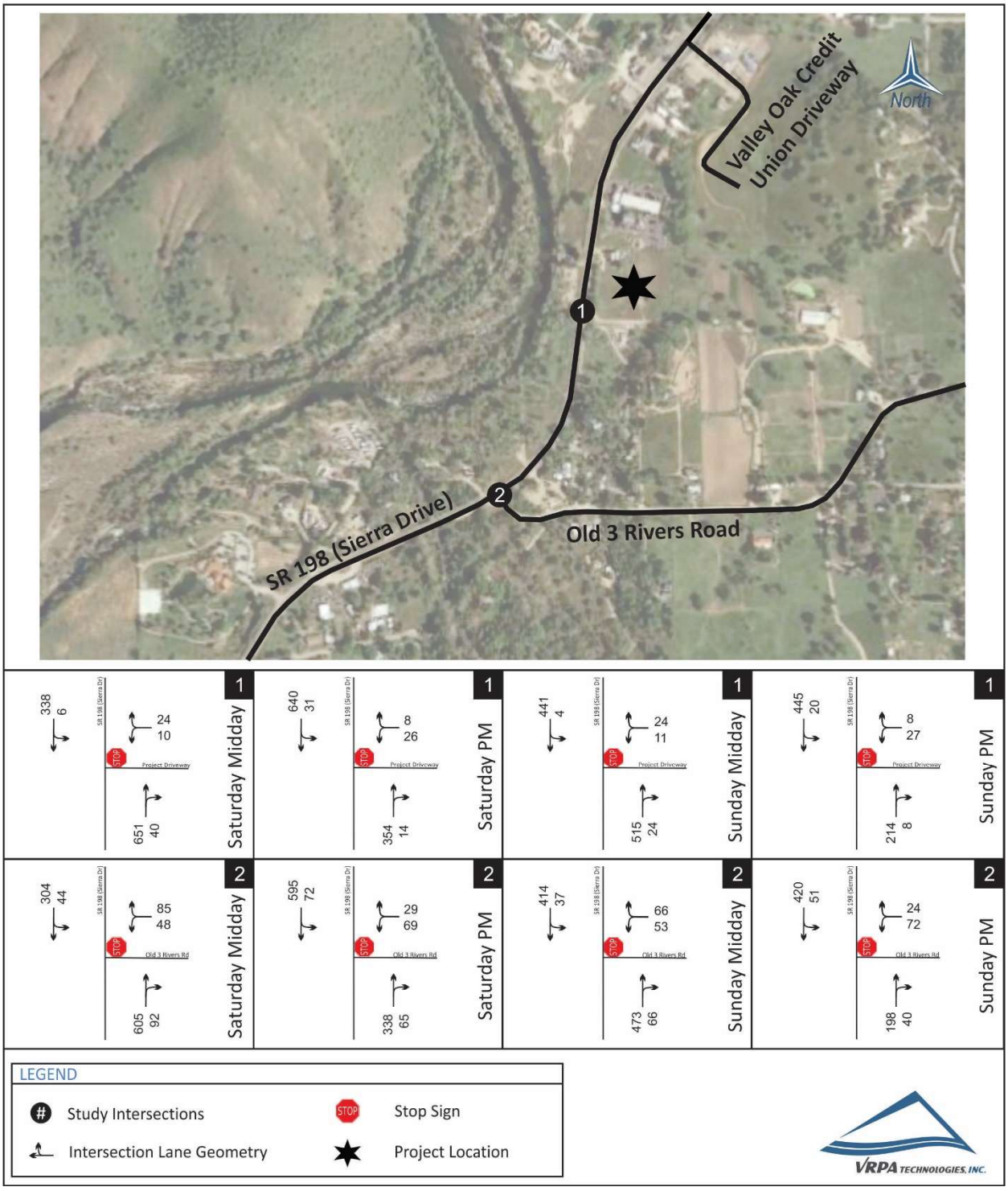
Three Rivers Hampton Inn & Suites
Cumulative Year 2042 Without Project Peak Hour Traffic

Figure 3-5



Three Rivers Hampton Inn & Suites
Cumulative Year 2042 Plus Project Peak Hour Traffic

Figure 3-6



3.9 Impacts

3.9.1 *Intersection Capacity Analysis*

Table 3-2 shows the projected delay for all scenarios at study area intersections. Results of the analysis show that levels of service at the SR 198 (Sierra Drive) and Project Driveway and SR 198 (Sierra Drive) and Old 3 Rivers Road intersections will not exceed target LOS 'D' for all the study scenarios. Therefore, no mitigation measures are required to achieve acceptable levels of service. It should be noted that the Project Driveway along SR 198 (Sierra Drive) must meet Tulare County and Caltrans standards.

3.9.2 *Queuing Analysis*

Table 3-3 provides a queue length summary for turning movements at the Project Driveway and Old 3 Rivers Road. Queuing analysis for unsignalized intersections was completed using Section 400 of Caltrans' Highway Design Manual. Results of the analysis show that the queue lengths along Old 3 Rivers Road are not projected to encroach upon the most easterly driveway to SR 198 (Sierra Drive).

Table 3-2
Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR		EXISTING PLUS PROJECT		NEAR-TERM PLUS PROJECT		CUMULATIVE YEAR 2042 WITHOUT PROJECT		CUMULATIVE YEAR 2042 PLUS PROJECT	
					DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
1. SR 198 (Sierra Drive) / Project Driveway	One-Way Stop Sign	D	Saturday	Midday	13.1	B	13.8	B	13.0	B	16.5	C
				PM	16.0	C	17.8	C	10.5	B	22.4	C
			Sunday	Midday	12.9	B	13.7	B	15.6	C	15.4	C
				PM	13.5	B	14.5	B	11.8	B	14.6	B
2. SR 198 (Sierra Drive) / Old 3 Rivers Road	One-Way Stop Sign	D	Saturday	Midday	15.0	C	20.5	C	22.8	C	24.8	C
				PM	14.0	B	27.6	D	31.1	D	33.9	D
			Sunday	Midday	15.4	C	18.1	C	21.2	C	22.4	C
				PM	12.7	B	18.1	C	18.9	C	19.9	C

DELAY is measured in seconds
LOS = Level of Service
For one-way controlled intersections, delay results show the delay for the worst movement.

Table 3-3
Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		EXISTING PLUS PROJECT				NEAR-TERM YEAR PLUS PROJECT				CUMULATIVE YEAR 2042 WITHOUT PROJECT				CUMULATIVE YEAR 2042 PLUS PROJECT			
			SATURDAY		SUNDAY		SATURDAY		SUNDAY		SATURDAY		SUNDAY		SATURDAY		SUNDAY	
			MIDDAY Queue	PM Queue	MIDDAY Queue	PM Queue	MIDDAY Queue	PM Queue	MIDDAY Queue	PM Queue	MIDDAY Queue	PM Queue	MIDDAY Queue	PM Queue	MIDDAY Queue	PM Queue	MIDDAY Queue	PM Queue
1. SR 198 (Sierra Drive) / Project Driveway	WB Approach	--	28	28	28	28	28	28	28	28	1	1	3	3	28	28	29	29
2. SR 198 (Sierra Drive) / Old 3 Rivers Road	WB Approach	325	44	22	37	23	98	75	88	73	111	82	98	80	111	82	98	80

Queue is measured in feet

4.0 Standards of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of an impact to traffic are based on the following thresholds of significance which come from Appendix G of the CEQA Guidelines. Accordingly, traffic impacts resulting from the proposed Project are considered significant if the Project would:

- ✓ Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- ✓ Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- ✓ Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (eg., farm equipment)?
- ✓ Result in inadequate emergency access?

4.1 Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant **-** An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County RMA and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs. Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of "D" on the County roadway system (both segments and intersections). Caltrans' SR-198 Transportation Concept Report (TCR) identifies the 2040 concept as LOS "D".

Results of the analysis show that the proposed Project will not exceed the minimum LOS standard of "D" as shown in Tables 2-1 and 3-2.

The Project does not conflict with any applicable adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Tulare County Area Transit (TCaT) Route 30 (Northeast County Route) operates between the Three Rivers Memorial Building and the Visalia Transit Center in downtown Visalia. Route 30 provides 4 roundtrips to the Visalia Transit Center on weekdays and 1 roundtrip on the weekend, all at 4-hour intervals. Implementation of the Project will not hinder the operation of Route 30 in the Three Rivers Community.

Caltrans' SR 198 TCR indicated that bicycles are permitted along the SR 198 corridor in the Three Rivers Community. The proposed Project will not prohibit the use of bicycles along SR 198. The SR 198 TCR also indicates that pedestrian facilities are nonexistent in the Three Rivers community. The Project will comply with Tulare County General Plan goals, which include Bicycle/Pedestrian Trail System (TC-5.1) and Consideration of Non-Motorized Modes in Planning and Development (TC-5.2).

Therefore, the Project will not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Therefore, no mitigation is needed.

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

Less Than Significant Impact **-** In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. For California, this legislation will eventually change the way that transportation studies are conducted for environmental documents. Delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, new performance measures such as vehicle miles travelled (VMT) or other similar measures will be used.

July 1, 2020 is the statewide implementation date and agencies may opt-in use of new metrics prior to that date. Therefore, the traffic analysis currently follows current practice regarding state and local guidance as of the date of preparation.

Tourism is the largest and most important industry in the Three Rivers area, as the town is situated near Sequoia National Forest, which receives over 1.2 million annual visitors, and Kings Canyon National Park, which receives nearly 700,000 annual visitors. The industries and businesses surrounding Three Rivers are almost all related to visitors passing through, en route to the Sequoia National Forest and Kings Canyon National Park. The Three Rivers Community and surrounding area features a multitude of boutique lodging facilities, restaurants, and small retail shops to support the area's small population and transient travelers.

The Feasibility Study prepared for the Project forecasts an unaccommodated demand equivalent to 7.3% of the base-year demand, resulting from the analysis of monthly and weekly peak demand and sell-out trends. Unaccommodated demand refers to individuals who are unable to secure accommodations in the market because all the local hotels are filled. These travelers must settle for less desirable accommodations or stay in properties located outside the market area. Seeking accommodations outside of the desired market area increases VMT

since travelers would be forced to travel longer distances to secure accommodations. The development of the Project would reduce the unaccommodated demand, thus reducing VMT in the market area. Therefore, no mitigation is needed.

4.3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (eg., farm equipment)?

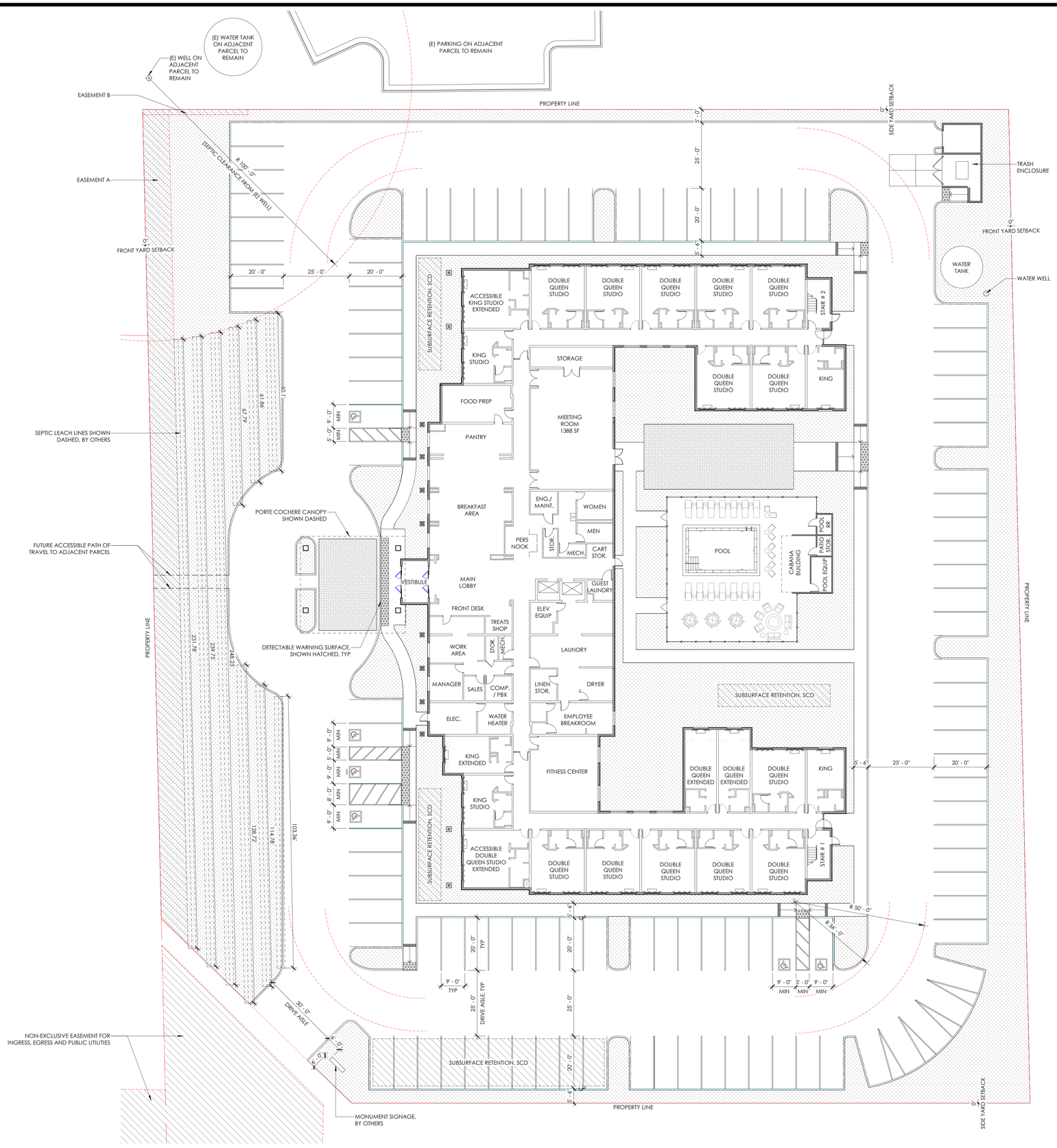
Less Than Significant Impact **-** The Project would not result in hazards due to design features, since all proposed improvements (Project Driveway) would be built to County design standards. Access to the proposed Project will be provided at one (1) driveway along SR 198 (Sierra Drive), which is an existing driveway within Tulare County jurisdiction. Internal traffic and parking operations will be designed in accordance with Tulare County design standards. The proposed Project seeks to utilize a plot of relatively undeveloped land for a hotel with approximately 105 rooms in a rural area surrounded by rural/agricultural residences. The Project would not increase the use of farm equipment on streets and roads in the Three Rivers Community. As a result, the Project will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, no mitigation is needed.

4.4 Result in inadequate emergency access?

Less Than Significant Impact **-** The Project would not result in any degradation of emergency access within the community. Congestion at an intersection or along a roadway can adversely impact emergency access. Results of the traffic analysis shows that all of the study intersections and roadway segments will meet Tulare County's and Caltrans' LOS "D" criteria through the year 2042. As a result, the Project will not result in inadequate emergency access. Therefore, no mitigation is needed.

APPENDIX A

Project Site Plan



1/16" = 1'-0"

SITE PLAN

ROOM MATRIX

	FIRST FLOOR (25,043 SF)	SECOND FLOOR (22,848 SF)	THIRD FLOOR (24,473 SF)	TOTAL (72,364 SF)
STANDARD DOUBLE QUEEN EXTENDED	2	15	18	35
STANDARD DOUBLE QUEEN ACCESSIBLE EXT.	0	1	1	2
DOUBLE QUEEN STUDIO	13	13	13	39
DOUBLE QUEEN STUDIO EXT.	0	1	1	2
ACCESSIBLE DOUBLE QUEEN STUDIO EXT.	1	1	0	2
STANDARD KING	2	2	2	6
STANDARD KING EXTENDED	1	3	3	7
STANDARD KING ACCESSIBLE EXT.	0	1	1	2
KING STUDIO	2	2	2	6
KING STUDIO ACCESSIBLE EXT.	1	1	2	4
TOTAL NUMBER OF GUEST ROOMS	22	40	43	**105**

PARKING COUNT

GUEST ROOMS	105
REQUIRED PARKING SECTION 15 (A.2.b.(3)) (1 PARKING SPACE FOR EVERY 3 GUEST ROOMS)	108
REGULAR STALLS	108
TOTAL PARKING	108
ACCESSIBLE PARKING (INCLUDED ABOVE)	6 = OK

ZONING CODE

APN:	068-080-010
ZONING	C-2-MU-SC (GENERAL COMMERCIAL WITH MIXED-USE OVERLAY AND SCENIC CORRIDOR OVERLAY)
GENERAL PLAN	URBAN DEVELOPMENT BOUNDARIES

THREE RIVERS COMMUNITY PLAN

MIXED-USE OVERLAY DISTRICT:	
HEIGHT	35 FT
SETBACKS:	
FRONT YARD	0 FT
SIDE YARD	0 FT
REAR YARD	0 FT
FLOOR AREA RATIO (FAR) - MAX ALLOWED	2
LOT AREA (SF)	122,403.6 SF
TOTAL BUILDING SF	72,364 SF
FAR	0.6 < 2 = OK
FENCES, WALLS, AND SCREENING	NOT REQUIRED (LOT DOES NOT ABUT A 'R' ZONE)

SITE PLAN LEGEND

ACCESSIBLE PATH OF TRAVEL, NO SLOPES IN DIRECTION OF TRAVEL EXCEEDING 5% AND NO CROSS SLOPES EXCEEDING 2%

DETECTABLE WARNING SURFACE

DVB architecture
5221 DEER VALLEY ROAD, # 150
RESCUE, CALIFORNIA, 95672
(916) 316-6759
josh@dvbarchitecture.com

OWNER

CONTRACTOR

PRELIMINARY DESIGN

THREE RIVERS HIS

SIERRA DRIVE, THREE RIVERS, CA 93271

NOT FOR CONSTRUCTION

05/06/20 PRELIMINARY DESIGN

SITE PLAN

Project Number 19042

Drawn By JJD

Checked By JJD

A1

APPENDIX B

Traffic Count Data Sheets

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 198 / Sierra Dr & Old 3 Rivers Rd
City: Three Rivers
Control: 1-Way Stop(WB)

Project ID: 18-02019-001
Date: 2018-02-03

Total

NS/EW Streets:	SR 198 / Sierra Dr				SR 198 / Sierra Dr				Old 3 Rivers Rd				Old 3 Rivers Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	46	5	0	3	25	0	0	0	0	0	0	3	0	4	0	86
11:15 AM	0	51	5	1	4	18	0	0	0	0	0	0	4	0	2	0	85
11:30 AM	0	57	2	1	4	22	0	0	0	0	0	0	5	0	7	0	98
11:45 AM	0	63	1	0	5	34	0	0	0	0	0	0	1	0	6	0	110
12:00 PM	0	60	3	0	2	35	0	0	0	0	0	0	3	0	3	1	107
12:15 PM	0	56	2	0	4	31	0	0	0	0	0	0	3	0	1	0	97
12:30 PM	0	57	3	0	7	24	0	0	0	0	0	0	4	0	3	0	98
12:45 PM	0	58	4	0	2	28	0	0	0	0	0	0	2	0	1	0	95
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	448	25	2	31	217	0	0	0	0	0	0	25	0	27	1	776
APPROACH %'s :	0.00%	94.32%	5.26%	0.42%	12.50%	87.50%	0.00%	0.00%					47.17%	0.00%	50.94%	1.89%	
PEAK HR :	11:30 AM - 12:30 PM																TOTAL
PEAK HR VOL :	0	236	8	1	15	122	0	0	0	0	0	0	12	0	17	1	412
PEAK HR FACTOR :	0.000	0.937	0.667	0.250	0.750	0.871	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.000	0.607	0.250	0.936
		0.957				0.878								0.625			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	41	1	0	0	69	0	0	0	0	0	0	3	0	3	0	117
4:15 PM	0	32	4	0	2	51	0	0	0	0	0	0	2	0	1	0	92
4:30 PM	0	28	5	0	2	56	0	0	0	0	0	0	1	0	2	0	94
4:45 PM	0	35	7	0	2	61	0	0	0	0	0	0	2	0	1	0	108
5:00 PM	0	26	5	0	5	58	0	0	0	0	0	0	2	0	0	0	96
5:15 PM	0	27	3	0	1	56	0	0	0	0	0	0	2	0	3	0	92
5:30 PM	0	21	1	0	4	33	0	0	0	0	0	0	4	0	0	0	63
5:45 PM	0	24	3	0	2	70	0	0	0	0	0	0	5	0	3	0	107
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	234	29	0	18	454	0	0	0	0	0	0	21	0	13	0	769
APPROACH %'s :	0.00%	88.97%	11.03%	0.00%	3.81%	96.19%	0.00%	0.00%					61.76%	0.00%	38.24%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	136	17	0	6	237	0	0	0	0	0	0	8	0	7	0	411
PEAK HR FACTOR :	0.000	0.829	0.607	0.000	0.750	0.859	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.583	0.000	0.878
		0.911				0.880								0.625			

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 198 / Sierra Dr & Old 3 Rivers Rd
City: Three Rivers
Control: 1-Way Stop(WB)

Project ID: 18-02019-001
Date: 2018-02-04

Total

NS/EW Streets:	SR 198 / Sierra Dr				SR 198 / Sierra Dr				Old 3 Rivers Rd				Old 3 Rivers Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	36	4	0	1	36	0	0	0	0	0	0	2	0	2	0	81
11:15 AM	0	40	3	0	1	36	0	0	0	0	0	0	3	0	2	0	85
11:30 AM	0	27	2	0	0	30	0	0	0	0	0	0	2	0	2	0	63
11:45 AM	0	44	3	0	4	37	0	0	0	0	0	0	1	0	2	0	91
12:00 PM	0	58	1	0	3	45	0	0	0	0	0	0	2	0	6	0	115
12:15 PM	0	40	1	0	4	45	0	0	0	0	0	0	4	0	2	0	96
12:30 PM	0	45	3	0	2	41	0	0	0	0	0	0	7	0	0	0	98
12:45 PM	0	42	5	0	2	36	0	0	0	0	0	0	3	0	0	0	88
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	332	22	0	17	306	0	0	0	0	0	0	24	0	16	0	717
APPROACH %'s :	0.00%	93.79%	6.21%	0.00%	5.26%	94.74%	0.00%	0.00%					60.00%	0.00%	40.00%	0.00%	
PEAK HR :	11:45 AM - 12:45 PM																TOTAL
PEAK HR VOL :	0	187	8	0	13	168	0	0	0	0	0	0	14	0	10	0	400
PEAK HR FACTOR :	0.000	0.806	0.667	0.000	0.813	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.417	0.000	0.870
		0.826				0.923								0.750			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	19	5	0	2	46	0	0	0	0	0	0	3	0	1	0	76
4:15 PM	0	25	2	0	1	57	0	0	0	0	0	0	4	0	1	0	90
4:30 PM	0	16	1	0	2	33	0	0	0	0	0	0	2	0	1	0	55
4:45 PM	0	19	2	0	1	28	0	0	0	0	0	0	1	0	2	0	53
5:00 PM	0	12	3	0	2	29	0	0	0	0	0	0	2	0	0	0	48
5:15 PM	0	6	2	0	2	26	0	0	0	0	0	0	2	0	1	0	39
5:30 PM	0	9	6	0	1	32	0	0	0	0	0	0	3	0	0	0	51
5:45 PM	0	16	2	0	2	31	0	0	0	0	0	0	2	0	1	0	54
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	122	23	0	13	282	0	0	0	0	0	0	19	0	7	0	466
APPROACH %'s :	0.00%	84.14%	15.86%	0.00%	4.41%	95.59%	0.00%	0.00%					73.08%	0.00%	26.92%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	79	10	0	6	164	0	0	0	0	0	0	10	0	5	0	274
PEAK HR FACTOR :	0.000	0.790	0.500	0.000	0.750	0.719	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.625	0.000	0.761
		0.824				0.733								0.750			

APPENDIX C

SYNCHRO 10 Worksheets

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	457	1	1	248
Future Vol, veh/h	0	1	457	1	1	248
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	96	96	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	0	1	476	1	1	282

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	761	477	0	0	477	0
Stage 1	477	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	372	586	-	-	1050	-
Stage 1	622	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	372	586	-	-	1050	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	586	1050	-
HCM Lane V/C Ratio	-	-	0.002	0.001	-
HCM Control Delay (s)	-	-	11.2	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	22	31	426	14	27	221
Future Vol, veh/h	22	31	426	14	27	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	96	96	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	35	49	444	15	31	251

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	765	452	0	0	459	0
Stage 1	452	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	370	605	-	-	1066	-
Stage 1	639	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	357	605	-	-	1066	-
Mov Cap-2 Maneuver	357	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	739	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	14.3	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	470	1066	-
HCM Lane V/C Ratio	-	-	0.179	0.029	-
HCM Control Delay (s)	-	-	14.3	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	257	1	1	439
Future Vol, veh/h	0	1	257	1	1	439
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	91	91	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	0	1	282	1	1	499

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	784	283	0	0	283	0
Stage 1	283	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	361	754	-	-	1240	-
Stage 1	763	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	361	754	-	-	1240	-
Mov Cap-2 Maneuver	361	-	-	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	754	1240	-
HCM Lane V/C Ratio	-	-	0.001	0.001	-
HCM Control Delay (s)	-	-	9.8	7.9	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	14	12	245	31	11	428
Future Vol, veh/h	14	12	245	31	11	428
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	91	91	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	22	19	269	34	13	486

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	798	286	0	0	303	0
Stage 1	286	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	354	751	-	-	1219	-
Stage 1	760	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	349	751	-	-	1219	-
Mov Cap-2 Maneuver	349	-	-	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	600	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	13.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	464	1219	-
HCM Lane V/C Ratio	-	-	0.089	0.01	-
HCM Control Delay (s)	-	-	13.5	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	356	0	1	328
Future Vol, veh/h	1	1	356	0	1	328
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	83	83	93	93
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	1	1	429	0	1	353

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	784	429	0	-	429	0
Stage 1	429	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	361	624	-	0	1094	-
Stage 1	655	-	-	0	-	-
Stage 2	707	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	361	624	-	-	1094	-
Mov Cap-2 Maneuver	361	-	-	-	-	-
Stage 1	654	-	-	-	-	-
Stage 2	707	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	457	1094	-
HCM Lane V/C Ratio	-	0.005	0.001	-
HCM Control Delay (s)	-	12.9	8.3	-
HCM Lane LOS	-	B	A	-
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	26	18	338	14	24	304
Future Vol, veh/h	26	18	338	14	24	304
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	83	83	93	93
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	35	24	407	17	26	327

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	795	416	0	0	424	0
Stage 1	416	-	-	-	-	-
Stage 2	379	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	355	634	-	-	1099	-
Stage 1	664	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	345	634	-	-	1099	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	690	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	14.8	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	424	1099	-
HCM Lane V/C Ratio	-	-	0.138	0.023	-
HCM Control Delay (s)	-	-	14.8	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	152	0	1	308
Future Vol, veh/h	1	1	152	0	1	308
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	82	82	73	73
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	1	1	185	0	1	422

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	185	0	-	185	0
Stage 1	185	-	-	-	-	-
Stage 2	424	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	457	855	-	0	1349	-
Stage 1	844	-	-	0	-	-
Stage 2	658	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	457	855	-	-	1349	-
Mov Cap-2 Maneuver	457	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	658	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	596	1349	-
HCM Lane V/C Ratio	-	0.004	0.001	-
HCM Control Delay (s)	-	11.1	7.7	-
HCM Lane LOS	-	B	A	-
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	18	9	143	18	11	297
Future Vol, veh/h	18	9	143	18	11	297
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	82	82	73	73
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	24	12	174	22	15	407

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	622	185	0	0	196	0
Stage 1	185	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	449	855	-	-	1336	-
Stage 1	844	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	442	855	-	-	1336	-
Mov Cap-2 Maneuver	442	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	649	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	12.3	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	527	1336	-
HCM Lane V/C Ratio	-	-	0.068	0.011	-
HCM Control Delay (s)	-	-	12.3	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	24	457	40	5	248
Future Vol, veh/h	10	24	457	40	5	248
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	96	96	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	11	26	476	42	6	282

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	791	497	0	0	518	0
Stage 1	497	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	357	571	-	-	1013	-
Stage 1	609	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	355	571	-	-	1013	-
Mov Cap-2 Maneuver	355	-	-	-	-	-
Stage 1	605	-	-	-	-	-
Stage 2	754	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	484	1013	-
HCM Lane V/C Ratio	-	-	0.076	0.006	-
HCM Control Delay (s)	-	-	13.1	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	22	31	465	14	27	231
Future Vol, veh/h	22	31	465	14	27	231
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	96	96	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	35	49	484	15	31	263

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	817	492	0	0	499	0
Stage 1	492	-	-	-	-	-
Stage 2	325	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	345	575	-	-	1030	-
Stage 1	612	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	333	575	-	-	1030	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	15	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	442	1030	-
HCM Lane V/C Ratio	-	-	0.19	0.03	-
HCM Control Delay (s)	-	-	15	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	8	257	14	31	439
Future Vol, veh/h	26	8	257	14	31	439
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	91	91	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	28	9	282	15	35	499

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	859	290	0	0	297	0
Stage 1	290	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	326	747	-	-	1225	-
Stage 1	757	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	313	747	-	-	1225	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	564	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	363	1225	-
HCM Lane V/C Ratio	-	-	0.102	0.029	-
HCM Control Delay (s)	-	-	16	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	14	12	258	31	11	454
Future Vol, veh/h	14	12	258	31	11	454
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	91	91	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	22	19	284	34	13	516

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	843	301	0	0	318	0
Stage 1	301	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	333	736	-	-	1204	-
Stage 1	748	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	328	736	-	-	1204	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	14	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	441	1204	-
HCM Lane V/C Ratio	-	-	0.094	0.01	-
HCM Control Delay (s)	-	-	14	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	23	356	24	4	328
Future Vol, veh/h	11	23	356	24	4	328
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	83	83	93	93
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	12	25	429	29	4	353

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	805	444	0	0	458	0
Stage 1	444	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	350	612	-	-	1067	-
Stage 1	644	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	348	612	-	-	1067	-
Mov Cap-2 Maneuver	348	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	703	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	491	1067	-
HCM Lane V/C Ratio	-	-	0.075	0.004	-
HCM Control Delay (s)	-	-	12.9	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	26	18	362	14	24	314
Future Vol, veh/h	26	18	362	14	24	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	83	83	93	93
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	35	24	436	17	26	338

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	835	445	0	0	453	0
Stage 1	445	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	336	611	-	-	1072	-
Stage 1	644	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	326	611	-	-	1072	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	682	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	15.4	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	403	1072	-
HCM Lane V/C Ratio	-	-	0.146	0.024	-
HCM Control Delay (s)	-	-	15.4	8.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	7	152	8	20	308
Future Vol, veh/h	27	7	152	8	20	308
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	82	82	73	73
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	29	8	185	10	27	422

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	666	190	0	0	195	0
Stage 1	190	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	423	849	-	-	1337	-
Stage 1	840	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	412	849	-	-	1337	-
Mov Cap-2 Maneuver	412	-	-	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	461	1337	-
HCM Lane V/C Ratio	-	-	0.08	0.02	-
HCM Control Delay (s)	-	-	13.5	7.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	18	9	151	18	11	323
Future Vol, veh/h	18	9	151	18	11	323
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	82	82	73	73
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	24	12	184	22	15	442

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	667	195	0	0	206	0
Stage 1	195	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	422	844	-	-	1325	-
Stage 1	836	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	416	844	-	-	1325	-
Mov Cap-2 Maneuver	416	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	626	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	12.7	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	501	1325	-
HCM Lane V/C Ratio	-	-	0.072	0.011	-
HCM Control Delay (s)	-	-	12.7	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	24	513	40	5	262
Future Vol, veh/h	10	24	513	40	5	262
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	96	96	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	11	26	534	42	6	298

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	865	555	0	0	576	0
Stage 1	555	-	-	-	-	-
Stage 2	310	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	323	529	-	-	964	-
Stage 1	573	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	321	529	-	-	964	-
Mov Cap-2 Maneuver	321	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	444	964	-
HCM Lane V/C Ratio	-	-	0.083	0.006	-
HCM Control Delay (s)	-	-	13.8	8.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	3.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	42	76	476	87	36	237
Future Vol, veh/h	42	76	476	87	36	237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	96	96	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	67	121	496	91	41	269

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	893	542	0	0	587	0
Stage 1	542	-	-	-	-	-
Stage 2	351	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	311	538	-	-	954	-
Stage 1	581	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	295	538	-	-	954	-
Mov Cap-2 Maneuver	295	-	-	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	710	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	20.5	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	416	954	-
HCM Lane V/C Ratio	-	-	0.45	0.043	-
HCM Control Delay (s)	-	-	20.5	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.3	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	8	277	14	31	507
Future Vol, veh/h	26	8	277	14	31	507
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	91	91	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	28	9	304	15	35	576

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	958	312	0	0	319	0
Stage 1	312	-	-	-	-	-
Stage 2	646	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	284	726	-	-	1202	-
Stage 1	740	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	272	726	-	-	1202	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	708	-	-	-	-	-
Stage 2	520	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.8	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	319	1202	-
HCM Lane V/C Ratio	-	-	0.116	0.029	-
HCM Control Delay (s)	-	-	17.8	8.1	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Int Delay, s/veh	4.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	64	25	264	56	68	466
Future Vol, veh/h	64	25	264	56	68	466
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	91	91	88	88
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	102	40	290	62	77	530

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1005	321	0	0	352	0
Stage 1	321	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	267	718	-	-	1169	-
Stage 1	733	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	242	718	-	-	1169	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	499	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	27.6	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	297	1169	-
HCM Lane V/C Ratio	-	-	0.476	0.066	-
HCM Control Delay (s)	-	-	27.6	8.3	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	2.4	0.2	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	23	407	24	4	342
Future Vol, veh/h	11	23	407	24	4	342
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	83	83	93	93
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	12	25	490	29	4	368

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	881	505	0	0	519	0
Stage 1	505	-	-	-	-	-
Stage 2	376	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	316	565	-	-	1012	-
Stage 1	604	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	314	565	-	-	1012	-
Mov Cap-2 Maneuver	314	-	-	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	692	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	449	1012	-
HCM Lane V/C Ratio	-	-	0.082	0.004	-
HCM Control Delay (s)	-	-	13.7	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	45	60	371	61	30	322
Future Vol, veh/h	45	60	371	61	30	322
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	83	83	93	93
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	60	80	447	73	32	346

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	894	484	0	0	520	0
Stage 1	484	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	310	581	-	-	1011	-
Stage 1	618	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	298	581	-	-	1011	-
Mov Cap-2 Maneuver	298	-	-	-	-	-
Stage 1	594	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	18.1	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	413	1011	-
HCM Lane V/C Ratio	-	-	0.339	0.032	-
HCM Control Delay (s)	-	-	18.1	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.5	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	7	168	8	20	352
Future Vol, veh/h	27	7	168	8	20	352
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	82	82	73	73
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	29	8	205	10	27	482

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	746	210	0	0	215	0
Stage 1	210	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	380	828	-	-	1314	-
Stage 1	823	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	369	828	-	-	1314	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	417	1314	-
HCM Lane V/C Ratio	-	-	0.089	0.021	-
HCM Control Delay (s)	-	-	14.5	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	66	21	155	34	47	330
Future Vol, veh/h	66	21	155	34	47	330
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	82	82	73	73
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	88	28	189	41	64	452

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	790	210	0	0	230	0
Stage 1	210	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	358	828	-	-	1298	-
Stage 1	823	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	334	828	-	-	1298	-
Mov Cap-2 Maneuver	334	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	558	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	18.1	0	1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	390	1298	-
HCM Lane V/C Ratio	-	-	0.297	0.05	-
HCM Control Delay (s)	-	-	18.1	7.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.2	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	651	1	1	338
Future Vol, veh/h	0	1	651	1	1	338
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	96	96	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	0	1	678	1	1	367

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1048	679	0	0	679	0
Stage 1	679	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	251	450	-	-	881	-
Stage 1	502	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	251	450	-	-	881	-
Mov Cap-2 Maneuver	251	-	-	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	450	881	-
HCM Lane V/C Ratio	-	-	0.002	0.001	-
HCM Control Delay (s)	-	-	13	9.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	48	85	566	92	44	294
Future Vol, veh/h	48	85	566	92	44	294
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	96	96	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	52	92	590	96	48	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1054	638	0	0	686	0
Stage 1	638	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	249	475	-	-	876	-
Stage 1	524	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	232	475	-	-	876	-
Mov Cap-2 Maneuver	232	-	-	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	22.8	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	345	876	-
HCM Lane V/C Ratio	-	-	0.419	0.055	-
HCM Control Delay (s)	-	-	22.8	9.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2	0.2	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	354	1	1	640
Future Vol, veh/h	0	1	354	1	1	640
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	0	1	385	1	1	696

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1084	386	0	0	386	0
Stage 1	386	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	239	660	-	-	1135	-
Stage 1	685	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	239	660	-	-	1135	-
Mov Cap-2 Maneuver	239	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	492	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	660	1135	-
HCM Lane V/C Ratio	-	-	0.002	0.001	-
HCM Control Delay (s)	-	-	10.5	8.2	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	69	29	326	65	72	569
Future Vol, veh/h	69	29	326	65	72	569
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	75	32	354	71	78	618

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1164	390	0	0	425	0
Stage 1	390	-	-	-	-	-
Stage 2	774	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	214	656	-	-	1098	-
Stage 1	682	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	191	656	-	-	1098	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	608	-	-	-	-	-
Stage 2	453	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	31.1	0	1
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	242	1098	-
HCM Lane V/C Ratio	-	-	0.44	0.071	-
HCM Control Delay (s)	-	-	31.1	8.5	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	2.1	0.2	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	515	0	1	441
Future Vol, veh/h	1	1	515	0	1	441
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	1	1	560	0	1	479

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1041	560	0	-	560	0
Stage 1	560	-	-	-	-	-
Stage 2	481	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	254	526	-	0	977	-
Stage 1	570	-	-	0	-	-
Stage 2	620	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	254	526	-	-	977	-
Mov Cap-2 Maneuver	254	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	620	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	343	977	-
HCM Lane V/C Ratio	-	0.006	0.001	-
HCM Control Delay (s)	-	15.6	8.7	-
HCM Lane LOS	-	C	A	-
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	53	66	449	66	37	404
Future Vol, veh/h	53	66	449	66	37	404
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	93	93
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	58	72	488	72	40	434

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1038	524	0	0	560	0
Stage 1	524	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	255	551	-	-	977	-
Stage 1	592	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	551	-	-	977	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	21.2	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	350	977	-
HCM Lane V/C Ratio	-	-	0.37	0.041	-
HCM Control Delay (s)	-	-	21.2	8.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.7	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	214	0	1	445
Future Vol, veh/h	1	1	214	0	1	445
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	1	1	233	0	1	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	719	233	0	-	233	0
Stage 1	233	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	394	804	-	0	1294	-
Stage 1	803	-	-	0	-	-
Stage 2	616	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	394	804	-	-	1294	-
Mov Cap-2 Maneuver	394	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	529	1294	-
HCM Lane V/C Ratio	-	0.004	0.001	-
HCM Control Delay (s)	-	11.8	7.8	-
HCM Lane LOS	-	B	A	-
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	72	24	190	40	51	395
Future Vol, veh/h	72	24	190	40	51	395
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	85	28	224	47	60	465

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	833	248	0	0	271	0
Stage 1	248	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	337	788	-	-	1253	-
Stage 1	791	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	315	788	-	-	1253	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	555	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	18.9	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	371	1253	-
HCM Lane V/C Ratio	-	-	0.304	0.048	-
HCM Control Delay (s)	-	-	18.9	8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.3	0.2	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	24	651	40	6	338
Future Vol, veh/h	10	24	651	40	6	338
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	96	96	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	11	26	678	42	7	367

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1080	699	0	0	720	0
Stage 1	699	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	240	438	-	-	850	-
Stage 1	491	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	238	438	-	-	850	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	486	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	351	850	-
HCM Lane V/C Ratio	-	-	0.105	0.008	-
HCM Control Delay (s)	-	-	16.5	9.3	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	48	85	605	92	44	304
Future Vol, veh/h	48	85	605	92	44	304
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	96	96	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	52	92	630	96	48	330

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1104	678	0	0	726	0
Stage 1	678	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	233	450	-	-	846	-
Stage 1	502	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	217	450	-	-	846	-
Mov Cap-2 Maneuver	217	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	657	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	24.8	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	324	846	-
HCM Lane V/C Ratio	-	-	0.446	0.057	-
HCM Control Delay (s)	-	-	24.8	9.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.2	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	8	354	14	31	640
Future Vol, veh/h	26	8	354	14	31	640
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	28	9	385	15	34	696

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1157	393	0	0	400	0
Stage 1	393	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	216	654	-	-	1122	-
Stage 1	680	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	205	654	-	-	1122	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	647	-	-	-	-	-
Stage 2	458	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.4	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	244	1122	-
HCM Lane V/C Ratio	-	-	0.151	0.03	-
HCM Control Delay (s)	-	-	22.4	8.3	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	69	29	338	65	72	595
Future Vol, veh/h	69	29	338	65	72	595
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	75	32	367	71	78	647

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1206	403	0	0	438	0
Stage 1	403	-	-	-	-	-
Stage 2	803	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	202	645	-	-	1086	-
Stage 1	673	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	179	645	-	-	1086	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	439	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	33.9	0	0.9
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	228	1086	-
HCM Lane V/C Ratio	-	-	0.467	0.072	-
HCM Control Delay (s)	-	-	33.9	8.6	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	2.3	0.2	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	24	515	24	4	441
Future Vol, veh/h	11	24	515	24	4	441
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	12	26	560	26	4	479

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1060	573	0	0	586	0
Stage 1	573	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	247	517	-	-	955	-
Stage 1	562	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	246	517	-	-	955	-
Mov Cap-2 Maneuver	246	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	384	955	-
HCM Lane V/C Ratio	-	-	0.099	0.005	-
HCM Control Delay (s)	-	-	15.4	8.8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	53	66	473	66	37	414
Future Vol, veh/h	53	66	473	66	37	414
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	93	93
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	58	72	514	72	40	445

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1075	550	0	0	586	0
Stage 1	550	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	242	533	-	-	955	-
Stage 1	576	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	228	533	-	-	955	-
Mov Cap-2 Maneuver	228	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	591	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	22.4	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	334	955	-
HCM Lane V/C Ratio	-	-	0.387	0.042	-
HCM Control Delay (s)	-	-	22.4	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.8	0.1	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	8	214	8	20	445
Future Vol, veh/h	27	8	214	8	20	445
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	29	9	233	9	22	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	766	238	0	0	242	0
Stage 1	238	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	369	798	-	-	1284	-
Stage 1	799	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	361	798	-	-	1284	-
Mov Cap-2 Maneuver	361	-	-	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	590	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	413	1284	-
HCM Lane V/C Ratio	-	-	0.092	0.017	-
HCM Control Delay (s)	-	-	14.6	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	2.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	72	24	198	40	51	420
Future Vol, veh/h	72	24	198	40	51	420
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	9	9	9	9
Mvmt Flow	85	28	233	47	60	494

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	871	257	0	0	280	0
Stage 1	257	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.19	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.281	-
Pot Cap-1 Maneuver	320	779	-	-	1243	-
Stage 1	784	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	299	779	-	-	1243	-
Mov Cap-2 Maneuver	299	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	19.9	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	353	1243	-
HCM Lane V/C Ratio	-	-	0.32	0.048	-
HCM Control Delay (s)	-	-	19.9	8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.4	0.2	-

APPENDIX D

Chapter 400 of Caltrans' Highway Design Manual (HDM)

CHAPTER 400
INTERSECTIONS AT GRADE

Intersections are planned points of conflict where two or more roadways join or cross. At-grade intersections are among the most complicated elements on the highway system, and control the efficiency, capacity, and safety for motorized and non-motorized users of the facility. The type and operation of an intersection is important to the adjacent property owners, motorists, bicyclists, pedestrians, transit operators, the trucking industry, and the local community.

There are two basic types of at grade intersections: crossing and circular. It is not recommended that intersections have more than four legs. Occasionally, local development and land uses create the need for a more complex intersection design. Such intersections may require a specialized intersection design to handle the specify traffic demands at that location. In addition to the guidance in this manual, see Traffic Operations Policy Directive (TOPD) Number 13-02: Intersection Control Evaluation (ICE) for direction and procedures on the evaluation, comparison and selection of the intersection types and control strategies identified in Index 401.5. Also refer to the Complete Streets Intersection Guide for further information.

Topic 401 - Factors Affecting Design

Index 401.1 - General

At-grade intersections must handle a variety of conflicts among users, which includes truck, transit, pedestrians, and bicycles. These recurring conflicts play a major role in the preparation of design standards and guidelines. Arriving, departing, merging, turning, and crossing paths of moving pedestrians, bicycles, truck, and vehicular traffic have to be accommodated within a relatively small area. The objective of designing an intersection is to effectively balance the convenience, ease, and comfort of the users, as well as the human factors, with moving traffic (automobiles, trucks, motorcycles, transit vehicles, bicycles, pedestrians, etc.).The safety and mobility needs of motorist, bicyclist and pedestrians as well as their movement patterns in intersections must be analyzed early in the planning phase and then followed through appropriately during the design phase of all intersections on the State highway. It is Departmental policy to develop integrated multimodal projects in balance with community goals, plans, and values.

The Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians contains a primer on the factors to consider when designing intersections. It is published by the California Division of Traffic Operations.

401.2 Human Factors

(1) The Driver. An appreciation of driver performance is essential to proper highway design and operation. The suitability of a design rests as much on how safely and efficiently drivers are able to use the highway as on any other criterion.

Motorist's perception and reaction time set the standards for sight distance and length of transitions. The driver's ability to understand and interpret the movements and crossing times of the other vehicle drivers, bicyclists, and pedestrians using the intersection is equally important when making decisions and their associated reactions. The designer needs to keep in mind the user's limitations and therefore design intersections so that they meet user expectation.

(2) The Bicyclist. Bicyclist experience, skills and physical capabilities are factors in intersection design. Intersections are to be designed to help bicyclists understand how to traverse the intersection. Chapter 1000 provides intersection guidance for Class I and Class III bikeways that intersect the State highway system. The guidance in this chapter specifically relates to bicyclists that operate within intersections on the State highway system.

(3) The Pedestrian. Understanding how pedestrians will use an intersection is critical because pedestrian volumes, their age ranges, physical ability, etc. all factor in to their startup time and the time it takes them to cross an intersection and thus, dictates how to design

the intersection to avoid potential conflicts with bicyclists and motor vehicles. The guidance in this chapter specifically relates to pedestrian travel within intersections on the State highway system. See Topic 105, Pedestrian Facilities, Design Information Bulletin 82 - "Pedestrian Accessibility Guidelines for Highway Projects," the AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, and the California Manual on Uniform Traffic Control Devices (California MUTCD) for additional guidance.

401.3 Traffic Considerations

Good intersection design clearly indicates to bicyclists and motorists how to traverse the intersection (see Figure 403.6A). Designs that encourage merging traffic to yield to through bicycle and motor vehicle traffic are desirable.

The size, maneuverability, and other characteristics of bicycles and motorized vehicles (automobiles, trucks, transit vehicles, farm equipment, etc.) are all factors that influence the design of an intersection. The differences in operating characteristics between bicycles and motor vehicles should be considered early in design.

Table 401.3 compares vehicle characteristics to intersection design elements.

A design vehicle is a convenient means of representing a particular segment of the vehicle population. See Topic 404 for a further discussion of the uses of design vehicles.

Transit vehicles and how their stops interrelate with an intersection, pedestrian desired walking patterns and potential transfers to other transit facilities are another critical factor to understand when designing an intersection. Transit stops and their placement needs to take into account the required maintenance operations that will be needed and usually supplied by the Transit Operator.

401.4 The Physical Environment

In highly developed urban areas, where right of way is usually limited, the volume of vehicular traffic, pedestrians, and bicyclists may be large, street parking exists, and transit stops (for both buses and light rail) are available. All interact in a variety of movements that contribute to and add to the complexity of a State highway and can result in busy intersections.

Industrial development may require special attention to the movement of large trucks.

Rural areas where farming occurs may require special attention for specialized farm equipment. In addition, rural cities or town centers (rural main streets) also require special attention.

Rural intersections in farm areas with low traffic volumes may have special visibility problems or require shadowing of left-turn vehicles from high speed approach traffic.

Table 401.3

Vehicle Characteristics	Intersection Design Element Affected
Length	Length of storage lane
Width	Lane width
Height	Clearance to overhead signs and signals
Wheel base	Corner radius and width of turning lanes
Acceleration	Tapers and length of acceleration lane
Deceleration	Tapers and length of deceleration lane

There are many factors to be considered in the design of intersections, with the goal to achieve a functional, safe and efficient intersection for all users of the facility. The location and level of use by various modes will have an impact on intersection design, and therefore should be considered early in the design process. In addition to current levels of use, it is important to consider future travel patterns for vehicles, including trucks; pedestrian and bicycle demand and the future expansion of transit.

401.5 Intersection Type

Intersection types are characterized by their basic geometric configuration, and the form of intersection traffic control that is employed:

(1) Geometric Configurations

(a) Crossing-Type Intersections - "Tee" and 4-legged intersections

(b) Circular Intersections –roundabouts, traffic circles, rotaries; however, only roundabouts are acceptable for State highways.

(c) Alternative Intersection Designs – various effective geometric alternatives to traditional designs that can reduce crashes and their severity, improve operations, reduce congestion and delay typically by reducing or altering the number of conflict points; these alternatives include geometric design features such as intersections with displaced left-turns or variations on U-turns.

(2) Intersection Control strategies, See California MUTCD and Traffic Operations Policy Directive (TOPD) Number 13-02, Intersection Control Evaluation for procedures and guidance on how to evaluate, compare and select from among the following intersection control strategies:

(a) Two-Way Stop Controlled - for minor road traffic

(b) All-Way Stop Control

(c) Signal Control

(d) Yield Control (Roundabout)

Historically, crossing-type intersections with signal or "STOP"-control have been used on the State highway system. However, other intersection types, given the appropriate circumstances may enhance intersection performance through fewer or less severe crashes and improve operations by reducing overall delay. Alternative intersection geometric designs should be considered and evaluated early in the project scoping, planning and decision-making stages, as they may be more efficient, economical and safer solutions than traditional designs. Alternative intersection designs can effectively balance the safety and mobility needs of the motor vehicle drivers, transit riders, bicyclists and pedestrians using the intersection.

401.6 Transit

Transit use may range from periodic buses, handled as part of the normal mix of vehicular traffic, to Bus Rapid Transit (BRT) or light rail facilities which can have a large impact on other users of the intersection. Consideration of these modes should be part of the early planning and design of intersections.

Topic 402 - Operational Features Affecting Design

402.1 Capacity

Adequate capacity to handle peak period traffic demands is a basic goal of intersection design.

(1) Unsignalized Intersections. The "Highway Capacity Manual", provides methodology for capacity analysis of unsignalized intersections controlled by "STOP" or "YIELD" signs. The assumption is made that major street traffic is not affected by the minor street movement. Unsignalized intersections generally become candidates for signalization when traffic backups begin to develop on the cross street or when gaps in traffic are insufficient for drivers to yield to crossing pedestrians. See the California MUTCD, for signal warrants. Changes to intersection controls must be coordinated with District Traffic Branch.

(2) Signalized Intersections. See Topic 406 for analysis of simple signalized intersections, including ramps. The analysis of complex and alternative intersections should be referred to the District Traffic Branch; also see Traffic Operations Policy Directive (TOPD) Number 13-02.

(3) Roundabout Intersections. See TOPD Number 13-02 for screening process and the Intersection Control Evaluation(ICE) Process Informational Guide for operational analysis methods and tools.

402.2 Collisions

(1) General. Intersections have a higher potential for conflict compared to other sections of the highway because travel is interrupted, traffic streams cross, and many types of turning movements occur.

The type of traffic control affects the type of collisions. Signalized intersections tend to have more rear end and same-direction

sideswipes than intersections with "STOP"-control on minor legs. Roundabouts experience few angle or crossing collisions. Roundabouts reduce the frequency and severity of collisions, especially when compared to the performance of signalized intersections in high speed environments. Other alternative intersection types are configurations to consider for minimizing the number of conflict points.

(2) Undesirable Geometric Features.

- Inadequate approach sight distance.
- Inadequate corner sight distance.
- Steep grades.
- Five or more approaches.
- Presence of curves within intersections(unless at roundabouts).
- Inappropriately large curb radii.
- Long pedestrian crossing distances.
- Intersection Angle <75 degrees (see Topic 403).

402.3 On-Street Parking

On-street parking generally decreases through-traffic capacity, impedes traffic flow, and increases crash potential. Where the primary service of the arterial is the movement of vehicles, it may be desirable to prohibit on-street parking on State highways in urban and suburban expressways and rural arterial sections. However, within urban and suburban areas and in rural communities located on State highways, on-street parking should be considered in order to accommodate existing land uses. Where adequate off-street parking facilities are not available, the designer should consider on-street parking, so that the proposed highway improvement will be compatible with the land use. On-street parking as well as off-street parking needs to comply with DIB82. See AASHTO, A Policy on Geometric Design of Highways and Streets for additional guidance related to on-street parking.

402.4 Consider All Users

Intersections should accommodate all users of the facility, including vehicles, bicyclists, pedestrians and transit. Bicycles have all the rights and responsibilities as motorist per the California Vehicle Code, but should have separate consideration of their needs, even separate facilities if volumes warrant. Pedestrians should not be prohibited from crossing one or more legs of an intersection, unless no other safe alternative exists. Pedestrians can be prohibited from crossing one or more legs of an intersection if a reasonable alternate route exists and there is a demonstrated need to do so. All pedestrian facilities shall be ADA compliant as outlined in DIB 82. Transit needs should be determined early in the planning and design phase as their needs can have a large impact on the performance of an intersection. Transit stops in the vicinity of intersections should be evaluated for their effect on the safety and operation of the intersection(s) under study. See Topic 108 for additional information.

402.5 Speed-Change Areas

Speed-change areas for vehicles entering or leaving main streams of traffic are beneficial to the safety and efficiency of an intersection. Entering traffic merges most efficiently with through traffic when the merging angle is less than 15 degrees and when speed differentials are at a minimum.

Topic 403 - Principles of Channelization

403.1 Preference to Major Movements

The provision of direct free-flowing high-standard alignment to give preference to major movements is good channelization practice. This may require some degree of control of the minor movements such as stopping, funneling, or even eliminating them. These controlling measures should conform to natural paths of movement and should be introduced gradually to promote smooth and efficient operation.

403.2 Areas of Conflict

Large multilane undivided intersection areas are undesirable. The hazards of conflicting movements are magnified when motorists, bicyclists, and pedestrians are unable to anticipate movements of other users within these areas. Channelization reduces areas of conflict by separating or regulating traffic movements into definite paths of travel by the use of pavement markings or traffic islands.

Multilane undivided intersections, even with signalization, are more difficult for pedestrians to cross. Providing pedestrian refuge islands enable pedestrians to cross fewer lanes at a time.

See Index 403.7 for traffic island guidance when used as pedestrian refuge. Curb extensions shorten crossing distance and increase visibility. See Index 303.4 for curb extensions.

403.3 Angle of Intersection

A right angle (90°) intersection provides the most favorable conditions for intersecting and turning traffic movements. Specifically, a right angle provides:

- The shortest crossing distance for motor vehicles, bicycles, and pedestrians.
- Sight lines which optimize corner sight distance and the ability of motorists to judge the relative position and speed of approach traffic.
- Intersection geometry that can reduce vehicle turning speeds so collisions are more easily avoided and the severity of collisions are minimized.
- Intersection geometry that sends a message to turning bicyclists and motorists that they are making a turning movement and should yield as appropriate to through traffic on the roadway they are leaving, to traffic on the receiving roadway, and to pedestrians crossing the intersection.

Minor deviations from right angles are generally acceptable provided that the potentially detrimental impact on visibility and turning movements for large trucks (see Topic 404) can be mitigated. However, large deviations from right angles may decrease visibility, hamper certain turning operations, and will increase the size of the intersection and therefore crossing distances for bicyclists and pedestrians, may encourage high speed turns, and may reduce yielding by turning traffic. When a right angle cannot be provided due to physical constraints, the interior angle should be designed as close to 90 degrees as is practical, but should not be less than 75 degrees. Mitigation should be considered for the affected intersection design features. (See Figure 403.3A). A 75 degree angle does not unreasonably increase the crossing distance or generally decrease visibility. Class II bikeway crossings at railroads follow similar guidance to Class I bikeway crossings at railroads, see Index 1003.5(3), and Figure 403.3B.

A characteristic of skewed intersection angles is that they result in larger intersections.

When existing intersection angles are less than 75 degrees, the following retrofit improvement strategies should be considered:

- Realign the subordinate intersection legs if the new alignment and intersection location(s) can be designed without introducing new geometric or operational deficiencies.
- Provide acceleration lanes for difficult turning movements due to radius or limited visibility.
- Restrict problematic turning movements; e.g. for minor road left turns with potentially limited visibility.
- Provide refuge areas for pedestrians at very long crossings.

For additional guidance on the above and other improvement strategies, consult with the District Design Liaison or HQ Traffic Liaison.

Particular attention should be given to skewed angles on curved alignment with regards to sight distance and visibility. Crossroads skewed to the left have more restricted visibility for drivers of vans and trucks than crossroads skewed to the right. In addition, severely skewed intersection angles, coupled with steep downgrades (generally over 4 percent) can increase the potential for high centered vehicles to overturn where the vehicle is on a downgrade and must make a turn greater than 90 degrees onto a crossroad. These factors should be considered in the design of skewed intersections.

403.4 Points of Conflict

Channelization separates and clearly defines points of conflict within the intersection. Bicyclists, pedestrians and motorists should be exposed to only one conflict or confronted with one decision at a time.

Speed-change areas for diverging traffic should provide adequate length clear of the through lanes to permit vehicles to decelerate after leaving the through lanes.

See AASHTO, A Policy on Geometric Design of Highways and Streets for additional guidance on speed-change lanes.

Figure 403.3A
Angle of Intersection
(Minor Leg Skewed to the Right)

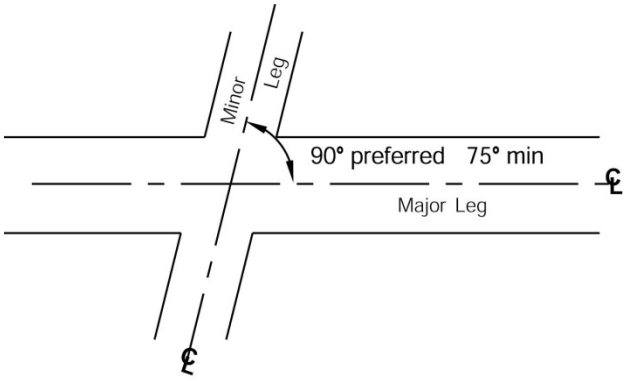
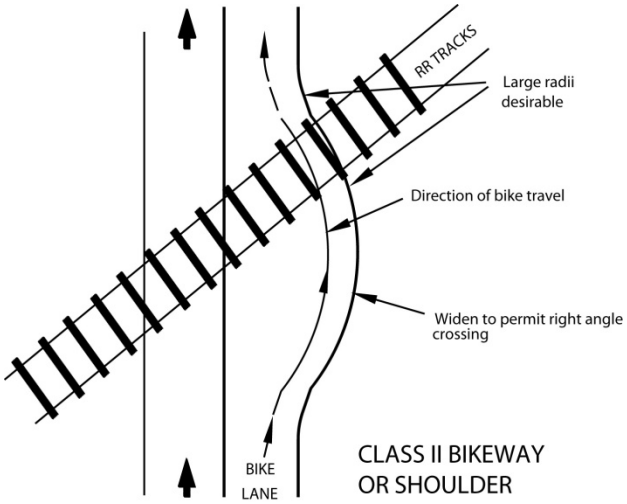


Figure 403.3.B
Class II Bikeway
Crossing Railroad



403.5 (Currently Not In Use)

403.6 Turning Traffic

A separate turning lane removes turning movements from the intersection area. Abrupt changes in alignment or sight distance should be avoided, particularly where traffic turns into a separate turning lane from a high-standard through facility.

For wide medians, consider the use of offset left-turn lanes at both signalized and unsignalized intersections. Opposing left-turn lanes are offset or shifted as far to the left as practical by reducing the width of separation immediately before the intersection. Rather than aligning the left-turn lane exactly parallel with and adjacent to the through lane, the offset left-turn lane is separated from the adjacent through lane. Offset left-turn lanes provide improved visibility of opposing through traffic. For further guidance on offset left-turn lanes, see AASHTO, A Policy on Geometric Design of Highways and Streets.

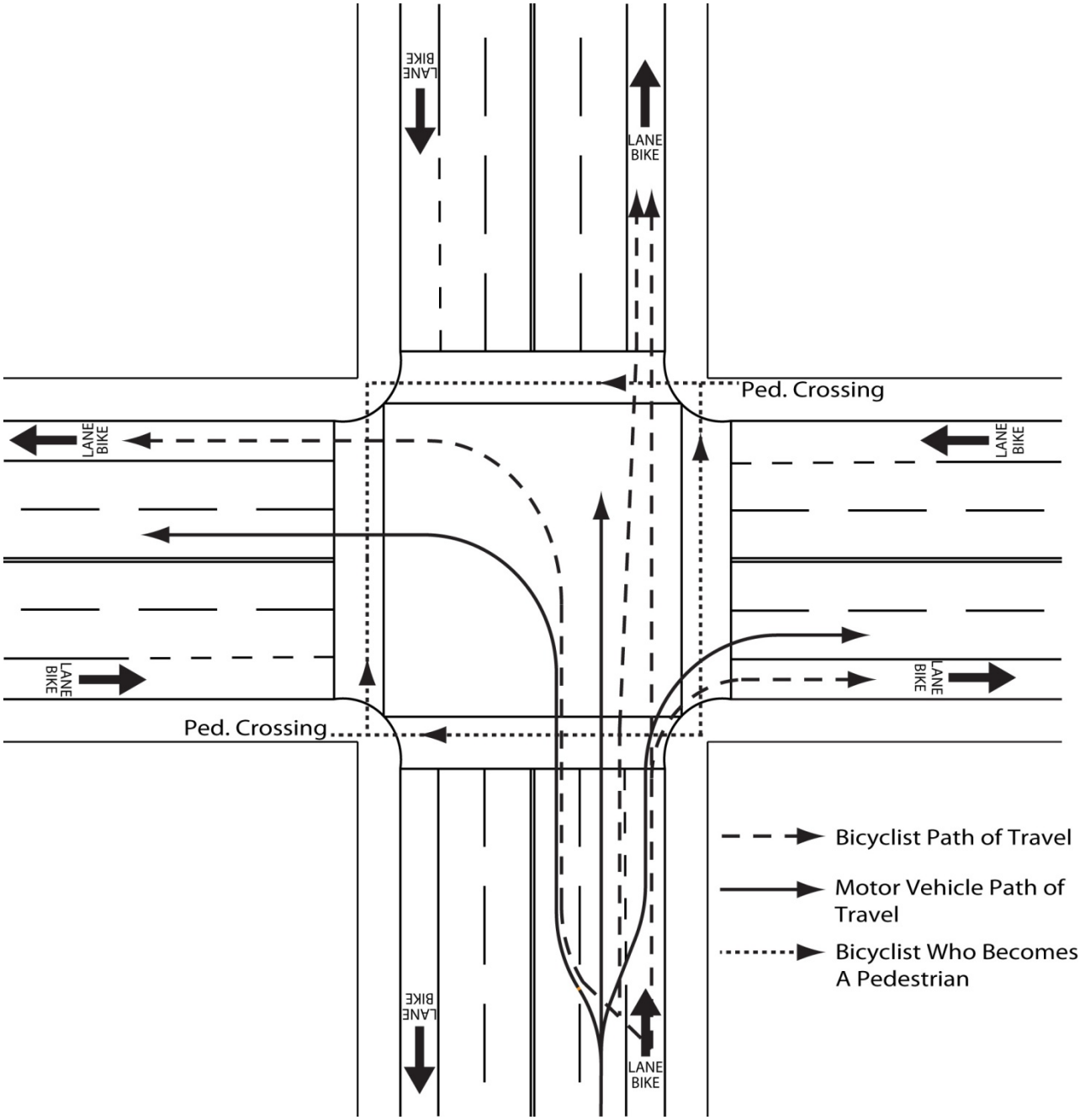
(1) Treatment of Intersections with Right-Turn-Only Lanes. Most motor vehicle/bicycle collisions occur at intersections. For this reason, intersection design should be accomplished in a manner that will minimize confusion by motorists and bicyclists, eliminate ambiguity and induce all road users to operate in accordance with the statutory rules of the road in the California Vehicle Code. Right-turn-only lanes should be designed to meet user expectations and reduce conflicts between vehicles and bicyclists.

Figure 403.6A illustrates a typical at-grade intersection of multilane streets without right-turn-only lanes. Bike lanes or shoulders are included on all approaches. Some common movements of motor vehicles and bicycles are shown. A prevalent crash type is between straight-through bicyclists and right-turning motorists, who do not yield to through bicyclists.

Optional right-turn lanes should not be used in combination with right-turn-only lanes on roads where bicycle travel is permitted. The use of optional right-turn lanes in combination with right-turn-only lanes is not recommended in any case where a Class II bike lane is present. This may increase the need for dual or triple right-turn-only lanes, which have

Figure 403.6A

Typical Bicycle and Motor Vehicle Movements at Intersections of Multilane Streets without Right-Turn-Only Lanes

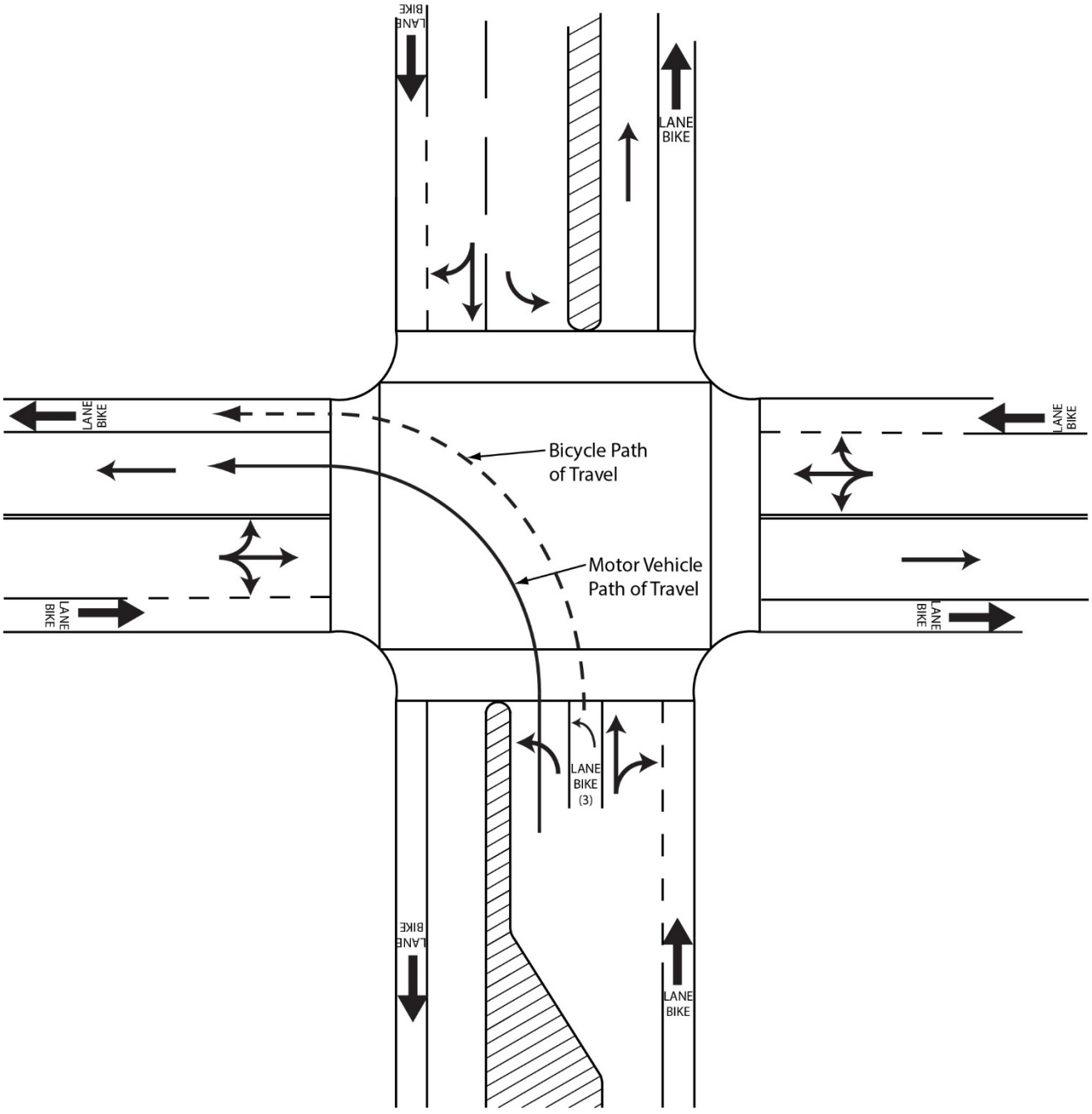


NOTE:

Only one direction is shown for clarity.

Figure 403.6B

Bicycle Left-Turn-Only Lane



NOTES:

(1) For bicycle lane markings, see the California MUTCD.

(2) Bicycle detectors are necessary for signalized intersections.

(3) Left-turn bicycle lane should have receiving bike lane or shoulder.

challenges with visibility between turning vehicles and pedestrians. Multiple right-turn-only lanes should not be free right-turns when there is a pedestrian crossing. If there is a pedestrian crossing on the receiving leg of multiple right-turn-only lanes, the intersection should be controlled by a pedestrian signal head, or geometrically designed such that pedestrians cross only one turning lane at a time.

Locations with right-turn-only lanes should provide a minimum 4-foot width for bicycle use between the right-turn and through lane when bikes are permitted, except where posted speed is greater than 40 mph, the minimum width should be 6 feet. Configurations that create a weaving area without defined lanes should not be used.

For signing and delineation of bicycle lanes at intersections, consult District Traffic Operations.

Figure 403.6B depicts an intersection with a left-turn-only bicycle lane, which should be considered when bicycle left-turns are common. A left-turn-only bicycle lane may be considered at any intersection and should always be considered as a tool to provide mobility for bicyclists. Signing and delineation options for bicycle left-turn-only lanes are shown in the California MUTCD.

(2) Design of Intersections at Interchanges. The design of at-grade intersections at interchanges should be accomplished in a manner that will minimize confusion of motorists, bicyclists, and pedestrians. Higher speed, uncontrolled entries and exits from freeway ramps should not be used at the intersection of the ramps with the local road. The smallest curb return radius should be used that accommodates the design vehicle. Intersections with interior angles close to 90 degrees reduce speeds at conflict points between motorists, bicyclists, and pedestrians. The intersection skew guidance in Index 403.3 applies to all ramp termini at the local road.

403.7 Refuge Areas

Traffic islands should be used to provide refuge areas for bicyclists and pedestrians. See Index 405.4 for further guidance.

403.8 Prohibited Turns

Traffic islands may be used to direct bicycle and motorized vehicle traffic streams in desired directions and prevent undesirable movements. Care should be taken so that islands used for this purpose accommodate convenient and safe pedestrian and bicycle crossings, drainage, and striping options. See Topic 303.

403.9 Effective Signal Control

At intersections with complex turning movements, channelization is required for effective signal control. Channelization permits the sorting of approaching bicycles and motorized vehicles which may move through the intersection during separate signal phases. Pedestrians may also have their own signal phase. This requirement is of particular importance when traffic-actuated signal controls are employed.

The California MUTCD has warrants for the placement of signals to control vehicular, bicycle and pedestrian traffic. Pedestrian activated devices, signals or beacons are not required, but must be evaluated where directional, multilane, pedestrian crossings occur. These locations may include:

- Mid-block street crossings;
- Channelized turn lanes;
- Ramp entries and exits; and
- Roundabouts.

The evaluation, selection, programming and use of a chosen device should be done with guidance from District Traffic Operations.

403.10 Installation of Traffic Control Devices

Channelization may provide locations for the installation of essential traffic control devices, such as “STOP” and directional signs. See Index 405.4 for information about the design of traffic islands.

403.11 Summary

- Give preference to the major move(s).

- Reduce areas of conflict.
- Reduce the duration of conflicts.
- Cross traffic at right angles or skew no more than 75 degrees. (90 degrees preferred.)
- Separate points of conflict.
- Provide speed-change areas and separate turning lanes where appropriate.
- Provide adequate width to shadow turning traffic.
- Restrict undesirable moves with traffic islands.
- Coordinate channelization with effective signal control.
- Install signs in traffic islands when necessary but avoid building conflicts one or more modes of travel.
- Consider all users.

403.12 Other Considerations

- An advantage of curbed islands is they can serve as pedestrian refuge. Where curbing is appropriate, consideration should be given to mountable curbs. See Topic 303 for more guidance.
- Avoid complex intersections that present multiple choices of movement to the motorist and bicyclist.
- Traffic safety should be considered. Collision records provide a valuable guide to the type of channelization needed.

Topic 404 - Design Vehicles

404.1 General

Any vehicle, whether car, bus, truck, or recreational vehicle, while turning a curve, covers a wider path than the width of the vehicle. The outer front tire can generally follow a circular curve, but the inner rear tire will swing in toward the center of the curve.

Some terminology is vital to understanding the engineering concepts related to design vehicles. See Index 62.4 Interchanges and Intersection at Grade for terminology.

404.2 Design Considerations

It may not be necessary to provide for design vehicle turning movements at all intersections along the State route if the design vehicle's route is restricted or it is not expected to use the cross street frequently. Discuss with Traffic Operations and the local agency before a turning movement is not provided. The goal is to minimize possible conflicts between vehicles, bicycles, pedestrians, and other users of the roadway, while providing the minimum curb radii appropriate for the given situation.

Both the tracking width and swept width should be considered in the design of roadways for use of the roadway by design vehicles.

Tracking width lines delineate the path of the vehicle tires as the vehicle moves through the turn.

Swept width lines delineate the path of the vehicle body as the vehicle moves through the turn and will therefore always exceed the tracking width. The following list of criteria is to be used to determine whether the roadway can accommodate the design vehicle.

(1) Traveled way.

(a) To accommodate turn movements(e.g., at intersections, driveways, alleys, etc.),the travel way width and intersection design should be such that tracking width and swept width lines for the design vehicle do not cross into any portion of the lane for opposing traffic. Encroachment into the shoulder and bike lane is permitted.

(b) Along the portion of roadway where there are no turning options, vehicles are required to stay within the lane lines. **The tracking and swept widths lines for the design vehicle shall stay within the lane as defined in Index 301.1 and Table 504.3A.** This includes no encroachment into Class II bike lanes.

(2) Shoulders. Both tracking width and swept width lines may encroach onto paved shoulders to accommodate turning. For design projects where the tracking width lines are shown to encroach onto paved shoulders, the shoulder pavement structure should be engineered to sustain the weight of the design vehicle. See Index 613 for general traffic loading

considerations and Index 626 for tied rigid shoulder guidance. At corners where no sidewalks are provided and pedestrians are using the shoulder, a paved refuge area may be provided outside the swept width of turning vehicle.

(3) Curbs and Gutters. Tires may not mount curbs. If curb and gutter are present and any portion of the gutter pan is likewise encroached, the gutter pan must be engineered to match the adjacent shoulder pavement structure. See Index 613.5(2)(c) for gutter pan design guidance.

(4) Edge of Pavement. To accommodate a turn, the swept width lines may cross the edge of pavement provided there are no obstructions. The tracking width lines shall remain on the pavement structure, including the shoulder, provided that the shoulder is designed to support vehicular traffic. If truck volumes are high, consideration of a wider shoulder is encouraged in order to preserve the pavement edge.

(5) Bicycle Lanes. Where bicycle lanes are considered, the design guidance noted above applies. Vehicles are permitted to cross a bicycle lane to initiate or complete a turning movement or for emergency parking on the shoulder. See the California MUTCD for Class II bike lane markings.

To accommodate turn movements (e.g., intersections, driveways, alleys, etc. are present), both tracking width and swept width lines may cross the broken white painted bicycle lane striping in advance of the right-turn, entering the bicycle lane when clear to do so.

(6) Sidewalks. Tracking width and swept width lines must not encroach onto sidewalks or pedestrian refuge areas, without exception.

(7) Obstacles. Swept width lines may not encroach upon obstacles including, but not limited to, curbs, islands, sign structures, traffic delineators/channelizers, traffic signals, lighting poles, guardrails, trees, cut slopes, and rock outcrops.

(8) Appurtenances. Swept width lines do not include side mirrors or other appurtenances allowed by the California Vehicle Code, thus, accommodation to non-motorized users of the facility and appurtenances should be considered.

If both the tracking width and swept width lines meet the design guidance listed above, then the geometry is adequate for that design vehicle. Consideration should be given to pedestrian crossing distance, motor vehicle speeds, truck volumes, alignment, bicycle lane width, sight distance, and the presence of on-street parking.

Note that the STAA Design Vehicle has a template with a 56-foot (minimum) and a 67-foot (longer) radius and the California Legal Design Vehicle has a template with 50-foot (minimum) and 60-foot (longer) radii. The longer radius templates are more conservative. The longer radius templates develop less swept width and leave a margin of error for the truck driver. The longer radius templates should be used for conditions where the vehicle may not be required to stop before entering the intersection.

The minimum radius template can be used if the longer radius template does not clear all obstacles. The minimum radius templates demonstrate the tightest turn that the vehicles can navigate, assuming a speed of less than 10 miles per hour.

For offtracking lane width requirements on freeway ramps, see Topic 504.

404.3 Design Tools

District Truck Managers should be consulted early in the project to ensure compliance with the design vehicle guidance contained in Topic 404. Consult local agencies to verify the location of local truck routes. Essentially, two options are available – templates or computer software.

- The turning templates in Figures 404.5A through G are a design aid for determining the swept width and/or tracking width of large vehicles as they maneuver through a turn. The templates can be used as overlays to evaluate the adequacy of the geometric layout of a curve or intersection when reproduced on clear film and scaled to match the highway drawings. These templates assume a vehicle speed of less than 10 miles per hour.
- Computer software such as AutoTURN or AutoTrak can draw the swept width and/or tracking width along any design curve within a CADD drawing program such as MicroStation

or AutoCAD. Dimensions taken from the vehicle diagrams in Figures 404.5A through G may be inputted into the computer program by creating a custom vehicle if the vehicle is not already included in the software library. The software can also create a vehicle turn template that conforms to any degree curve desired.

404.4 Design Vehicles and Related Definitions

(1) The Surface Transportation Assistance Act of 1982 (STAA).

(a) STAA Routes. STAA allows certain longer trucks called STAA trucks to operate on the National Network. After STAA was enacted, the Department evaluated State routes for STAA truck access and created Terminal Access and Service Access routes which, together with the National Network, are called the STAA Network. Terminal Access routes allow STAA access to terminals and facilities. Service Access routes allow STAA trucks one-mile access off the National Network, but only at identified exits and only for designated services. Service Access routes are primarily local roads. A "Truck Route Map," indicating the National Network routes and the Terminal Access routes is posted on the Department's Office of Commercial Vehicle Operations website and is also available in printed form.

(b) STAA Design Vehicle. The STAA design vehicle is a truck tractor-semitrailer combination with a 48-foot semitrailer, a 43-foot kingpin-to-rear-axle (KPRA) distance, an 8.5-foot body and axle width, and a 23-foot truck tractor wheelbase. Note, a truck tractor is a non-load-carrying vehicle. There is also a STAA double (truck tractor-semitrailer-trailer); however, the double is not used as the design vehicle due to its shorter turning radius. The STAA Design Vehicle is shown in Figures 404.5A and B.

The STAA Design Vehicle in Figures 404.5A or B should be used on the National Network, Terminal Access, California Legal, and Advisory routes.

(c) STAA Vehicle – 53-Foot Trailer. Another category of vehicle allowed only on STAA routes has a maximum 53-foot trailer, a maximum 40-foot KPRA for two or more axles, a maximum 38-foot KPRA for a single axle, and unlimited overall length. This vehicle is not to be used as the design vehicle as it is not the worst case for offtracking due to its shorter KPRA. The STAA Design Vehicle should be used instead.

(2) California Legal.

(a) California Legal Routes. Virtually all State routes off the STAA Network are California Legal routes. There are two types of California Legal routes, the regular California Legal routes and the KPRA Advisory Routes. Advisory routes have signs posted that state the maximum KPRA length that the route can accommodate without the vehicle offtracking outside the lane. KPRA advisories range from 30 feet to 38 feet, in 2-foot increments. California Legal vehicles are allowed to use both types of California Legal routes. California Legal vehicles can also use the STAA Network. However, STAA trucks are not allowed on any California Legal routes. The Truck Route Map indicating the California Legal routes is posted on the Department's Office of Commercial Vehicle Operations website.

(b) California Legal Design Vehicle. The California Legal vehicle is a truck tractor-semitrailer with the following dimensions: the maximum overall length is 65 feet; the maximum KPRA distance is 40 feet for semitrailers with two or more axles, and 38 feet for semitrailers with a single axle; the maximum width is 8.5 feet. There are also two categories of California Legal doubles (truck tractor-semitrailer-trailer); however, the doubles are not used as the design vehicle due to their shorter turning radii. The California Legal Design Vehicle is shown in Figures 404.5C and D.

The California Legal Design Vehicle in Figures 404.5C and D should only be used

when the STAA design vehicle is not feasible and with concurrence from the District Truck Manager.

(3) 40-Foot Bus.

(a) 40-Foot Bus Routes. All single-unit vehicles, including buses and motor trucks up to 40 feet in length, are allowed on virtually every route in California.

(b) 40-Foot Bus Design Vehicle. The 40-Foot Bus Design Vehicle shown in Figure 404.5E is an AASHTO standard. Its 25-foot wheelbase and 40-foot length are typical of city transit buses and some intercity buses. At intersections where truck volumes are light or where the predominate truck traffic consists of mostly 3-axle units, the 40-foot bus may be used. Its wheel path sweeps a greater width than 3-axle delivery trucks, as well as smaller buses such as school buses.

(4) 45-Foot Bus & Motorhome.

(a) 45-Foot Bus & Motorhome Routes. The "45-foot bus and motorhome" refers to bus and motorhomes over 40 feet in length, up to and including 45 feet in length. These longer buses and motorhomes are allowed in California, but only on certain routes.

The 45-foot tour bus became legal on the National Network in 1991 and later allowed on some State routes in 1995. The 45-foot motorhome became legal in California in 2001, but only on those routes where the 45-foot bus was already allowed. A Bus and Motorhome Map indicating where these longer buses and motorhomes are allowed and where they are not allowed is posted on the Department's Office of Commercial Vehicle Operations website.

(b) 45-Foot Bus and Motorhome Design Vehicle. The 45-Foot Bus & Motorhome Design Vehicle shown in Figure 404.5F is used by Caltrans for the longest allowable bus and motorhome. Its wheelbase is 28.5 feet. It is also similar to the AASHTO standard 45-foot bus. Typically this should be the smallest design vehicle used on a State highway. It may be used where the State highway intersects local streets without commercial or industrial traffic.

The 45-Foot Bus and Motorhome Design Vehicle shown in Figure 404.5F should be used in the design of all interchanges and intersections on all green routes indicated on the Bus and Motorhome Map for both new construction and rehabilitation projects. Check also the longer standard design vehicles on these routes as required – the STAA Design Vehicle and the California Legal Design Vehicle in Indexes 404.3(1) and (2).

(5) 60-Foot Articulated Bus.

(a) 60-Foot Articulated Bus Routes. The articulated bus is allowed a length of up to 60 feet per CVC 35400(b)(3)(A). This bus is used primarily by local transit agencies for public transportation. There is no master listing of such routes. Local transit agencies should be contacted to determine possible routes within the proposed project.

(b) 60-Foot Articulated Bus Design Vehicle. The 60-Foot Articulated Bus Design Vehicle shown in Figure 404.5G is an AASHTO standard. The routes served by these buses should be designed to accommodate the 60-Foot Articulated Bus Design Vehicle.

404.5 Turning Templates & Vehicle Diagrams

Figures 404.5A through G are computer-generated turning templates at an approximate scale of 1"=50' and their associated vehicle diagrams for the design vehicles described in Index 404.3. The radius of the template is measured to the outside front wheel path at the beginning of the curve. Figures 404.5A through G contain the terms defined as follows:

(1) Tractor Width - Width of tractor body.

(2) Trailer Width - Width of semitrailer body.

(3) Tractor Track - Tractor axle width, measured from outside face of tires.

(4) Trailer Track – Semitrailer axle width, measured from outside face of tires.

(5) Lock To Lock Time - The time in seconds that an average driver would take under normal driving conditions to turn the steering wheel of a vehicle from the lock position on one side to the lock position on the other side. The default in AutoTurn software is 6 seconds.

(6) Steering Lock Angle - The maximum angle that the steering wheels can be turned. It is further defined as the average of the maximum angles made by the left and right steering wheels with the longitudinal axis of the vehicle.

(7) Articulating Angle - The maximum angle between the tractor and semitrailer.

Topic 405 - Intersection Design Standards

405.1 Sight Distance

(1) Stopping Sight Distance. See Index 201.1 for minimum stopping sight distance requirements.

(2) *Corner Sight Distance*.

(a) General--At unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle, bicyclist or pedestrian waiting at the crossroad and the driver of an approaching vehicle. Line of sight for all users should be included in right of way, in order to preserve sight lines.

Adequate time must be provided for the waiting user to either cross all lanes of through traffic, cross the near lanes and turn left, or turn right, without requiring through traffic to radically alter their speed.

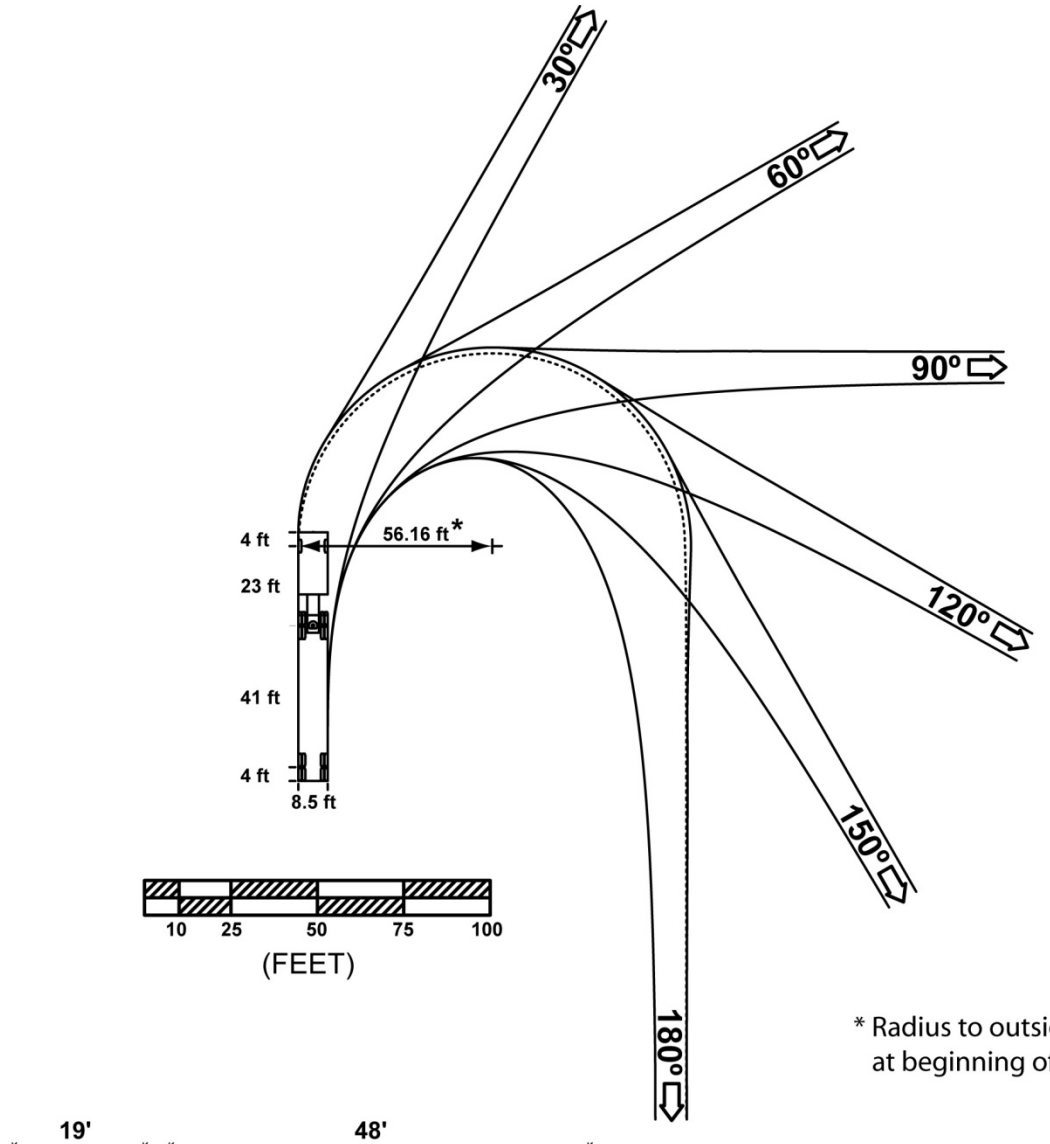
The values given in Table 405.1A provide 7-1/2 seconds for the driver on the crossroad to complete the necessary maneuver while the approaching vehicle travels at the assumed design speed of the main highway. The 7-1/2 second criterion is normally applied to all lanes of through traffic in order to cover all possible maneuvers by the vehicle at the crossroad. However, by providing the standard corner sight distance to the lane nearest to and farthest from the waiting vehicle, adequate time should be obtained to make the necessary movement. On multilane highways a 7-1/2 second criterion for the outside lane, in both directions of travel, normally will provide increased sight distance to the inside lanes. Consideration should be given to increasing these values on downgrades steeper than 3 percent and longer than 1 mile (see Index 201.3), where there are high truck volumes on the crossroad, or where the skew of the intersection substantially increases the distance traveled by the crossing vehicle.

In determining corner sight distance, a set back distance for the vehicle waiting at the crossroad must be assumed. **Set back for the driver of the vehicle on the crossroad shall be a minimum of 10 feet plus the shoulder width of the major road but not less than 15 feet.** Line of sight for corner sight distance is to be determined from a 3and 1/2-foot height at the location of the driver of the vehicle on the minor road to a 4 and 1/4-foot object height in the center of the approaching lane of the major road as illustrated in Figure 504.3J. If the major road has a median barrier, a 2-foot object height should be used to determine the median barrier set back.

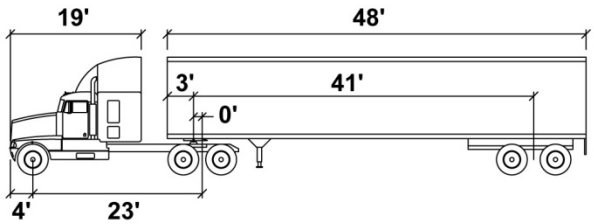
In some cases the cost to obtain 7-1/2 seconds of corner sight distances may be excessive. High costs may be attributable to right of way acquisition, building removal, extensive excavation, or immitigable environmental impacts. In such cases a lesser value of corner sight distance, as described under the following headings, may be used.

(b) Public Road Intersections (Refer to Topic 205)--<u>At unsignalized public road intersections (see Index 405.7) corner sight distance values given in Table 405.1A should be provided.</u>

Figure 404.5A
STAA Design Vehicle
56-Foot Radius



* Radius to outside wheel at beginning of curve.



LEGEND

Swept Width (Body)

Tracking Width (Tires)

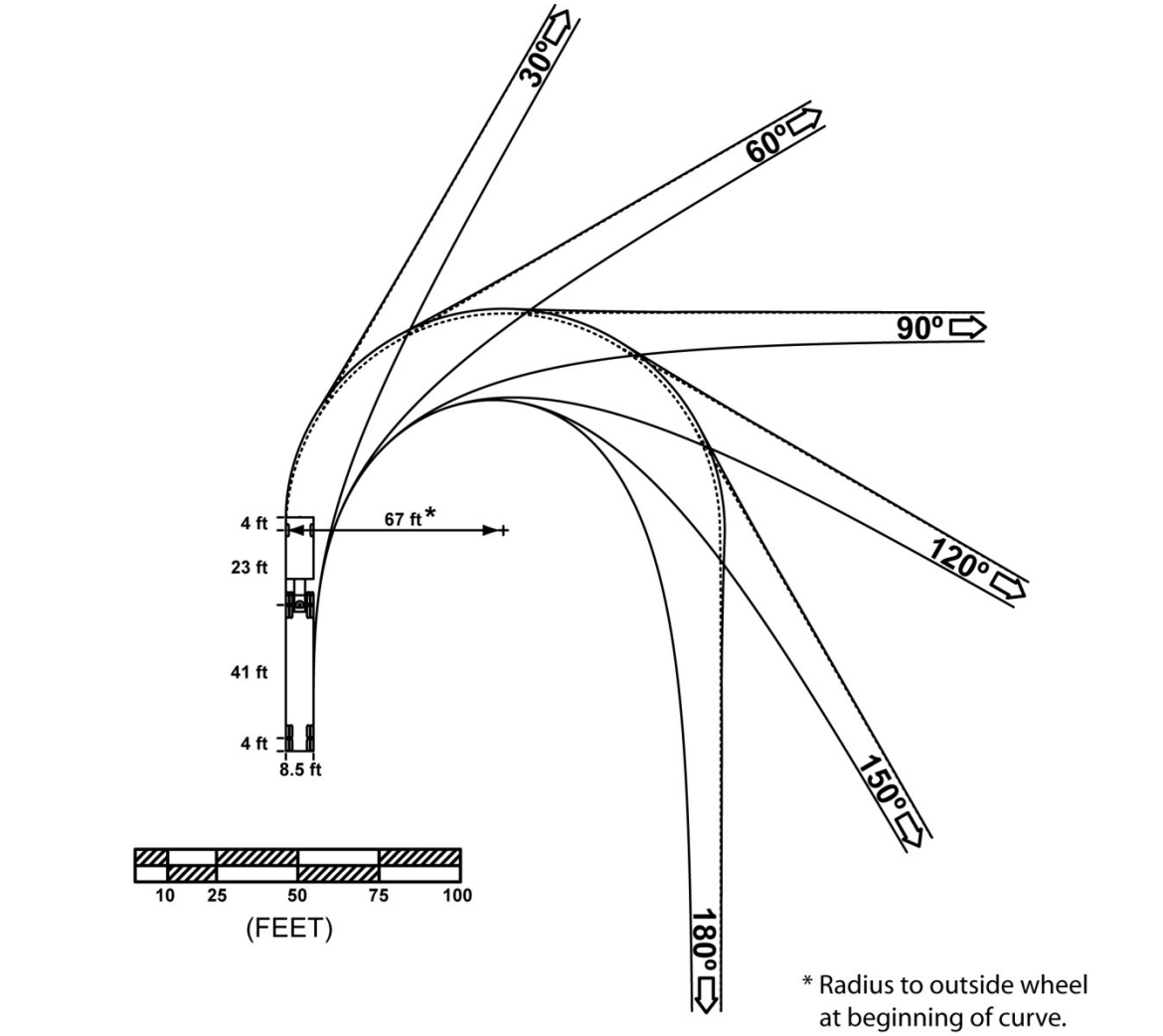
STAA - STANDARD

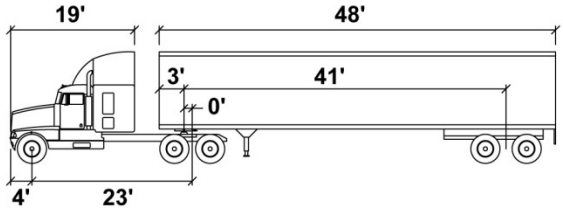
Tractor Width	: 8.5'	Lock to Lock Time	: 6 seconds
Trailer Width	: 8.5'	Steering Lock Angle	: 26.3 degrees
Tractor Track	: 8.5'	Articulating Angle	: 70 degrees
Trailer Track	: 8.5'		

Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5B

STAA Design Vehicle
67-Foot Radius





LEGEND

Swept Width (Body)

Tracking Width (Tires)

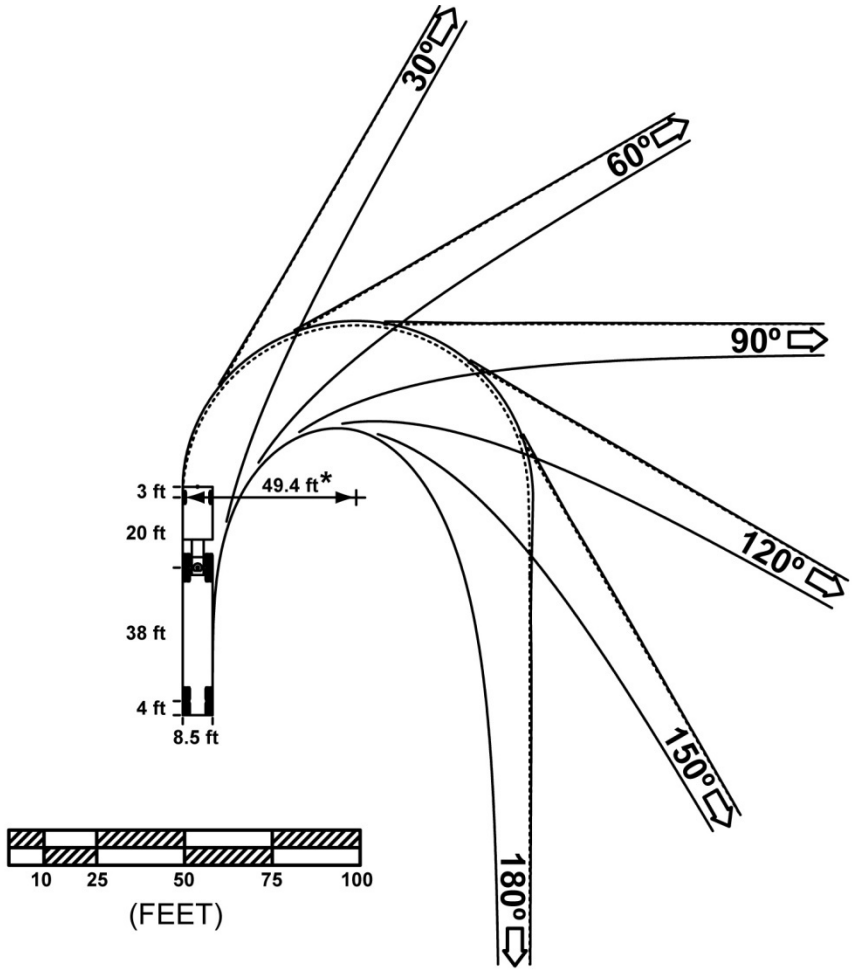
STAA - STANDARD

Tractor Width	: 8.5'	Lock to Lock Time	: 6 seconds
Trailer Width	: 8.5'	Steering Lock Angle	: 26.3 degrees
Tractor Track	: 8.5'	Articulating Angle	: 70 degrees
Trailer Track	: 8.5'		

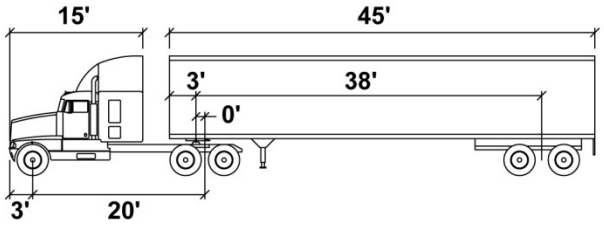
Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5C

California Legal Design Vehicle
50-Foot Radius



* Radius to outside wheel at beginning of curve.



LEGEND

Swept Width (Body)

Tracking Width (Tires)

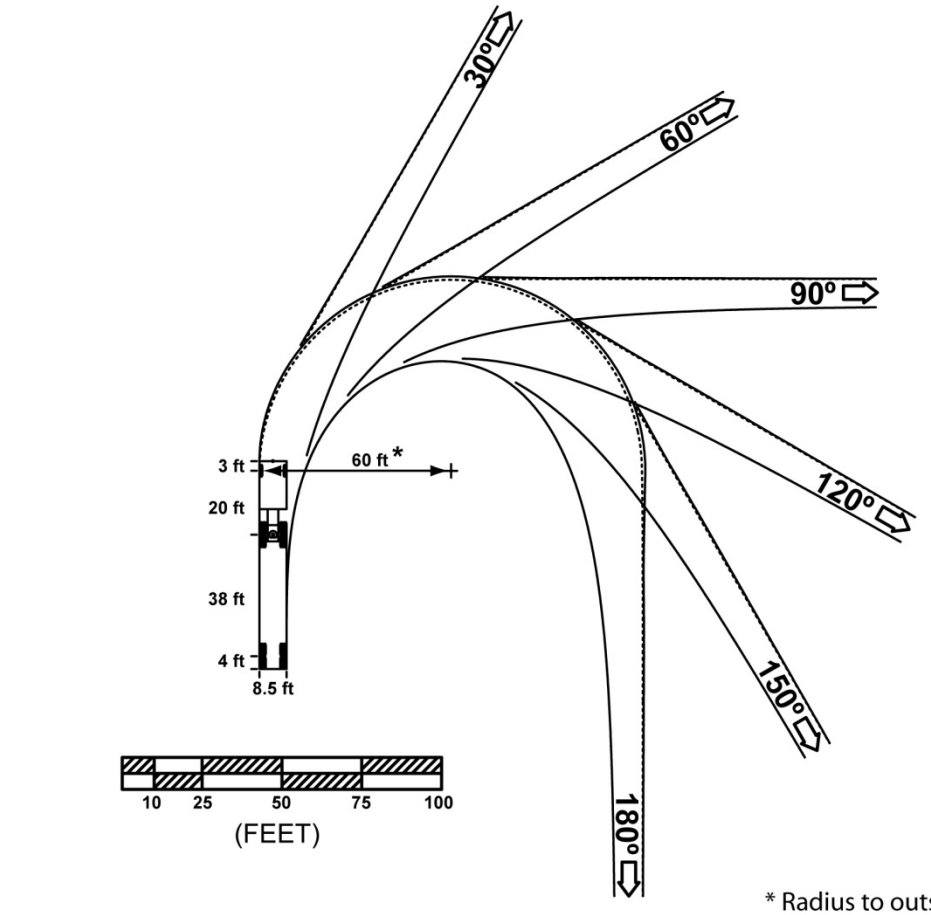
CA LEGAL - 65 FT

Tractor Width	: 8.5'	Lock to Lock Time	: 6 seconds
Trailer Width	: 8.5'	Steering Lock Angle	: 26.3 degrees
Tractor Track	: 8.5'	Articulating Angle	: 70 degrees
Trailer Track	: 8.5'		

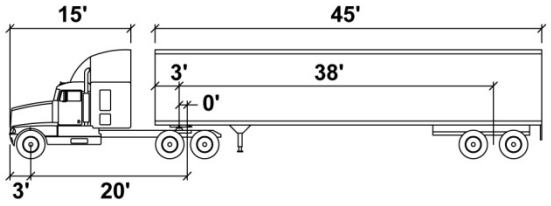
Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5D

California Legal Design Vehicle
60-Foot Radius



* Radius to outside wheel at beginning of curve.



LEGEND

Swept Width (Body)

Tracking Width (Tires)

CA LEGAL - 65 FT

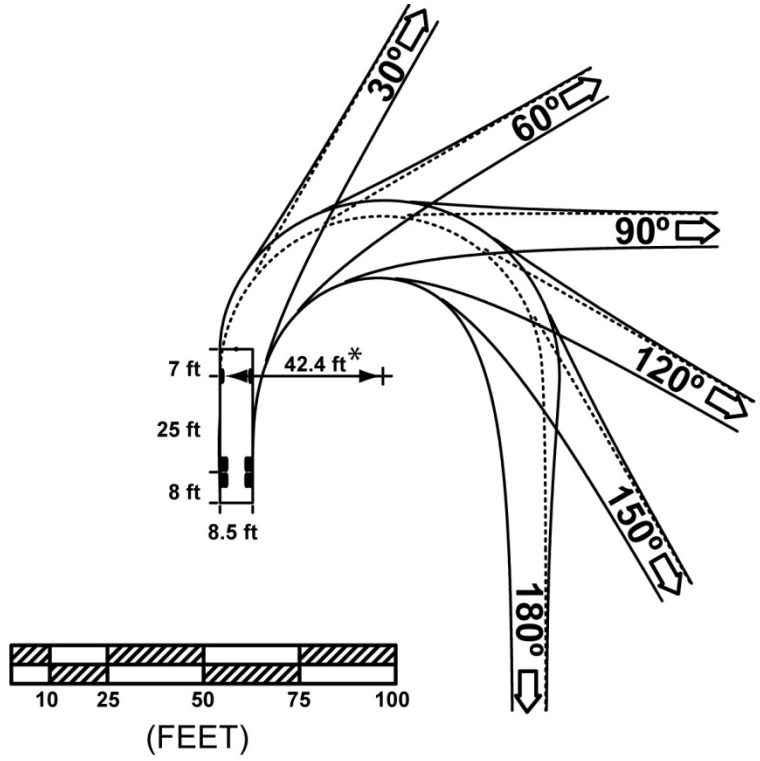
Tractor Width	: 8.5'
Trailer Width	: 8.5'
Tractor Track	: 8.5'
Trailer Track	: 8.5'

Lock to Lock Time	: 6 seconds
Steering Lock Angle	: 26.3 degrees
Articulating Angle	: 70 degrees

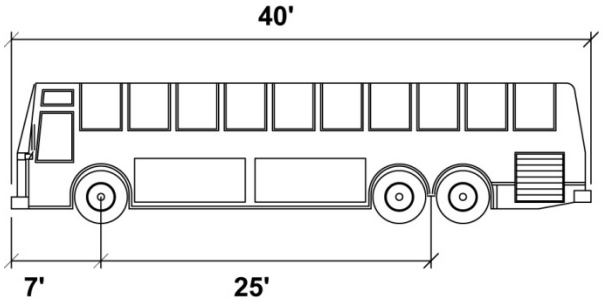
Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5E

40-Foot Bus Design Vehicle



* Radius to outside wheel at beginning of curve.



LEGEND

———	Swept Width (Body)
- - - - -	Tracking Width (Tires)

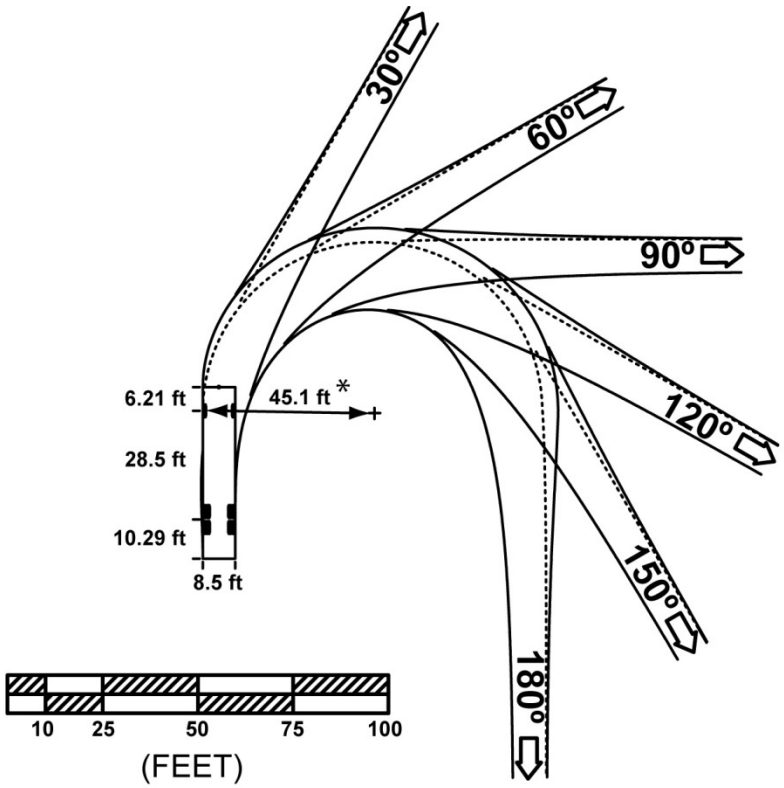
40' BUS

Width	: 8.5'
Track	: 8.5'
Lock to Lock Time	: 6 seconds
Steering Lock Angle	: 41.0 degrees

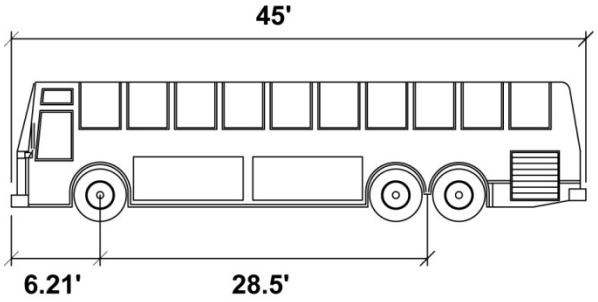
Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5F

45-Foot Bus & Motorhome Design Vehicle



* Radius to outside wheel at beginning of curve.



LEGEND

———	Swept Width (Body)
- - - - - - - - - - - -	Tracking Width (Tires)

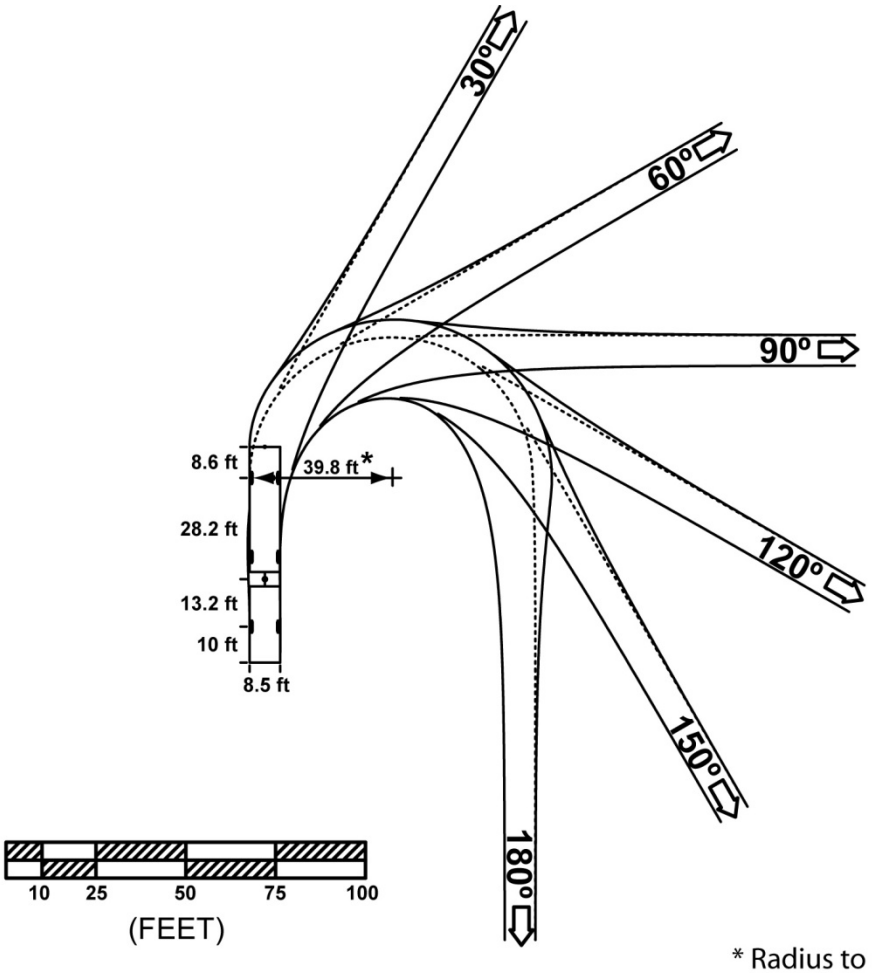
45' BUS

Width	: 8.5'
Track	: 8.5'
Lock to Lock Time	: 6 seconds
Steering Lock Angle	: 44.3 degrees

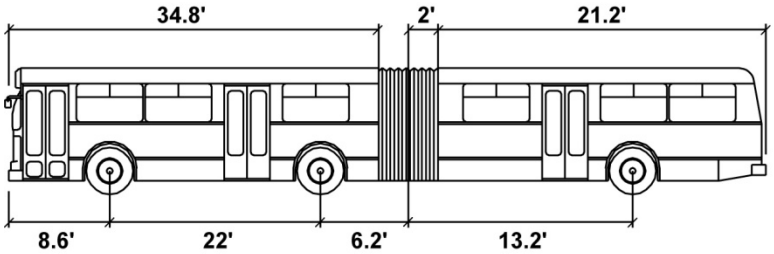
Note: For definitions, see Indexes 404.1, and 404.5.

Figure 404.5G

60-Foot Articulated Bus Design Vehicle



* Radius to outside wheel at beginning of curve.



LEGEND

Swept Width (Body)

Tracking Width (Tires)

ARTICULATED BUS

Width	: 8.5'
Track	: 8.5'
Lock to Lock Time	: 6 seconds
Steering Lock Angle	: 38.3 degrees
Articulating Angle	: 50.0 degrees

Note: For definitions, see Indexes 404.1 and 404.5.

At signalized intersections the values for corner sight distances given in Table 405.1A should also be applied whenever possible. Even though traffic flows are designed to move at separate times, unanticipated conflicts can occur due to violation of signal, right turns on red, malfunction of the signal, or use of flashing red/yellow mode.

Table 405.1A
Corner Sight Distance (7-1/2 Second Criteria)

Design Speed (mph)	Corner Sight Distance (ft)
25	275
30	330
35	385
40	440
45	495
50	550
55	605
60	660
65	715
70	770

Where restrictive conditions exist, similar to those listed in Index 405.1(2)(a), the minimum value for corner sight distance at both signalized and unsignalized intersections shall be equal to the stopping sight distance as given in Table 201.1, measured as previously described.

(c) Private Road Intersections (Refer to Index 205.2) and Rural Driveways (Refer to Index 205.4)--**The minimum corner sight distance shall be equal to the stopping sight distance as given in Table 201.1, measured as previously described.**

(d) Urban Driveways (Refer to Index 205.3)--Corner sight distance requirements as described above are not applied to urban driveways.

(3) Decision Sight Distance. At intersections where the State route turns or crosses another State route, the decision sight distance values given in Table 201.7 should be used. In computing and measuring decision sight distance, the 3.5-foot eye height and the 0.5-foot object height should be used, the object being located on the side of the intersection nearest the approaching driver.

The application of the various sight distance requirements for the different types of intersections is summarized in Table 405.1B.

Table 405.1B
Application of Sight Distance Requirements

Intersection Types	Sight Distance		
	Stopping	Corner	Decision
Private Roads	X	X[(1)]	
Public Streets and Roads	X	X	
Signalized Intersections	X	[(2)]	
State Route Intersections & Route Direction Changes, with or without Signals	X	X	X

NOTES:

(1) Per Index 405.1(2)(c), the minimum corner sight distance shall be equal to the stopping sight distance as given in Table 201.1. See Index 405.1(2)(a) for setback requirements.

(2) Apply corner sight distance requirements at signalized intersections whenever possible due to unanticipated violations of the signals or malfunctions of the signals. See Index 405.1(2)(b).

(4) Acceleration Lanes for Turning Moves onto State Highways. At rural intersections, with "STOP" control on the local cross road, acceleration lanes for left and right turns onto the State facility should be considered. At a minimum, the following features should be evaluated for both the major highway and the cross road:

- divided versus undivided
- number of lanes

- design speed
- gradient
- lane, shoulder and median width
- traffic volume and composition of highway users, including trucks and transit vehicles
- turning volumes
- horizontal curve radii
- sight distance
- proximity of adjacent intersections
- types of adjacent intersections

For additional information and guidance, refer to AASHTO, A Policy on Geometric Design of Highways and Streets, the Headquarters Traffic Liaison, the District Design Liaison, and the Project Delivery Coordinator.

405.2 Left-turn Channelization

(1) General. The purpose of a left-turn lane is to expedite the movement of through traffic by, controlling the movement of turning traffic, increasing the capacity of the intersection, and improving safety characteristics.

The District Traffic Branch normally establishes the need for left-turn lanes.

(2) Design Elements.

(a) Lane Width – **The lane width for both single and double left-turn lanes on State highways shall be 12 feet.**

For conventional State highways with posted speeds less than or equal to 40 miles per hour and AADTT (truck volume) less than 250 per lane that are in urban, city or town centers (rural main streets), the minimum lane width shall be 11 feet.

When considering lane width reductions adjacent to curbed medians, refer to Index 303.5 for guidance on effective roadway width, which may vary depending on drivers' lateral positioning and shy distance from raised curbs.

(b) Approach Taper -- On conventional highways without a median, an approach taper provides space for a left-turn lane by moving traffic laterally to the right. The approach taper is unnecessary where a median is available for the full width of the left-turn lane. Length of the approach taper is given by the formula on Figures 405.2A, B and C.

Figure 405.2A shows a standard left-turn channelization design in which all widening is to the right of approaching traffic and the deceleration lane (see below) begins at the end of the approach taper. This design should be used in all situations where space is available, usually in rural and semi-rural areas or in urban areas with high traffic speeds and/or volumes.

Figures 405.2B and 405.2C show alternate designs foreshortened with the deceleration lane beginning at the 2/3 point of the approach taper so that part of the deceleration takes place in the through traffic lane. Figure 405.2C is shortened further by widening half (or other appropriate fraction) on each side. These designs may be used in urban areas where constraints exist, speeds are moderate and traffic volumes are relatively low.

(c) Bay Taper -- A reversing curve along the left edge of the traveled way directs traffic into the left-turn lane. The length of this bay taper should be short to clearly delineate the left-turn move and to discourage through traffic from drifting into the left-turn lane. Table 405.2A gives offset data for design of bay tapers. In urban areas, lengths of 60 feet and 90 feet are normally used. Where space is restricted and speeds are low, a 60-foot bay taper is appropriate. On rural high-speed highways, a 120-foot length is considered appropriate.

(d) Deceleration Lane Length -- Design speed of the roadway approaching the intersection should be the basis for determining deceleration lane length. It is desirable that deceleration take place entirely off the through traffic lanes. Deceleration lane lengths are given in Table 405.2B; the bay taper length is

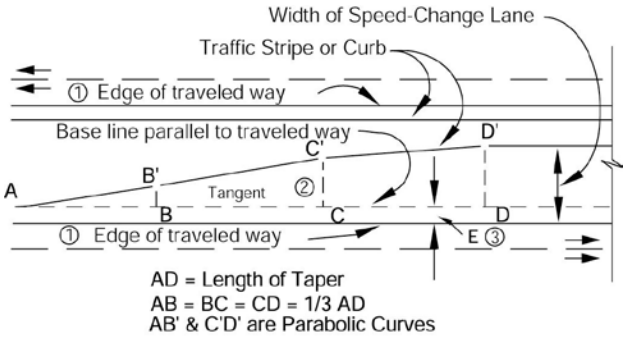
included. Where partial deceleration is permitted on the through lanes, as in Figures 405.2B and 405.2C, design speeds in Table 405.2B may be reduced 10 miles per hour to 20 miles per hour for a lower entry speed. In urban areas where cross streets are closely spaced and deceleration lengths cannot be achieved, the District Traffic branch should be consulted for guidance.

(e) Storage Length -- At unsignalized intersections, storage length may be based on the number of turning vehicles likely to arrive in an average 2-minute period during the peak hour. At a minimum, space for 2 vehicles should be provided at 25 feet per vehicle. If the peak hour truck traffic is 10 percent or more, space for at least one passenger car and one truck should be provided. Bus usage may require a longer storage length and should be evaluated if their use is anticipated.

At signalized intersections, the storage length may be based on one and one-half to two times the average number of vehicles that would store per signal cycle depending on cycle length, signal phasing, and arrival and departure rates. At a minimum, storage length should be calculated in the same manner as unsignalized intersection. The District Traffic Branch should be consulted for this information.

When determining storage length, the end of the left-turn lane is typically placed at least 3 feet, but not more than 30 feet, from the nearest edge of shoulder of the intersecting roadway. Although often set by the placement of a crosswalk line or limit line, the end of the storage lane should always be located so that the appropriate turning template can be accommodated.

Table 405.2A
Bay Taper for Median Speed-change Lanes



	LENGTH OF TAPER - feet				OFFSET DISTANCE			
	60	90	120		DD' = 10'	DD' = 11'	DD' = 12'	
	Distance From Point "A"							
	-	-	-		0.00	0.00	0.00	
	5	7.5	10.0		0.16	0.17	0.19	
	10	15.0	20.0		0.62	0.69	0.75	
	15	22.5	30.0		1.41	1.55	1.69	
B'	20	30.0	40.0	B'	2.50	2.75	3.00	B'
	30	45.0	60.0		5.00	5.50	6.00	
C'	40	60.0	80.0	C'	7.50	8.25	9.00	C'
	45	67.5	90.0		8.59	9.45	10.31	
	50	75.0	100.0		9.38	10.31	11.25	
	55	82.5	110.0		9.84	10.83	11.81	
	60	90.0	120.0		10.00	11.00	12.00	

NOTES:

(1) The table gives offsets from a base line parallel to the edge of traveled way at intervals measured from point "A". Add "E" for measurements from edge of traveled way.
(2) Where edge of traveled way is a curve, neither base line nor taper between B & C will be a tangent. Use proportional offsets from B to C.
(3) The offset "E" is usually 2 ft along edge of traveled way for curbed medians; Use "E" = 0 ft. for striped medians.

Table 405.2B
Deceleration Lane Length

Design Speed (mph)	Length to Stop (ft)
30	235
40	315
50	435
60	530

(3) Double Left-turn Lanes. At signalized intersections on multilane conventional highways and on multilane ramp terminals, double left-turn lanes should be considered if the left-turn demand is 300 vehicles per hour or more. The lane widths and other design elements of left-turn lanes given under Index 405.2(2) applies to double as well as single left-turn lanes.

The design of double left-turn lanes can be accomplished by adding one or two lanes in the median. See "Guidelines for Reconstruction of Intersections", published by Headquarters, Division of Traffic Operations, for the various treatments of double left-turn lanes.

(4) Two-way Left-turn Lane (TWLTL). The TWLTL consists of a striped lane in the median of an arterial and is devised to address the special capacity and safety problems associated with high-density strip development. It can be used on 2-lane highways as well as multilane highways. Normally, the District Traffic Operations Branch should determine the need for a TWLTL.

The minimum width for a TWLTL shall be 12 feet (see Index 301.1). The preferred width is 14 feet. Wider TWLTL's are occasionally provided to conform with local agency standards. However, TWLTL's wider than 14 feet are not recommended, and in no case should the width of a TWLTL exceed 16 feet. Additional width may encourage drivers in opposite directions to use the TWLTL simultaneously.

405.3 Right-turn Channelization

(1) General. For right-turning traffic, delays are less critical and conflicts less severe than for left-turning traffic. Nevertheless, right-turn lanes can be justified on the basis of capacity, analysis, and crash experience.

In rural areas a history of high speed rear-end collisions may warrant the addition of a right-turn lane.

In urban areas other factors may contribute to the need such as:

- High volumes of right-turning traffic causing backup and delay on the through lanes.
- Conflicts between crossing pedestrians and right-turning vehicles and bicycles.
- Frequent rear-end and sideswipe collisions involving right-turning vehicles.

Where right-turn channelization is proposed, lower speed right-turn lanes should be provided to reduce the likelihood of conflicts between vehicles, pedestrians, and bicyclists.

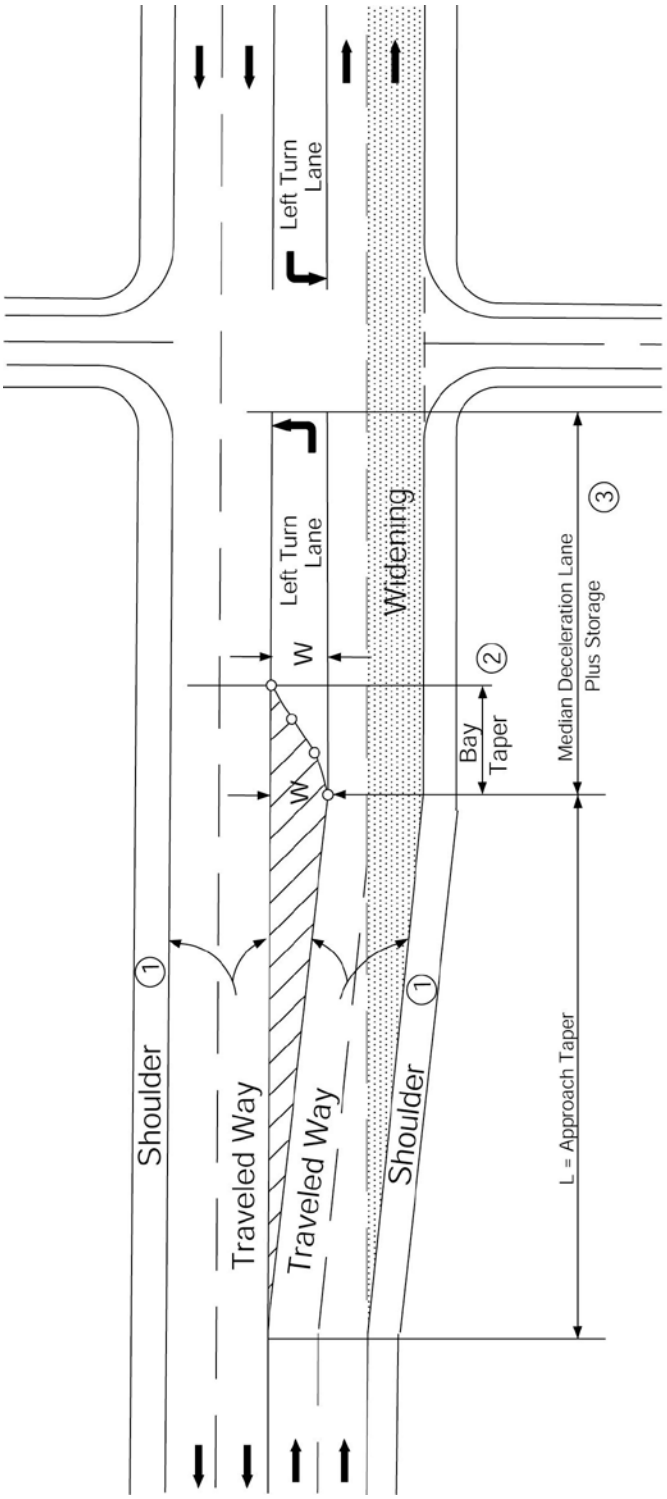
(2) Design Elements.

(a) Lane and Shoulder Width--**Index 301.1 shall be used for right-turn lane width requirements. Shoulder width shall be a minimum of 4 feet.** Although not desirable, lane and shoulder widths less than those given above can be considered for right-turn lanes under the following conditions pursuant to Index 82.2:

- In urban, city or town centers (rural main streets) with posted speeds less than 40 miles per hour in severely constrained situations, if truck or bus use is low, consideration may be given to reducing the right-turn lane width to 10 feet.
- Shoulder widths may also be considered for reduction under constricted situations. Whenever possible, at least a 2-foot shoulder should be provided where the right-turn lane is adjacent to a curb. Entire omission of the shoulder should only be considered in constrained situations and where an 11-foot lane can be constructed.

  Gutter pans can be included within a shoulder, but cannot be included as part of the travel lane width. Additional right of way for a future right-turn lane should be considered when an intersection is being designed.

Figure 405.2A
Standard Left-turn Channelization



EQUATION: L = Use WV, for $V \geq 45$mph ④
Or $WV^2/60$, for $V < 45$mph

Where L = Length of Approach Taper - feet
V = Design Speed - mph
W = Width of Median Lane - feet

NOTES:

① Where width is restricted, shoulder width may be reduced and parking restricted with an approved design exception pursuant to Index 82.2. For bicycle use, a minimum 4-foot shoulder is required (5-foot if gutter is present).

② Bay taper length = 60 feet to 120 feet. (See Table 405.2A)

③ For deceleration lane length see Table 405.2B.

④ Where both sides of roadway are widened, use a fraction of "W" that is proportional to widening on each side.

Figure 405.2B
Minimum Median Left-turn Channelization
(Widening on one Side of Highway)

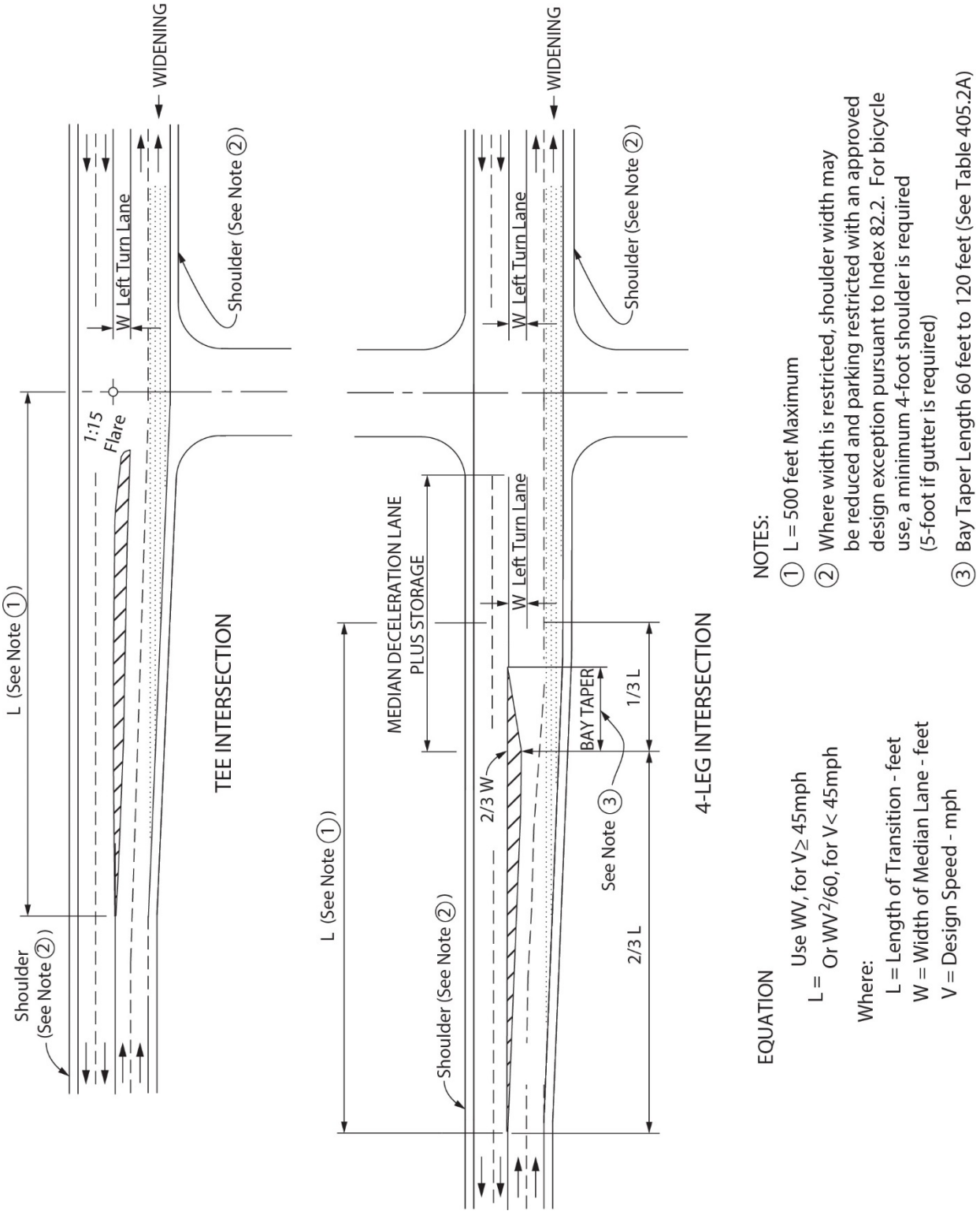
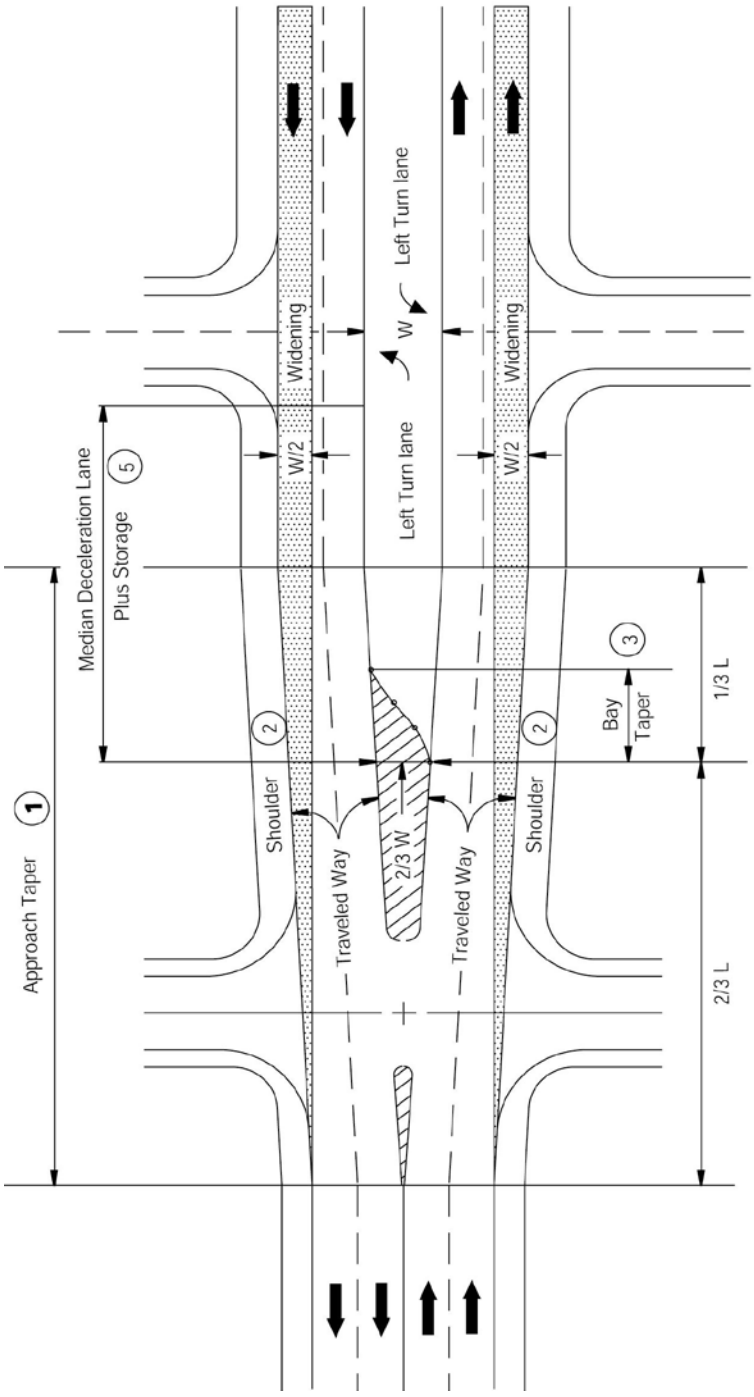


Figure 405.2C
Minimum Median Left-turn Channelization
(Widening on Both Sides in Urban Areas with Short Blocks)



NOTES:

1. L = 500 feet Maximum
2. Where width is restricted, shoulder width may be reduced and parking restricted with an approved design exception pursuant to Index 82.2. For bicycle use, a minimum 4 feet shoulder is required (5 feet if gutter is present).
3. Bay taper length = 60 feet to 120 feet. (See Table 405.2A)
4. Assumes equal widening each side. Where widening is unequal, use a fraction that is proportional to widening on each side.
5. For deceleration lane length see Table 405.2B.

EQUATION: 4

$L =$ Use $(1/2)WV$, for $V \geq 45$mph
Or $WV^2/120$, for $V < 45$mph

Where L = Length of Approach Taper - feet
W = Width of Median Lane - feet
V = Design Speed - mph

(b) Curve Radius--Where pedestrians are allowed to cross a free right-turning roadway, the curve radius should be such that the operating speed of vehicular traffic is no more than 20 miles per hour at the pedestrian crossing. See NCHRP Report 672, "Roundabouts: An Informational Guide" for guidance on the determination of design speed (fastest path) for turning vehicles. See Index 504.3(3) for additional information.

(c) Tapers--Approach tapers are usually unnecessary since main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift were needed, the approach taper would use the same formula as for a left-turn lane.

Bay tapers are treated as a mirror image of the left-turn bay taper.

(d) Deceleration Lane Length--The conditions and principles of left-turn lane deceleration apply to right-turn deceleration. Where full deceleration is desired off the high-speed through lanes, the lengths in Table 405.2B should be used. Where partial deceleration is permitted on the through lanes because of limited right of way or other constraints, average running speeds in Table 405.2B may be reduced 10 miles per hour to 20 miles per hour for a lower entry speed. For example, if the main line speed is 50 miles per hour and a 10 miles per hour deceleration is permitted on the through lanes, the deceleration length may be that required for 40 miles per hour.

(e) Storage Length--Right-turn storage length is determined in the same manner as left-turn storage length. See Index 405.2(2)(e).

(3) Right-turn Lanes at Off-ramp Intersections. Diamond off-ramps with a free right-turn at the local street and separate right-turn off-ramps around the outside of a loop will likely cause conflict as traffic volumes increase. Serious conflicts occur when the right-turning vehicle must weave across multiple lanes on the local street in order to turn left at a major cross street close to the ramp terminal. Furthermore, free right-turns create sight distance issues for pedestrians and bicyclists crossing the off-ramp, or pedestrians crossing the local road. Also, rear-end collisions can occur as right-turning drivers slow down or stop waiting for a gap in local street traffic. Free right-turns usually end up with "YIELD", "STOP", or signal controls thus defeating their purpose of increasing intersection capacity.

405.4 Traffic Islands

A traffic island is an area between traffic lanes for channelization of bicycle and vehicle movements or for pedestrian refuge. An island may be defined by paint, raised pavement markers, curbs, pavement edge, or other devices. The California MUTCD should be referenced when considering the placement of traffic islands at signalized and unsignalized locations. For splitter island guidance at roundabouts, see Index 405.10(13).

Traffic islands usually serve more than one function. These functions may be:

(a) Channelization to confine specific traffic movements into definite channels;

(b) Divisional to separate traffic moving in the same or opposite direction; and

(c) Refuge, to aid users crossing the roadway.

Generally, islands should present the least potential conflict to approaching or crossing bicycles and vehicles, and yet perform their intended function.

(1) Design of Traffic Islands. Island sizes and shapes vary from one intersection to another. They should be large enough to command attention. Channelizing islands should not be less than 50 square feet in area, preferably 75 square feet. Curbed, elongated divisional median islands should not be less than 4 feet wide and 20 feet long. All traffic islands placed in the path of a pedestrian crossing must comply with DIB 82. See the Standard Plans for typical island passageway details.

The approach end of each island should be offset 3 feet to the left and 5 feet to the right of approaching traffic, using standard 1:15 parabolic flares, and clearly delineated so that it does not surprise the motorist or bicyclist. These offsets are in addition to the shoulder

widths shown in Table 302.1. Table 405.4 gives standard parabolic flares to be used in island design. On curved alignment, parabolic flares may be omitted for small triangular traffic islands whose sides are less than 25 feet long.

The approach nose of a divisional island should be highly visible day and night with appropriate use of signs (reflectorized or illuminated) and object markers. The approach nose should be offset 3 feet from the through traffic to minimize accidental impacts.

(2) Delineation of Traffic Islands. Generally, islands should present the least potential conflict to approaching traffic and yet perform their intended function. See Index 303.2 for appropriate curb type. Islands may be designated as follows:

(a) Raised paved areas outlined by curbs.

(b) Flush paved areas outlined by pavement markings.

(c) Unpaved areas (small unpaved areas should be avoided).

On facilities with posted speeds over 40 miles per hour, the use of any type of curb is discouraged. Where curbs are to be used, they should be located at or outside of the shoulder edge, as discussed in Index 303.5.

In rural areas, painted channelization supplemented with raised pavement markers may be more appropriate than a raised curbed channelization. This design is as forgiving as possible and decreases the consequence of a driver's or bicyclist's failure to detect or recognize the curbed island. Consideration for snow removal operations should be determined where appropriate.

In urban areas, posted speeds less than or equal to 40 miles per hour allow more frequent use of curbed islands. Local agency requirements and matching existing conditions are factors to consider.

(3) Pedestrian Refuge

Pedestrian refuge islands allow pedestrians to cross fewer lanes at a time while judging conflicts separately. They also provide a refuge so slower pedestrians can wait for a gap in traffic while reducing total crossing distance.

At unsignalized intersections in rural city/town centers (rural main streets), suburban, or urban areas, a pedestrian refuge should be provided between opposing traffic where pedestrians are allowed to cross 2 or more through traffic lanes in one direction of travel, at marked or unmarked crosswalks. Pedestrian islands at signalized crosswalks should be considered, taking into account crossing distance and pedestrian activity. Note that signalized pedestrian crossings must be timed to allow for pedestrians to cross. See the California MUTCD, Chapter 4E, for further guidance.

Traffic islands used as pedestrian refuge are to be large enough to provide a minimum of 6 feet in the direction of pedestrian travel, without exception.

All traffic islands placed in the path of a pedestrian crossing must be accessible, refer to DIB 82 and the Standard Plans for further guidance. An example of a traffic island that serves as a pedestrian refuge is shown on Figure 405.4.

405.5 Median Openings

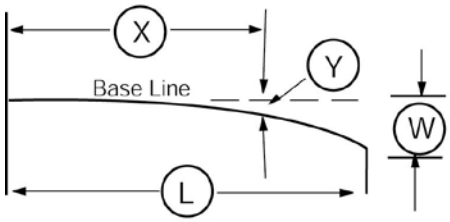
(1) General. Median openings, sometimes called crossovers, provide for crossings of the median at designated locations. Except for emergency passageways in a median barrier, median openings are not allowed on urban freeways.

Median openings on expressways or divided conventional highways should not be curbed except when the median between openings is curbed, or it is necessary for delineation of traffic signal standards and other necessary hardware, or for protection of pedestrians. In these special cases B4 curbs should be used. An example of a median opening design is shown on Figure 405.5.

(2) Spacing and Location. By a combination of interchange ramps and emergency passageways, provisions for access to the opposite side of a freeway may be provided for law enforcement, emergency, and maintenance vehicles to avoid extreme out-of-direction travel. Access should not be more frequent

Table 405.4

Parabolic Curb Flares Commonly Used



$$Y = \frac{W X^2}{L^2}$$

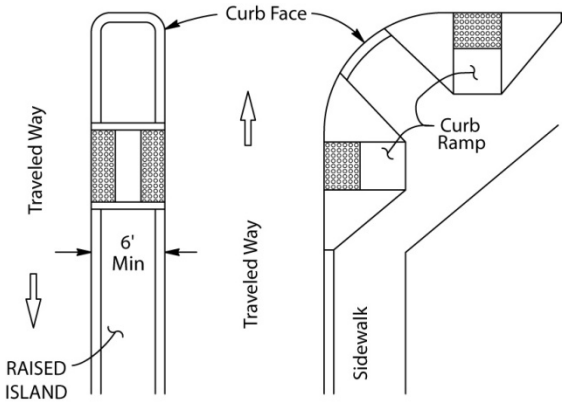
(L) = Length of flare in feet
(W) = Maximum offset in feet
(X) = Distance along base line in feet
(Y) = Offset from base line in feet

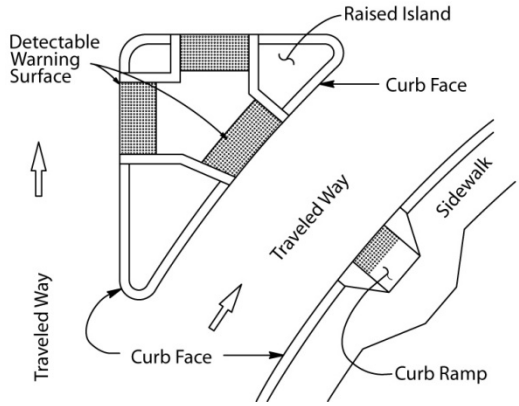
(W) is shown in table thus

OFFSET IN FEET FOR GIVEN "X" DISTANCE																
Distance (X) / Length of Flare (L)	10	15	20	25	30	40	45	50	60	70	75	80	90	100	110	120
1:5 FLARES																
25	0.80	1.80	3.20	5.00												
50	0.40		1.60		3.60	6.40		10.00								
1:10 FLARES																
50	0.20		0.80		1.80	3.20		5.00								
100	0.10		0.40		0.90	1.60		2.50	3.60	4.90		6.40	8.10	10.00		
1:15 FLARES																
45	0.15		0.59		1.33	2.37	3.00									
75	0.09		0.36		0.80	1.42		2.22	3.20	4.36	5.00					
90	0.07		0.30		0.67	1.19		1.85	2.67	3.63		4.74	6.00			
120	0.06		0.22		0.50	0.89		1.39	2.00	2.72		3.56	4.50	5.56	6.72	8.00

Figure 405.4

Pedestrian Refuge Island





than at three-mile intervals. See Chapter 7 of the Traffic Manual for additional information on the design of emergency passageways.

Emergency passageways should be located only where decision sight distance is available (see Table 201.7).

Median openings at close intervals on other types of highways create conflicts with high speed through traffic. Median openings should be spaced at intervals no closer than 1600 feet. If a median opening falls within 300 feet of an access opening, it should be placed opposite the access opening.

(3) Length of Median Opening. For any three or four-leg intersection on a divided highway, the length of the median opening should be at least as great as the width of the crossroads pavement, median width, and shoulders. An important factor in designing median openings is the path of the design vehicle making a minimum left turn at 5 miles per hour to 10 miles per hour. The length of median opening varies with width of median and angle of intersecting road.

Usually a median opening of 60 feet is adequate for 90 degree intersections with median widths of 22 feet or greater. When the median width is less than 22 feet, a median opening of 70 feet is needed. When the intersection angle is other than 90 degrees, the length of median opening should be established by using truck turn templates (see Index 404.3).

(4) Cross Slope. The cross slope in the median opening should be limited to 5 percent. Crossovers on curves with super elevation exceeding 5 percent should be avoided. This cross slope may be exceeded when an existing 2-lane roadbed is converted to a 4-lane divided highway. The elevation of the new construction should be based on the 5 percent cross slope requirement when the existing roadbed is raised to its ultimate elevation.

(5) References. For information related to the design of intersections and median openings, "A Policy on Geometric Design of Highways and Streets," AASHTO, should be consulted.

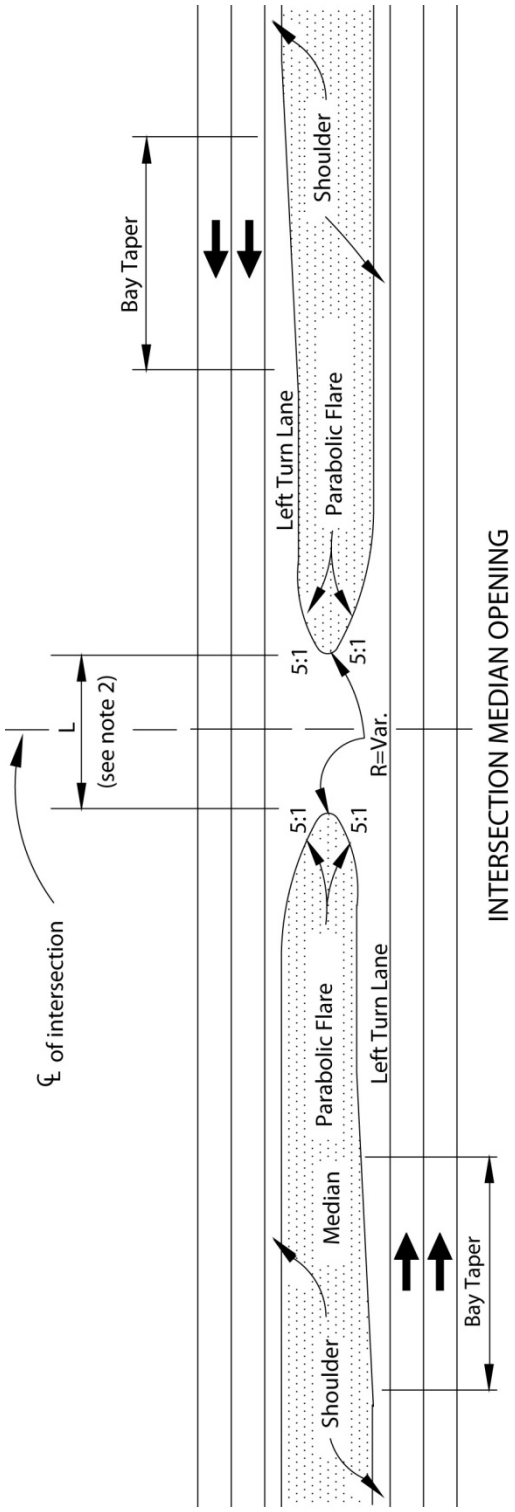
405.6 Access Control

The basic guidance which govern the extent to which access rights are to be acquired at interchanges (see Topic 104, Index 205.1 and 504.8 and the PDPM) also apply to intersections at grade on expressways. Cases of access control which frequently occur at intersections are shown in Figure 405.7. This illustration does not presume to cover all situations. Where required by traffic conditions, access should be extended in order to ensure proper operation of the expressway lanes. Reasonable variations which observe the basic principles referred to above are acceptable.

However, negative impacts on the mobility needs of pedestrians, bicyclists, equestrians, and transit users need to be assessed. Pedestrians and bicyclists are sensitive to additional out of direction travel.

Figure 405.5

Typical Design for Median Openings



NOTES:

① For length of bay taper, see Table 405.2A.

② L = Length of median opening: varies with width of median and angle of intersecting road. Usually for 90° intersection, L = 60 feet for median of 22 feet and wider. L = 70 feet for medians narrower than 22 feet.

③ See Index 405.2.

④ Pedeistrain and bicycle features are not shown on figure.

405.7 Public Road Intersections

The basic design to be used at right-angle public road intersections on the State Highway System is shown in Figure 405.7. The essential elements are sight distance (see Index 405.1) and the treatment of the right-turn on and off the main highway. Encroachment into opposing traffic lanes by the turning vehicle should be avoided or minimized.

(1) Right-turn Onto the Main Highway. The combination of a circular curve joined by a 2:1 taper on the crossroads and a 75-foot taper on the main highway is designed to fit the wheel paths of the appropriate turning template chosen by the designer.

It is desirable to keep the right-turn as tight as practical, so the "STOP" or "YIELD" sign on the minor leg can be placed close to the intersection.

(2) Right-turn Off the Main Highway. The combination of a circular curve joined by a 150-foot taper on the main highway and a 4:1 taper on the crossroads is designed to fit the wheel paths of the appropriate turning template and to move the rear of the vehicle off the main highway. Deceleration and storage lanes may be provided when necessary (see Index 405.3).

(3) Alternate Designs. Offsets are given in Figure 405.7 for right angle intersections. For skew angles, roadway curvature, and possibly other reasons, variations to the right-angle design are permitted, but the basic rule is still to approximate the wheel paths of the design vehicle.

A three-center curve is an alternate treatment that may be used at the discretion of the designer.

Intersections are major consideration in bicycle path design as well. See Indexes 403.6 and 1003.1(4) for general bicycle path intersection design guidance. Also see Section 5.3 of the AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities.

405.8 City Street Returns and Corner Radii

The pavement width and corner radius at city street intersections is determined by the type of vehicle to be accommodated and the mobility needs of pedestrians and bicyclists, taking into consideration the amount of available right of way, the types of adjoining land uses, the place types, the roadway width, and the number of lanes on the intersecting street.

At urban intersections, the California truck or the Bus Design Vehicle template may be used to determine the corner radius. Where STAA truck access is allowed, the STAA Design Vehicle template should be used giving consideration to factors mentioned above. See Index 404.3.

Smaller radii of 15 feet to 25 feet are appropriate at minor cross streets where few trucks or buses are turning. Local agency standards may be appropriate in urban and suburban areas.

Encroachment into opposing traffic lanes must be avoided.

405.9 Widening of 2-lane Roads at Signalized Intersections

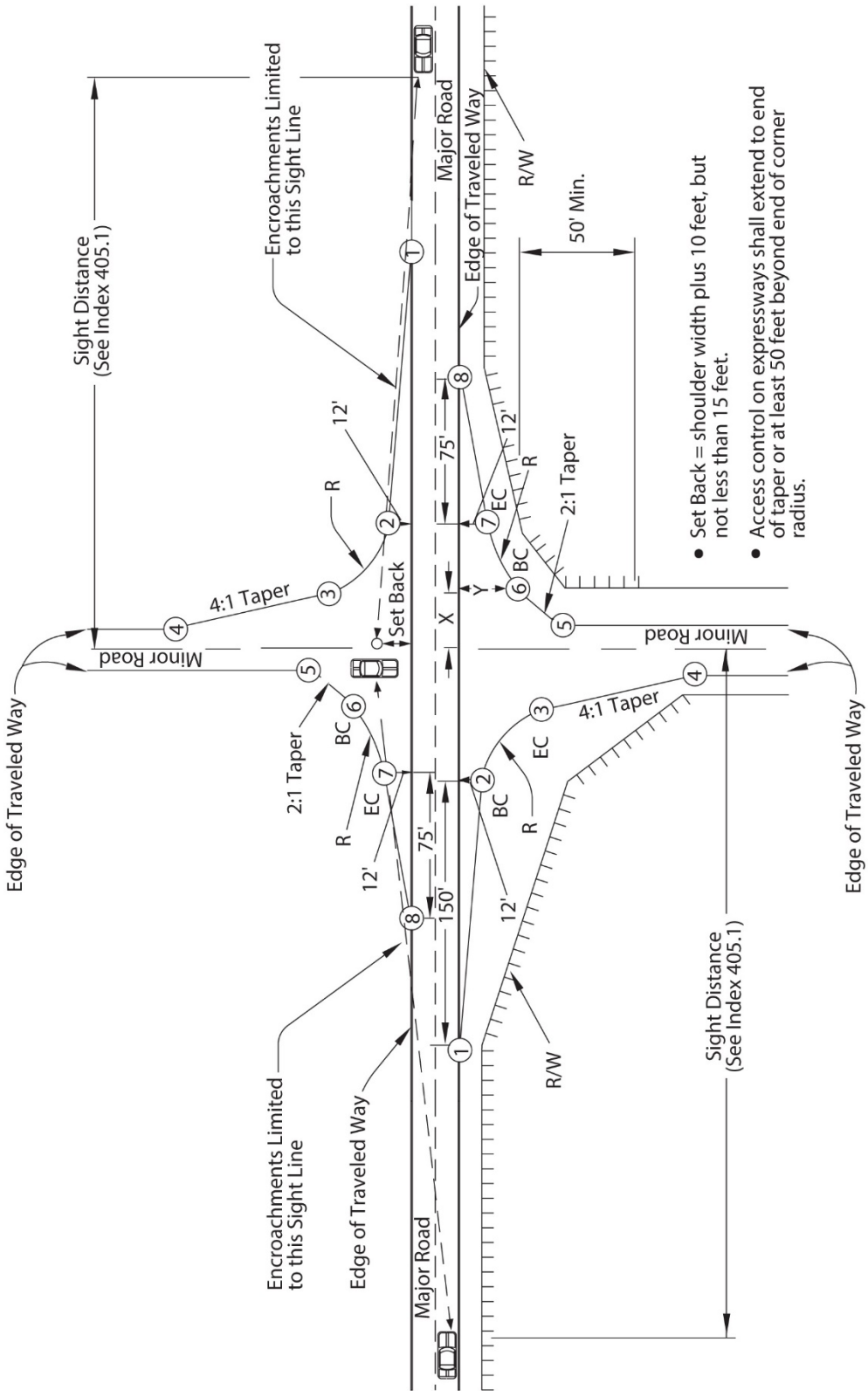
Two-lane State highways may be widened at intersections to 4-lanes whenever signals are installed. Sometimes it may be necessary to widen the intersecting road. The minimum design is shown in Figure 405.9. More elaborate treatment may be warranted by the volume and pattern of traffic movements. Unusual turning movement patterns may possibly call for a different shape of widening.

The impact on pedestrian and bicycle traffic mobility of larger intersections should be assessed before a decision is made to widen an intersection.

405.10 Roundabouts

Roundabout intersections on the State highway system must be developed and evaluated in accordance with National Cooperative Highway Research Program (NCHRP) Report 672 entitled "Roundabouts: An Informational Guide, 2nd ed." (NCHRP Guide 2) dated October 2010 and Traffic Operations Policy Directive (TOPD) Number 13-02. Also see Index 401.5 for general information and guidance. See Figure 405.10 Roundabout Geometric Elements for nomenclature associated with roundabouts. Signs, striping and markings at roundabouts are to comply with the California MUTCD.

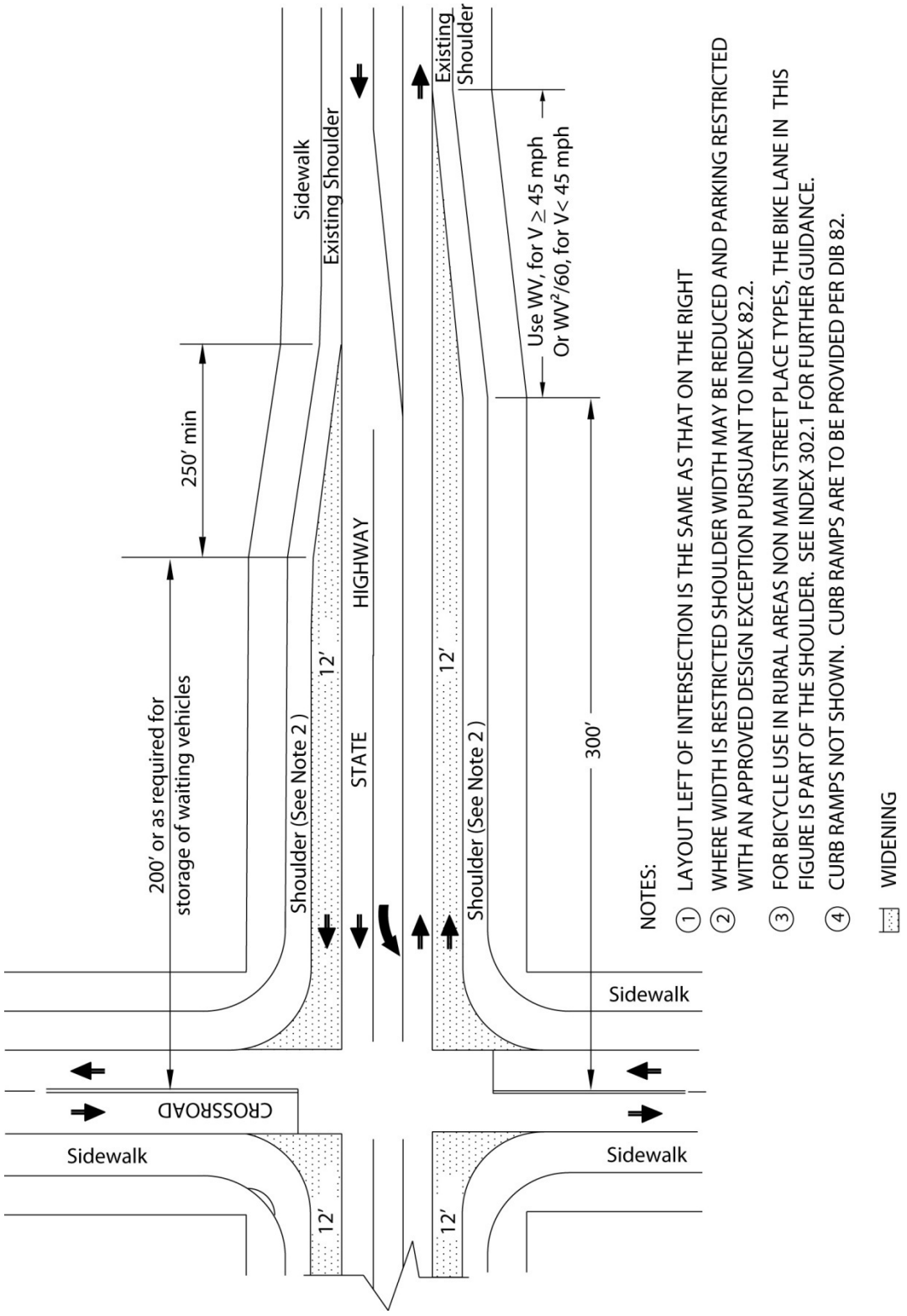
Figure 405.7
Public Road Intersections



X - Distance measured from centerline of minor road along major road - feet.
Y - Offset distance measured from edge of traveled way of major road to any given point - feet.

Radius of Curve	Design Vehicle	Pt ①		Pt ②		Pt ③		Pt ④		Pt ⑤		Pt ⑥		Pt ⑦		Pt ⑧	
		X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
30'	Bus	204.20	0.0	54.20	12.0	27.49	34.63	12.0	96.58	12.0	40.66	18.23	28.21	40.32	12.0	115.32	0.0
40'	California	215.08	0.0	65.08	12.0	29.46	42.17	12.0	112.03	12.0	53.35	21.87	33.61	51.33	12.0	126.33	0.0
50'	STAA	226.09	0.0	76.09	12.0	31.57	49.71	12.0	127.98	12.0	75.63	30.31	39.01	67.13	12.0	142.13	0.0

Figure 405.9
Widening of Two-lane Roads at Signalized Intersections



A roundabout is a form of circular intersection in which traffic travels counterclockwise around a central island and entering traffic must yield to the circulating traffic. Roundabouts feature, among other things, a central island, a circulatory roadway, and splitter islands on each approach. Roundabouts rely upon two basic and important operating principles:

(a) Speed reduction at the entry and through the intersection will be achieved through geometric design and,

(b) The yield-at-entry rule, which requires traffic entering the intersection to yield to traffic that is traveling in the circulatory roadway.

Benefits of roundabouts are:

- Fewer conflict points typically result in fewer collisions with less severity. Over half of vehicle to vehicle points of conflict associated with intersections are eliminated with the use of a roundabout. Additionally, a roundabout separates the points of conflict which eases the ability of the users to identify a conflict and helps prevent conflicts from becoming collisions.
- Roundabouts are designed to reduce the vehicular speeds at intersections. Lower speeds lessens the vehicular collision severity. Likewise, studies indicate that pedestrian and bicyclist collisions with motorized vehicles at lower speeds significantly reduce their severity.
- Roundabouts allow continuous free flow of vehicles and bicycles when no conflicts exist. This results in less noise and air pollution and reduces overall delays at roundabout intersections.

Except as indicated in this Index, the standards elsewhere in this manual do not apply to roundabouts. For the application of design standards, the approach ends of the splitter islands define the boundary of a roundabout intersection, see Figure 405.10. The design standards elsewhere in this manual apply to the approach legs beyond the approach ends of the splitter islands.

(1) Design Period.

First consider the design of a single lane roundabout per the design period guidance in Index 103.2. If a second lane is not needed until 10 or more years, it may be better to phase the improvements. Construct the first phase of the roundabout so at the 20-year design period, an additional lane can be easily added. In order to comply with the 10-year design period guidance provided in Index 103.2, the initial project must provide the right of way needed for utility relocations, a shared-use path designed for a Class I Bikeway, and all other features other than pavement, lighting, and striping in their ultimate locations.

In some locations, it may not be practical to build a single lane roundabout that will operate for 10 years. Geometric constraints and other conflicts may preclude widening to the ultimate configuration. In such cases, other intersection configurations or control strategies addressed in Index 401.5 may need to be considered.

When staging improvements, see NCHRP Guide 2, Section 6.12.

(2) Design Vehicles - See Topic 404.

The turning path for the design vehicle, see Index 404.5, dictates many of the roundabout dimensions. The design vehicle tracking and swept width are to be used when designing all the entries and exits, where design vehicles are unrestricted (see Index 404.2), and the circulatory roadway. The percentage of trucks and their lane utilization is an important consideration on multilane roundabouts when determining if the design will allow trucks to stay within their own lane or encroach into the adjacent lane. If permit vehicles larger than the design vehicle occasionally use the proposed roundabout, they can be accommodated by having removable signs or other removable features in the central island or around the circular path to ensure their swept path can negotiate the roundabout. Roundabouts should not be overdesigned for the occasional permit vehicle.

To accurately simulate the design vehicle swept width traveling through a roundabout, the minimum speed of the design vehicle used in computer simulation software (e.g., Auto

TURN) should be 10 mph through the roundabout.

(3) Inscribed Circle Diameter.

At single lane roundabouts, the size of the inscribed circle is largely dependent upon the turning requirements of the design vehicle. The inscribed circle diameter must be large enough to accommodate: (a) the STAA design vehicle for all roundabouts on the National Network and on Terminal Access routes; and, (b) the California Legal design vehicle on all non-STAA route intersections on California Legal routes and California Legal KPRA Advisory routes, while maintaining adequate deflection curvature to ensure appropriate travel speeds for smaller vehicles. The design vehicle is to navigate the roundabout with the front tractor wheels off the truck apron, if one is present. Transit vehicles, fire engines and single-unit delivery vehicles are also to be able to navigate the roundabout without using the truck apron, if one is present. The inscribed circle diameter for a single lane roundabout generally ranges between 105 feet to 150 feet to accommodate the California Legal design vehicle and 130 feet to 180 feet to accommodate the STAA design vehicle.

At multilane roundabouts, the inscribed circle diameter is to achieve adequate alignment of the natural vehicle path while maintaining deflection curvature to ensure appropriate travel speeds. To achieve both of these design objectives requires a slightly larger diameter than used for a single lane roundabout. The inscribed circle diameter for a multilane (2-lane) roundabout generally ranges between 150 feet to 220 feet to accommodate the California Legal design vehicle for non-STAA route intersections on California Legal routes and California Legal KPRA Advisory routes, and 165 feet to 220 feet to accommodate the STAA design vehicle for roundabouts on the National Network and on Terminal Access routes. Similar to a single lane roundabout, the design vehicle is to be able to navigate a multilane roundabout with the front tractor wheels staying off the truck apron, if one is present. Transit vehicles, fire engines and single-unit delivery vehicles are also to be able to navigate the roundabout without using the truck apron, if one is present.

(4) Entry Speeds.

Lowering the speed of vehicles entering and traveling through the roundabout is a primary design objective that is achieved by approach alignment and entry geometry.

The following entry speeds should not be exceeded:

- Single lane roundabouts, 25 mph.
- Multilane roundabouts, 30 mph.

For fastest path evaluation, see NCHRP Guide 2, Section 6.7.1.

(5) Exit Design.

Similar to entry design, exit design flexibility is required to achieve the optimal balance between competing design variables and project objectives to provide adequate capacity and, essentially, safety while minimizing excessive property impacts and costs. Thus, the selection of a curved versus tangential design is to be based upon the balance of each of these criteria. Exit design is influenced by the place type, pedestrian demand, bicyclist needs, the design vehicle and physical constraints. The exit curb radii are usually larger than the entry curb radii in order to minimize the likelihood of congestion and crashes at the exits. However, the desire to minimize congestion at the exits needs to be balanced with the need to maintain an appropriate operating speed through the pedestrian crossing. Therefore, the exit path radius should not be significantly greater than the circulating path radius to ensure low speeds are maintained at the pedestrian crossing.

(6) Number of Legs Serving the Roundabout.

Intersections with more than four legs are often difficult to manage operationally. Roundabouts are a proven traffic control device in such situations. However, it is necessary to ensure that the design vehicle can maneuver through all unrestricted legs of the roundabout.

(7) Pedestrian Use.

Sidewalks around the circular roadway are to be designed as shared-use paths, see Index 405.10(8)(c). However, the guidance in Design Information Bulletin (DIB) 82 Pedestrian Accessibility Guidelines for Highway Projects must also be followed when designing these shared-use facilities around a roundabout. If there is a difference in the standards, the guidance in DIB 82 is to be followed. In addition,

(a) Pedestrian curb ramps need to be differentiated from bike ramps:

- The detectable warning surface (truncated domes) differentiates a pedestrian curb ramp from a bicycle ramp.
- Detectable warning surface is required on curb ramps. They are not to be used on a bike ramp.

(b) Truck aprons and mountable curbs are not to be placed in the pedestrian crossing areas.

(c) See the California MUTCD for the signs and markings used at roundabouts.

(8) Bicyclist Use.

(a) General. Bicyclists may choose to travel in the circular roadway of a roundabout by taking a lane, while others may decide to travel using the shared-use path to bypass the circular roadway. Therefore, the approach and circular roadways, as well as the shared-use path all need to be designed for the mobility needs of bicyclists. See the California MUTCD for the signs and markings used at roundabouts.

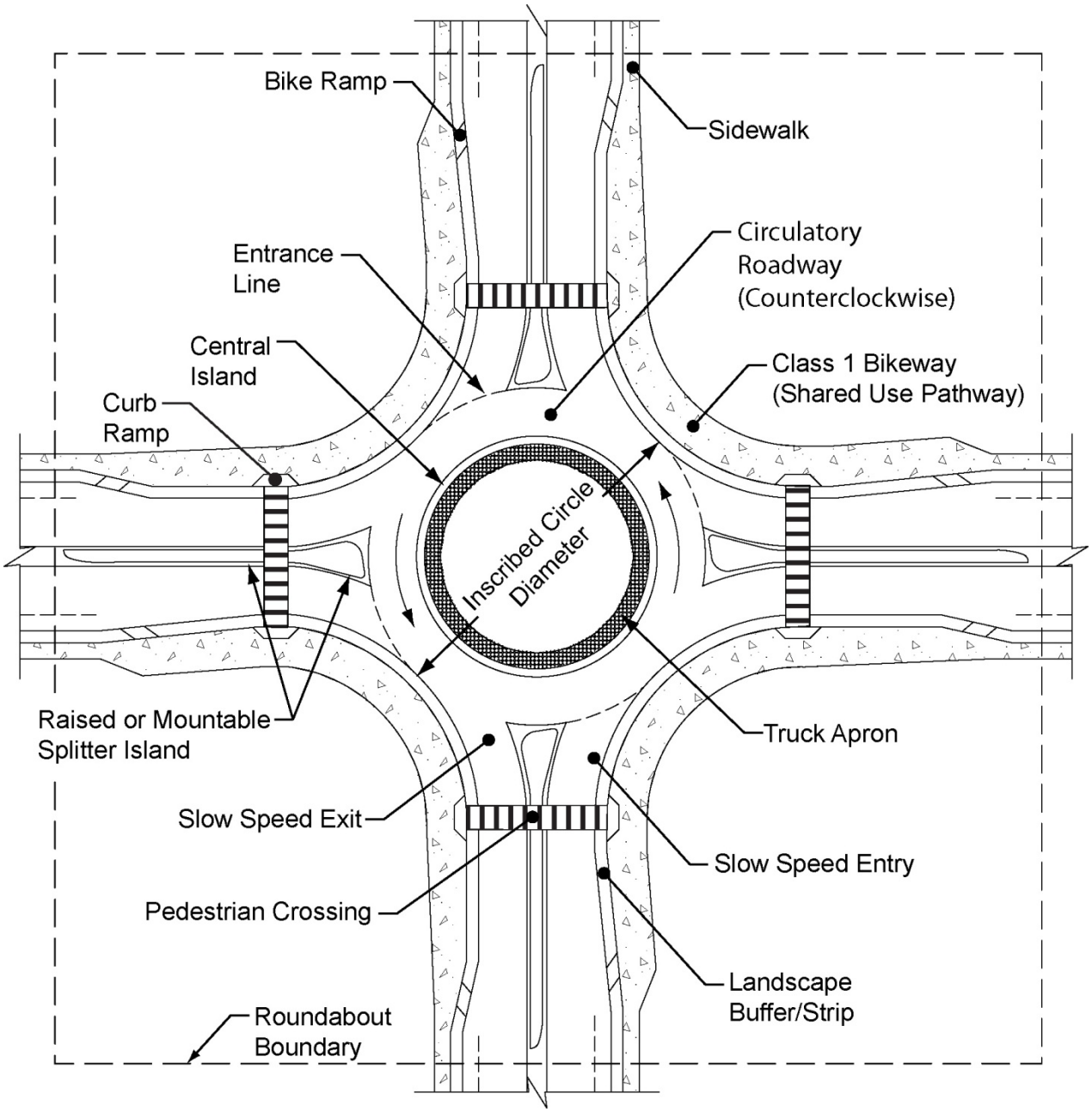
(b) Bicyclist Use of the Circular Roadway. Single lane roundabouts do not require bicyclists to change lanes in the circular roadway to select the appropriate lane for their direction of travel, so they tend to be comfortable for bicyclists to use. Even two-lane roundabouts, which may have straighter paths of travel that can lead to faster vehicular traveling speeds, appear to be comfortable for bicyclists that prefer to travel like vehicles. Roundabouts that have more than two circular lanes can create complexities in signing and striping(see the California MUTCD for guidance), and their operating speed may cause some bicyclists to decide to bypass the circular roadway and use the bicycle ramp that provides access to the shared-use path around the roundabout.

(c) Bicyclists Use of the Shared-Use Path. The shared-use path is to be designed using the guidance in Index 1003.1 for Class I Bikeways and in NCHRP Guide 2 Section 6.8.2.2. However, the accessibility guidance in DIB 82 must also be followed when designing these shared-use facilities around a roundabout. If there is a difference in the standards, the accessibility guidance in DIB 82 is to be followed to ensure the facility is accessible to pedestrians with disabilities.

Bicycle ramps are to be located to avoid confusion as curb ramps for pedestrians. Also see Index 405.10(7) for guidance on how to differentiate the two types of ramps. The design details and width of the ramp are also important to the bicyclist. Bicyclists approaching the bicycle ramp need to be provided the choice of merging left into the lane or moving right to use the bicycle ramp. Bicycle ramps should be placed at a 35 to 45 degree angle to the departure roadway and the sidewalk to enable the bicyclists to use the ramp and discourage bicyclists from entering the shared-use path at a speed that is detrimental to the pedestrians. The shared-use path should be designated as Class I Bikeways; however, appropriate regulatory signs may need to be posted if the local jurisdiction has a law(s) that prohibit bicyclists from riding on a sidewalk.

A landscape buffer or strip between the shared-use/Class I Bikeway and the circular roadway of the roundabout is needed and should be a minimum of 2 feet wide.

Figure 405.10
Roundabout Geometric Elements



NOTE:

This figure is provided to only show nomenclature and is not to be used for design details.

Pedestrian crossings may also be used by bicyclists; thus, these shared-use crossings need to be designed for both bicyclist and pedestrian needs.

(9) Transit Use.

Transit vehicles and buses will not have difficulty negotiating a roundabout when it has been designed using the California Legal design vehicle or the STAA design vehicle. However, to minimize passenger discomfort, a roundabout should be designed such that thetransit vehicle or bus does not use the truck apron, if one is present.

(10) Stopping Sight Distance and Visibility.

See Index 201.1 for stopping sight distance guidance at roundabouts.

It is desirable to create a domed or mounded central island, between 3.5 to 6 feet high, to focus attention on the approach and through roundabout alignment. A domed central island provides a visual screen from downstream alignment and other distractions.

(11) Speed Consistency.

Consistency in operating speeds between the various movements within the roundabout can minimize collisions between traffic streams. The operating speeds between competing traffic streams and between consecutive geometric elements should be minimized such that the maximum speed differential between them is no more than 15 mph; it is preferred that the operating speed differential be less than 10 mph.

(12) Path Alignment (Natural Path).

As two traffic streams approach the roundabout in adjacent lanes, drivers and bicyclists will be guided by lane markings up to the entrance line. At the yield point, they will continue along their natural trajectory into the circulatory roadway. The speed and orientation of the design vehicle at the entrance line determines what can be described as its natural path. The geometry of the exits also affects the natural path that the design vehicle travels. The natural path of two vehicles are not to overlap, see NCHRP Guide 2, Section 6.7.2.

(13) Splitter Islands.

Splitter islands (also called separator islands, divisional islands, or median islands) will be provided on all roundabouts. The purpose is to provide refuge for pedestrians, assist in controlling speeds, guide traffic into the roundabout, physically separate entering and exiting traffic streams, and deter wrongway movements.

The total length of the raised island should be at least 50 feet although 100 feet is desirable. On higher speed roadways, splitter island lengths of 150 feet or more is beneficial. Additionally, the splitter island should extend beyond the end of the exit curve to prevent exiting traffic from crossing into the path of approaching traffic. The splitter island width should be a minimum of 6 feet at the pedestrian crossing to adequately provide refuge for pedestrians.

Posted speeds on the approach roadway greater than or equal to 45 mph require the splitter island length, as measured from the inscribed circle diameter, to be 200 feet. In some instances, a longer splitter island may be desirable. Concrete curb is to be provided on the right side of the approach roadway equal to the length of the splitter island from the inscribed circle diameter.

(14) Access Control.

The access control standards in Index 504.3(3) and 504.8 apply to roundabouts at interchange ramp intersections. The dimensions shown in Index 504.8 are to be measured from the inscribed circle diameter.

Driveways should not be placed within 100 feet from the inscribed circle diameter.

(15) Lighting.

Lighting is required at all roundabouts. See the Traffic Manual Chapter 9 as well as consult with the District Traffic Operations Branch.

(16) Landscaping.

Landscaping should be designed such that drivers and bicyclists can observe the signing and shape of the roundabout as they approach, allowing adequate visibility for making decisions within the roundabout. The landscaping of the central island can enhance the intersection by making it a focal point, by promoting lower speeds and by breaking the headlight glare of oncoming vehicles or bicycles. It is desirable to create a domed or mounded central island, between 3.5 to 6 feet high, to increase the visibility of the intersection on the approach. Contact the District Landscape Architecture Unit to provide technical assistance in designing the roundabout landscaping.

(17) Vertical Clearance.

The vertical clearance guidance provided in Index 309.2 applies to roundabouts.

(18) Drainage Design.

See Chapter 800 to 890 for further guidance.

(19) Maintenance.

In climate regions where snowfall occurs and the use of snow removal equipment is necessary, consider tapering the approach ends of curbs. Contact the District Maintenance Engineer and appropriate Regional Manager for maintenance strategies and practices including seasonal operations, maintenance resources, and specialized equipment. Special equipment or procedures may be needed. Maintenance responsibilities may also include multiple state, county, and city agencies where coordination of maintenance efforts and funding is needed.

Topic 406 - Ramp Intersection Capacity Analysis

The following procedure for ramp intersection analysis may be used to estimate the capacity of any signalized intersection where the phasing is relatively simple. It is useful in analyzing the need for additional turning and through traffic lanes. For a more complete analysis refer to the Highway Capacity Manual.

(a) Ramp Intersection Analysis--For the typical local street interchange there is usually a critical intersection of a ramp and the crossroads that establishes the capacity of the interchange. The capacity of a point where lanes of traffic intersect is 1500 vehicles per hour. This is expressed as intersecting lane vehicles per hour (ILV/hr). Table 406 gives values of ILV/hr for various traffic flow conditions.

If a single-lane approach at a normal intersection has a demand volume of 1000 vph, for example, then the intersecting single-lane approach volume cannot exceed 500 vph without delay.

The three examples that follow illustrate the simplicity of analyzing ramp intersections using this 1500 ILV/hr concept.

(b) Diamond Interchange--The critical intersection of a diamond type interchange must accommodate demands of three conflicting travel paths. As traffic volumes approach capacity, signalization will be needed. For the spread diamond (Figure 406A), basic capacity analysis is made on the assumption that 3-phase signalization is employed. For the tight diamond (Figure 406B), it is assumed that 4-phase signal timing is used.

(c) 2 Quadrant Cloverleaf--Because this interchange design (Figure 406C) permits 2-phase signalization, it will have higher capacities on the approach roadways. The critical intersection is shared two ways instead of three ways as in the diamond case.

Table 406

Vehicle Traffic Flow Conditions at Intersections at Various Levels of Operation

ILV/hr	Description
< 1200:	Stable flow with slight, but acceptable delay. Occasional signal loading may develop. Free midblock operations.
1200-1500:	Unstable flow with considerable delays possible. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs on some approaches.
1500 (Capacity):	Stop-and-go operation with severe delay and heavy congestion(1). Traffic volume is limited by maximum discharge rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.

NOTE:

(1) The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500 ILV/hr, and the excess will be delayed in a queue.

Figure 406A
Spread Diamond

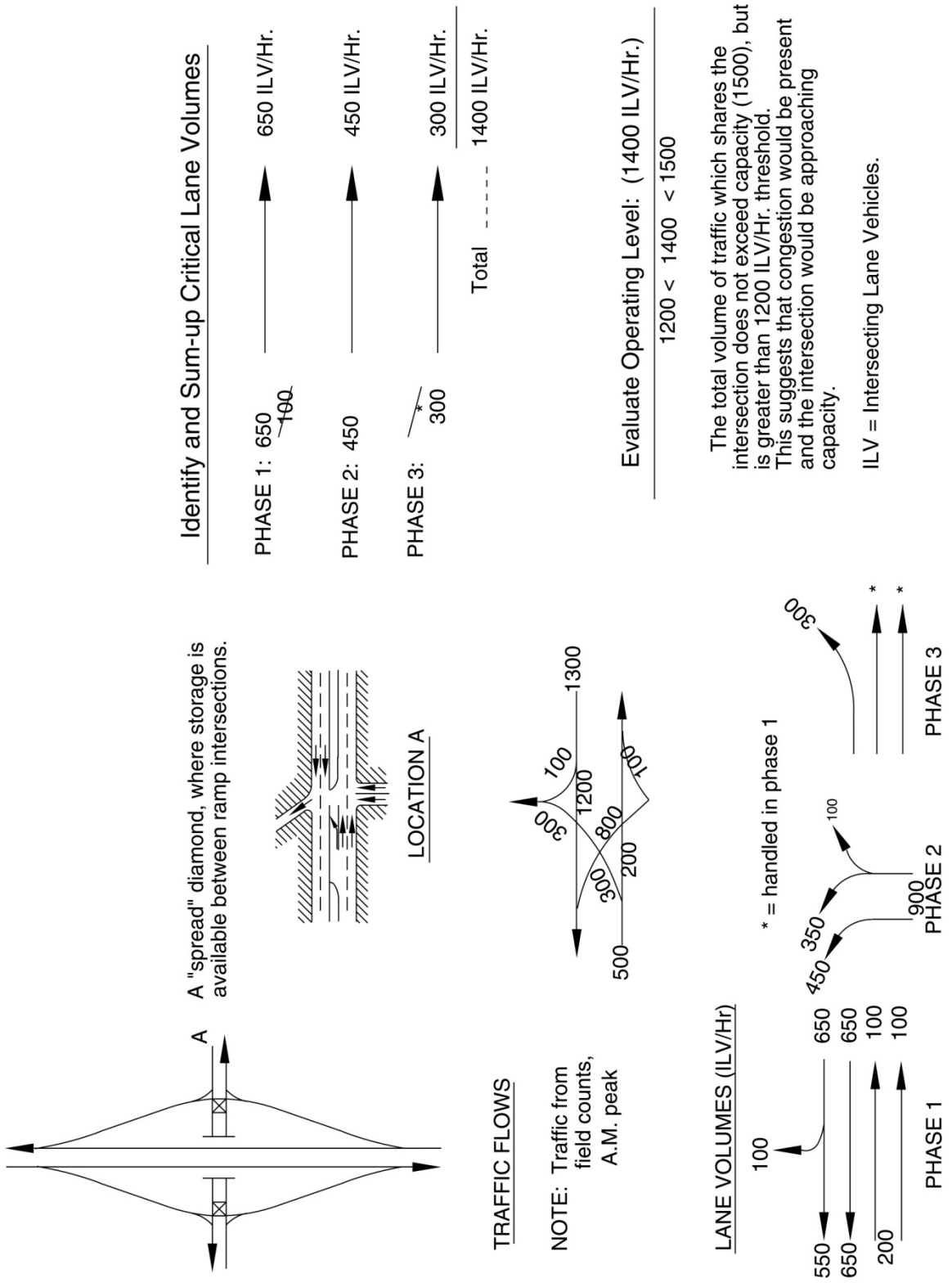
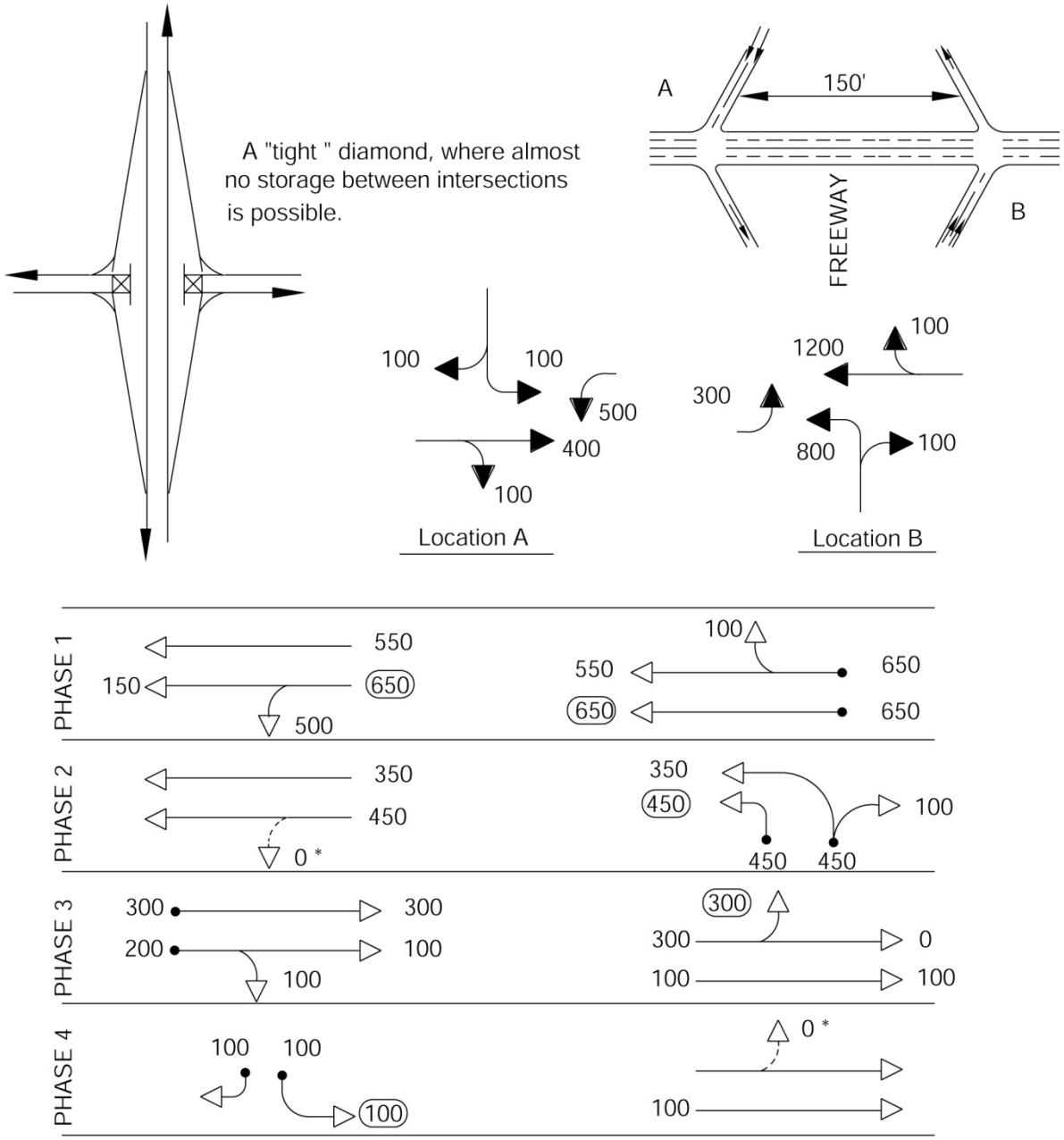


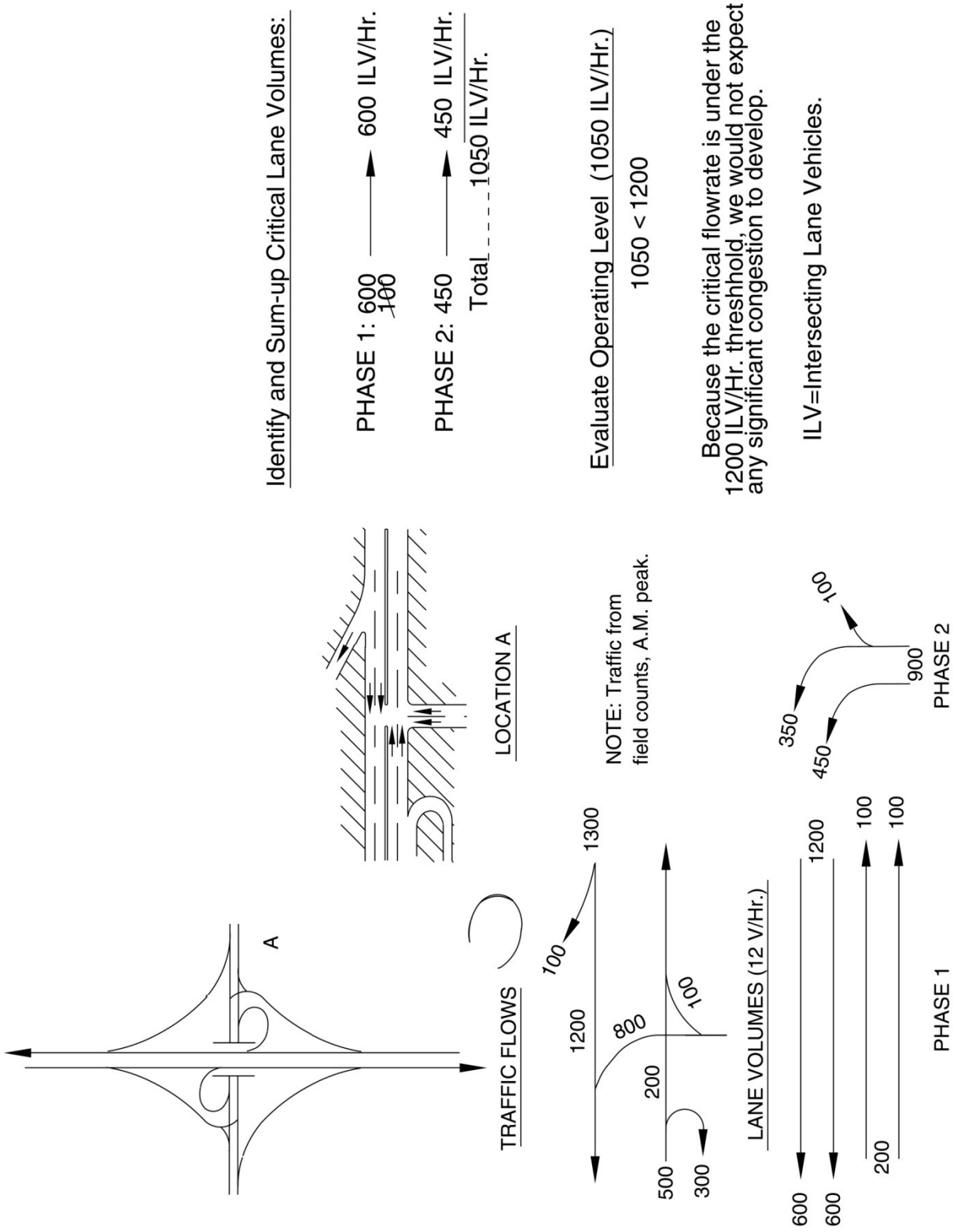
Figure 406B
Tight Diamond



*NOTE: When no storage at all is permitted, left-turn movement is cleared during this phase.

Critical Lane Volumes:	650
	450
	300
ILV=Intersecting Lane Vehicles.	100
	1500 ILV/Hr.

Figure 406C
Two-quadrant Cloverleaf



Attachment “F”

Wastewater

HAMPTON INN & SUITES
REPORT OF WASTE DISCHARGE
TECHNICAL REPORT

WASTEWATER TREATMENT SYSTEM
FOR THE PROPOSED

HAMPTON INN & SUITES

40758 SIERRA DRIVE, THREE RIVERS, CALIFORNIA 93271
APN #068-100-010 and #068-080-010

Prepared by ALD GENERAL ENGINEERING, INC.

September 8, 2020

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1.0 BACKGROUND

1.1 INTRODUCTION

This report is prepared pursuant to the guidance in State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment B-1.

This report provides details for the proposed Hampton Inn Hotel and future service station, market, and subway, or equivalent, onsite wastewater treatment system in Three rivers, California (See Appendix B for Vicinity Map and Site Plan).

The project is comprised of two undeveloped parcels (APN# 068-080-010[1] and 068-100-010[2]) that cumulatively comprise 4.39 acres and are located at 40758 Sierra Drive in Three Rivers, California[3]. The site is located on the east side of Highway 198 about 1.2 miles south of Three Rivers in Tulare County, California (See Appendix B for Vicinity Map and Site Plan). These properties are owned by Satwant Sanghera. The proposed development of the aforementioned parcels has site limitations (e.g. setbacks to wells, available space) that require the installation of a single wastewater system for the two parcels.

The proposed Hampton Inn Hotel (APN #068-080-010) is a 105-room hotel (185 beds) that will provide lodging for the traveling public. The calculated total average monthly influent rate for the hotel is 13,725 gpd. The future Commercial Development on frontage lot (APN #068-100-010) includes a service station with 3 pump islands[4] and a market, and Subway restaurant, or equivalent[5]. The calculated total average monthly influent rate for the future development of the frontage lot, based on uses identified by the client, is 3,420 gpd. The cumulative anticipated flow is 17,145 gallons per day. The proposed facilities will be located at the site shown in Appendix B.

The proposed wastewater treatment facility will be constructed in two phases. Phase I will include all wastewater treatment facilities, with the exception of the STEP tank (septic tank with effluent pump) independently sized for the future commercial development of the frontage. The STEP tank is the sole component for Phase II (See Appendix B for Site Plan and Figure 1 for visualization of Phase I and II).

1.2 FACILITY DESCRIPTION – GENERAL OVERVIEW

The proposed wastewater treatment facility is a media bed filtration system (Orenco AX-MAX system) with disinfection (ultraviolet treatment process), producing tertiary treated water which is discharged to the proposed subsurface drip field. The system is designed with the capability to treat a maximum flow of 17,145 gallons per day. The system will run 24 hours a day over 365 days a year.

[1] 2.81 acres
[2] 1.58 acres
[3] Section 26, Township 17 South, Range 28 East, Mount Diablo Base and Meridian.
[4] 2 multi-pump dispensers per island
[5] Or equivalent type of restaurant with limited/minimal amounts of FOG (Fats, Oils, and Grease). Cumulative Grease and Oil contribution to the advanced treatment unit below 25 mg/L.

2.0 WASTEWATER TREATMENT FACILITY

2.1 DOMESTIC WASTEWATER CHARACTERIZATION (UNTREATED WASTEWATER)

Wastewater will be generated at the proposed hotel by domestic sources that include: sinks, toilets, showers, laundry, and limited food preparation and associated dish washing/dish washer. The proposed hotel will serve breakfast, which consists of reheating prepackaged food in their food prep area and washing of cook wear used in the reheating process. All dinnerware and flatware will be disposable.

Wastewater will be generated at the future development of the frontage lot (service station and market, and Subway restaurant) primarily via a public restroom (e.g. sinks, toilets) and limited food production for a Subway Restaurant, or equivalent.

2.1.1 Anticipated Flow Rates

The anticipated domestic wastewater flow rates for the proposed uses is 17,145 gallons per day (Qmax) (see Table 1 for summary) (See Table 2 and 3 for details), based on estimated waste / sewage flow rates from the 2019 California Plumbing Code (CPC Table H 201.1(4)).

Table 1 Summary of Anticipated Flows.

Facility	**Flow Rates**
Hotel	13,725 gpd
Frontage Lot – Future Commercial Development	3,420 gpd
TOTAL	**17,145 gpd**

Hotel Flow Rate:

We evaluated the flow per room at 60 gpd/bed (per 2 person), and the flow for the laundry based on ½ load (cycle) per room per day, with a typical commercial washing unit use rate of 50 gallons per cycle. Flow rates are based on an average occupancy rate of 100 percent capacity. See Table 2 for itemized flow values.

We verified the anticipated flow rates with a water study provided by Chris Ott, HTL Hospitality Advisor for the project, for one of their network hotels. The reference entitled, a Water Savings Analysis for the St. Regis Resort, summarizes water conservation studies completed for the hotel sector for various hotel type (e.g. deluxe/resort, luxury, mid-market, economy). The total water usage by hotel type for a mid-market hotel is 100 gallons per day per room[6], and regardless of the hotel type the domestic[7] water use is 53 gallons per day per room, based on an average occupancy of 1.5 guest per room and an occupancy rate of 80 percent. Extrapolating the aforementioned value from 80 to 100 percent occupancy (Qmax), changes the value from 100 to 125 gallons per day per room. The typical percentage of the daily water use for laundry vs. other uses (restrooms, food service, HVAC, landscaping, other) is 20 percent.

Thus, we compared our anticipated flow per room at 130.7 gpd to the typical total water usage for a mid-

[6] Domestic, kitchen, laundry, HVAC, landscaping, etc.
[7] toilets, hand washing, misc. use, showers

market hotel at 100 (80 percent occupancy) and 125 (100 percent occupancy) gallons per day, which matches the studies values well. And we compared the ratio of our anticipated flow for laundry versus the flow per room (25 gpd / 130.7 gpd) at 19.1 percent, which matches the typical value from the study (20 percent). Therefore, we believe that anticipated flow rates accurately represent the proposed hotels wastewater demand.

Table 2 Flow Rates – Hotel

Hotel	**No. Rooms/Beds**		**Unit Flow**		**Anticipated Flow**	
Based on Beds	185	Beds[1,2]	60	gpd/bed	11,100	gpd
Addition for Laundry	0.5	cycles/room/day	50	gal/cycle	2,625	gpd
Total Hotel Anticipated Flow					**13,725**	**gpd**

[1] The number of guestrooms, by type, for the proposed hotel are listed in Table A.1 in Appendix A.
[2] The hotel shall have low-flow fixtures, reducing the wastewater demand on the overall facility.

Future Commercial Development Flow Rate:

We evaluated the flow for the future development based on an estimated number of employees, gas pump island, retail space, and restaurant space, provided by the client. See Table 3 for itemized flow. Since these numbers characterize a future development, the type of uses and anticipated flows must be verified prior to implementation.

Table 3 Flow Rates – Future Commercial Development on Frontage Lot.

Service Stations and Market	**Number**		**Unit Flow**		**Anticipated Flow**	
Employees	6	Employees	20	gpd/employee	120	gpd
Pump Islands	3	Pump Islands[1]	1000 500	gpd for 1st island gpd for each additional pump island	2,000	gpd
4,000 sq.ft. retail space	4,000	sq.ft.	1	gpd/10 sq.ft.	400	gpd
1,000 sq.ft. fast food restaurant space (Subway)	100	Meals per day peak	2 7	gpd/single service gpd/toilet use	900	gpd
Future Commercial Development Anticipated Flow Applied					**3,420**	**gpd**

[1] 1 Pump Island has 2 multi-pump dispensers.

2.1.2 Wastewater Characteristics

The water discharged to the subsurface will be made up entirely of domestic wastewater that has been treated to the tertiary level. Table 4 and Table 5 describes the influent[8] and effluent quality of wastewater, respectively. Since the facility falls below 20,000 gpd no nitrogen evaluation is necessary.

[8] Septic Tank effluent is approximately equal to half the waste strength of the raw wastewater influent.

Table 4 Raw Wastewater Influent Quality. See Table A.7 in Appendix A for detailed calculations[9].

	BOD (mg/L)	TSS (mg/L)
Hotel and Frontage Lot Dev.	510	150

For comparison purposes only, Orenco asserts the typical BOD waste strength for hotels and a Subway restaurant is 150 mg/L and 500 mg/L, respectively. These waste strengths combined with the aforementioned flow rates, have a weighted average value of 220 mg/L. Thus, the calculated value (255 mg/L) is 16 percent higher, or contains an effective 16 percent safety factor, when compared to Orenco.

Table 5 Effluent Water Quality Limitations.

Constituent	Unit	Average Monthly Limit	7-Day Average Limit
Biochemical Oxygen Demand (BOD)	Milligrams per liter (mg/L)	30	45
Total Suspended Solids (TSS)	mg/L	30	45

According to the manufacturer of the media bed filtration system (AX-MAX), "when loaded at or below the application loading rates, AdvanTex systems typically achieve treatment levels of <10 mg/L BOD_5 and TSS (30-day average or 30-day arithmetic mean), and they typically provide reduction of Total Nitrogen (TN) >60%, with nitrification exceeding 95%." And pursuant to the manufacturer, Grease and Oil contribution to the AX-Max unit must not exceed 25 mg/L.

Influent flows and waste strength, and effluent waste strength needs to be measured once the expansion is completed and the system is installed to confirm design values. Confirmation testing shall also include oil and grease values to confirm values are < 25 mg/L. If O&G values exceed 25 mg/L, pre-aeration is required. Adjustments may need to be made if actual waste strengths or flows differ from design values. Any changes in usage that may affect flows or waste strength require a review by the designer.

2.2 WASTEWATER TREATMENT SYSTEM

The proposed wastewater treatment system consists of two meander septic tanks, a media bed filtration system (Orenco AX-MAX system), ultraviolet (UV) disinfection system integrated in the AX-MAX, and subsurface drip field.

Wastewater from the hotel is conveyed to a 42-ft (15,000 gallon) Orenco T-Max traffic rated meander septic tank, and wastewater from the service station, market, and Subway is conveyed to a 14-ft (5,000 gallons) Orenco T-Max traffic rated Meander septic tank, by way of a gravity sewer main. Meander septic tanks will provide primary treatment. Sludge, scum, and biosolids captured in the septic tanks will be pumped by a licensed pumper and transported to an authorized disposal facility.

[9] Table A.7 quantifies the septic tank effluent quality. Influent values shown in Table 4 are calculated by multiplying effluent values by a factor of 2.

From the septic tanks, the primary treatment effluent is then pumped, via a Biofilter duplex pump, to the media bed filtration system. A duplex pump allows for continued operations in the event one pump needs to be shut down for cleaning or repair. The media bed filtration system is comprised of two AX-MAX pods to accommodate the required amount of filtration surface area.

In the media bed filtration system, effluent is distributed on a media bed via sprinklers. Effluent trickles through the media and is then either conveyed to the subsurface irrigation system or returned to the beginning of the media bed filtration system for additional treatment (up to four times).

From the advanced treatment system and associated equipment, the wastewater is disinfected using an ultraviolet (UV) treatment system, by Sanitron, and is discharged to a subsurface drip field. The systems cumulative calculated total average monthly influent rate is 17,145 gpd. The wastewater system will be located as shown in Appendix B – Site Plan.

2.2.1 Wastewater Treatment Schematic

See

Figure 1 and Figure 2 for simplified layouts/schematics of wastewater treatment system. See Appendix B

for Site Plan.

Figure 1 Wastewater Treatment System Flow Sheet. Pre-Anoxic Return Line will be plumbed into the 2nd compartment of the 15,000-gallon meander septic tank. AdvanTex AX-Max units are configured with integral recirculation-blend capacity and do not require an external recirculation-blend tank. Phase II components will be built in the future as part of the future frontage lot development, all other components will be built at this time.

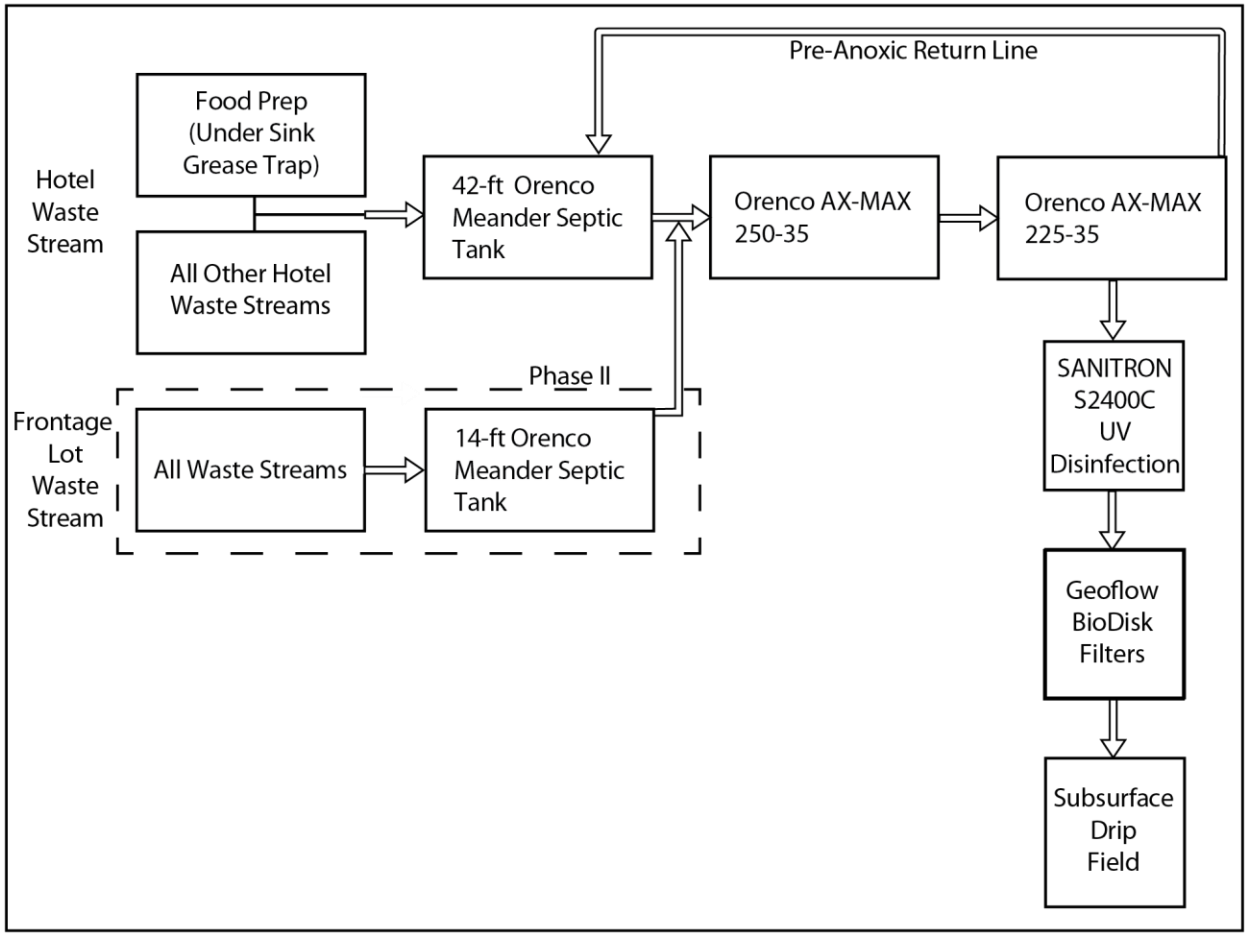
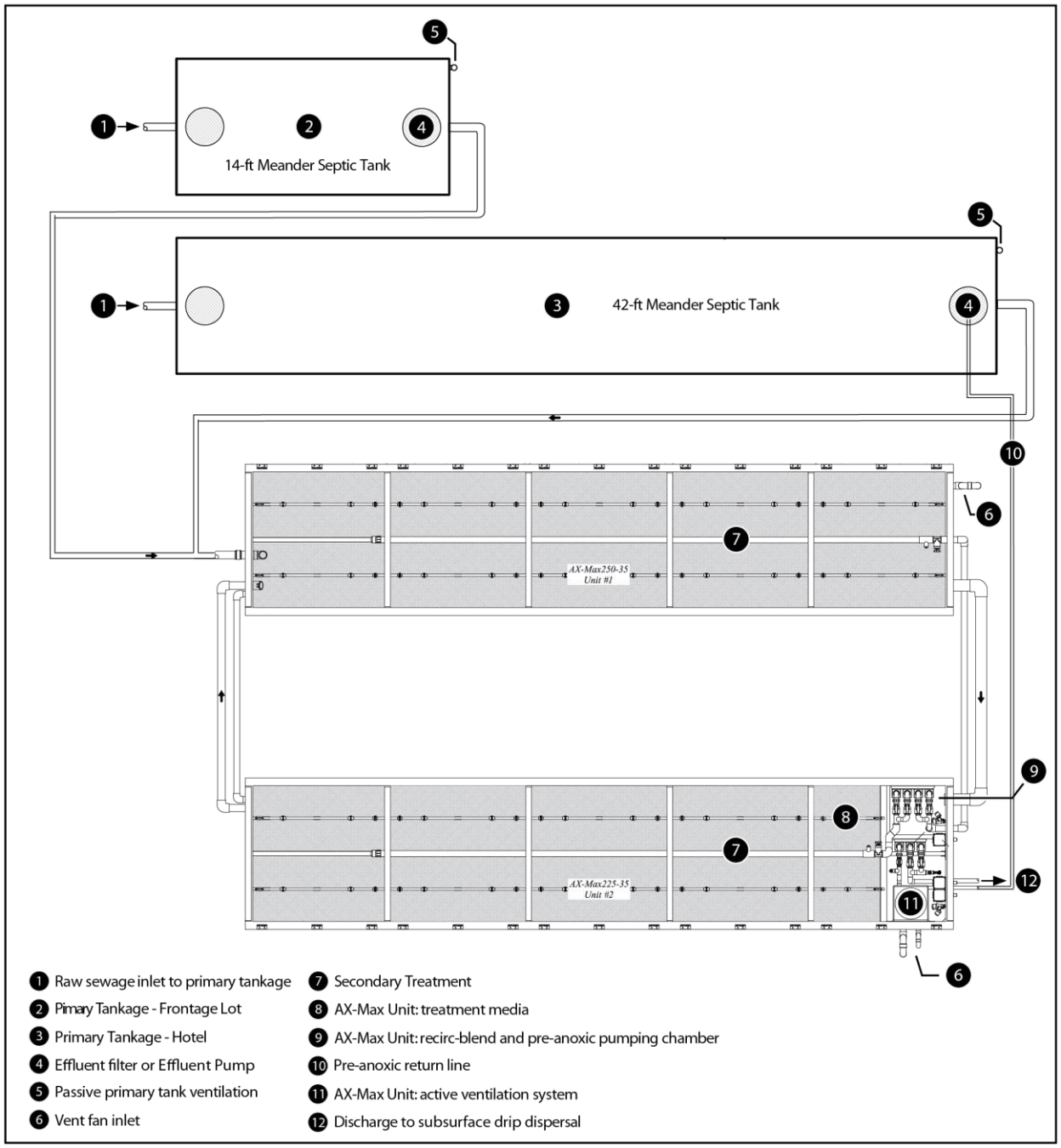

Pre-Anoxic Return Line
Food Prep
(Under Sink
Grease Trap)
Hotel
Waste
Stream
All Other Hotel
Waste Streams
42-ft Orenco
Meander Septic
Tank
Orenco AX-MAX
250-35
Orenco AX-MAX
225-35
SANITRON
S2400C
UV
Disinfection
Phase II
Frontage
Lot
Waste
Stream
All Waste Streams
14-ft Orenco
Meander Septic
Tank
Geoflow
BioDisk
Filters
Subsurface
Drip
Field

Figure 2 Layout of the Wastewater Treatment System (Modified from Orenco Document NDA-ATX-1).



2.2.2 System Components

2.2.2.1 Pretreatment Components (grease traps.)

Any septic system that receives high strength wastewater from a commercial food service facility must have an approved and property sized and functioning oil/grease interceptor. The hotel food prep area requires a grease interceptor with a minimum rating capacity of 35 gpm and 70-pounds grease to be installed downstream of the food prep's 3-compartment sink and dishwasher (see Section A.1 in

Appendix A for sizing calculations). Sizing and installation must conform to the manufacturers recommendations and based on PDI[10] Guide Lines.

The future subway on the frontage lot will require an appropriately sized grease interceptor that must be verified by the system designer prior to implementation.

See Section 2.3 for grease interceptor maintenance requirements.

2.2.2.2 Primary Treatment Equipment

Properly sized septic tanks are imperative in order to reduce commercial strength wastewater to an acceptable level prior to advanced treatment. We propose to use an Orenco Meander Septic Tank with 30 gpm Biofilter duplex[11] effluent pumps. For meander tank sizing and justification see Orenco's Design Review Letter (Attachment D).

See Table 6 for Septic Tank Specifications. For comparison purposes, tankage calculations based on the anticipated flow and drainage fixture units are included in Section A.2 in Appendix A.

Table 6 Summary of Septic Tank Sizes.

Facility	Septic Tank
Hotel	42-ft (15,000 gallon) Orenco T-Max traffic rated meander septic tank
Frontage Lot – Future Commercial Development	14-ft (5,000 gallon) Orenco T-Max traffic rated meander septic tank

The use of a pre-Anoxic tank for primary treatment of Type 5 waste is recommended by the manufacturer (1x peak daily flow), but the manufacturer approved the omission of a pre-anoxic tank requirement for Type 5 Waste (Orenco's waste classification for Hotels/Motels) because there is no nitrogen limit for flow rates less than 20,000 gpd (State Water Resources Control Board Order WQ 2014-0153-DWQ).

2.2.2.3 Media Bed Filtration System Equipment

The proposed Orenco AdvanTex treatment system is the AX-MAX unit. The filter treatment area is sized based on organic loading rate (OLR for BOD_5) and hydraulic loading rate (HLR). The area required for the OLR is most restrictive; therefore, the system requirements is designed based on the OLR. The minimum treatment surface area based on OLR is 457 square feet. The proposed treatment surface area is 475 square feet, and is achieved by using the following AX Pods: (1) AX-MAX250-35 and (2) AX-MAX225-35.

See Section A.3 in Appendix A for sizing calculations.

[10] Plumbing and Drainage Institute (PDI)
[11] Duplex pumps work by alternating from one dose to the next.

2.2.2.4 Disinfection System Equipment

Disinfection of the treated wastewater is incorporated into the wastewater treatment system to mitigate the fast percolation rates (1 minute per inch or faster). Disinfection shall be performed by UV treatment, using two (2) Sanitron's S2400C treatment units installed in series to allow for system redundancy and resilience. The units are each rated for flows of 40 gpm.

2.2.2.5 Treated Effluent Disposal Method

The proposed effluent disposal method is subsurface drip dispersal using Geoflow's WasteFlow PC (pressure compensating) 1.0 gph drip line with 2-foot emitter spacing. The subsurface drip irrigation system will be installed at 8-inches below the surface with an area of approximately 0.33 acres. The size is based on an average percolation rate of 0.45 minutes per inch (mpi), a design loading rate of 1.2 gal/ft^2/day, and a capacity of 17,145 gpd.

The dosing tank and 30 gpm duplex discharge pumps are integrated into the AX-MAX unit.

See Sections 2.2.3 below for supporting site conditions (soils, groundwater, surface water, water supply, setbacks). See Geoflow Subsurface Drip Design Spreadsheet for design details and calculations.

The subsurface disposal systems shall hold in reserve sufficient land area for possible future 100-percent replacement of the subsurface disposal system. The 100-percent replacement area is shown in Appendix B – Site Plan.

2.2.3 Site Conditions

2.2.3.1 Soils

In general, the soils encountered within the proposed effluent dispersal area and 100 percent expansion area consists primarily of fine to medium-grained sand (SP) to a maximum explored depth of 5 feet. The parent material is alluvium derived from granitic bedrock. Percolation testing of the dispersal area and 100 percent expansion area suggest that the soils have a very high absorption potential (0.45 minutes per inch). The site evaluation from The Dirt Guys is provided for reference in Appendix C.

The design loading rate is based on the manufacturers (Geoflow) loading rate for drip line in sandy clay loam with a treated effluent strength of <30mg/L (BOD_5 and TSS) is 1.2 gpd/sq.ft

2.2.3.2 Groundwater

Seasonally high Groundwater is located at approximately 10 to 12 feet below ground surface, as determined during The Dirt Guys site evaluation.

Pursuant to WDR Attachment 1, Table 5, Minimum Depth to Groundwater and Minimum Soil Depth from the Bottom of Dispersal System, for Perc Rates less than or equal to 1 MPI, require additional treatment. This requirement coupled with the groundwater depth in sandy soils, the proposed system must use disinfection.

2.2.3.3 Surface Water

The westside of the frontage lot is located about 210 feet from the nearest point to the active channel of the Kaweah River. No treated wastewater will be discharged directly to any water body.

A man-made pond is located about 50-feet west of the hotel parcel (See Site Plan in Appendix B). The pond is located more than 200-feet (setback requirement) from the proposed dispersal area and as such the pond is not discussed further in this report.

2.2.3.4 Water Supply

Potable water will be served to the hotel and frontage lot via a new commercial well that will be located more than 150 ft away from all the wastewater treatment system components (See Appendix B for Site Plan). A shared well agreement will be established for the frontage lot. See accompanying maps in Appendix B that identify the location of all groundwater wells within 150-feet of the subject parcels.

The frontage lot contains an existing well that must be properly abandoned (destructed) (See Appendix B for Site Plan). A permit is required for the destruction of water wells anywhere in Tulare County. All well work must be done by a contractor having a valid C-57 license as issued by the Contractors State License Board. The well must be properly abandoned prior to the final inspection of the septic system by the designer.

The neighboring lot (APN #068-100-041) contains an abandoned commercial building. The lot is of insufficient size to develop a well, and as such contains a water agreement with the neighboring Comfort Inn & Suites (APN #068-360-028). The proposed dispersal field will maintain a 5-foot setback to the property line of the aforementioned neighboring lot without a well, which is reasonable because it will not impact their development potential for the aforementioned reasons.

2.2.3.5 Setbacks

The wastewater treatment system must maintain all setbacks described in Table 3 of the General order, as well as the following setback requirements, as summarized in the Table 7.

Table 7 Summary of Setbacks.

Equipment or Activity	Domestic Well	Flowing Stream (see 1. Below)	Ephemeral Stream Drainage (see 2. Below)	Property Line
Septic Tank, Treatment System, or Collection System (see 3. Below)	150 ft. (see 4. below)	50 ft. (see 6. below)	50 ft.	5 ft. (see 6. below)
Leach Field (see 5. below)	100 ft, (see 6 and 7. below)	100 ft. (see 6. below)	5 ft	5 ft. (see 6. below)

1. A flowing stream shall be measured from the ordinary high-water mark established by fluctuations of water elevation and indicated by characteristics such as shelving, changes in soil character, vegetation type, presence of litter or debris, or other appropriate means.

2. Ephemeral Stream Drainage denotes a surface water drainage feature that flows only after rain or snowmelt and does not have sufficient groundwater seepage (baseflow) to maintain a condition of

flowing surface water. The drainage shall be measured from a line that defines the limit of the ordinary high-water mark (described in "a" above). Irrigation canals are not considered ephemeral streams drainage.

3. Septic Tank, Treatment System, or Collection System addresses equipment located below ground or that impedes leak detection by routine visual inspection
4. Setback established by Onsite Wastewater Treatment System Policy, section 7.5.6.
5. Leach Field includes all subsurface dispersal systems, including mound systems except seepage pits.
6. Setback established by California Plumbing Code, Table K-1.
7. California Well Standards, part II, section 8.

2.3 OPERATIONS AND MAINTENANCE

With certain exceptions[12], anyone performing construction work in California must be licensed by the California Contractors' State License Board. Septic tank and/or leach field service (repairs, pumping, etc.) shall be performed only by a California licensed General Engineering (A), Plumbing (C-36), or Sanitation System (C-42) contractor.

A maintenance agreement with a certified Orenco Maintenance provider and pump contractor will have to be provided to the permitting authority prior to final approval. The maintenance agreement must state that they assume responsibility to maintain the system continuously for the life of the system, or until another maintenance provider is hired and a copy of such maintenance agreement is provided.

The MANUFACTURER shall provide the services of a trained representative for training the OWNER'S service provider, inspecting all AX-MAX units, wiring, and unit placement and installation.

2.3.1 Describe Routine Operation and Maintenance Procedures

The Discharger shall maintain a record of all septic service activities for a minimum of five years. At a minimum, the record shall include the date, nature of service, service company name, and service company state contractor license number.

Septic tanks shall be pumped when any one of the following conditions exists:

- The combined thickness of sludge and scum exceeds one-third of the tank depth of the first compartment.
- The scum layer is within 3 inches of the outlet device.
- The sludge layer is within 6 inches of the outlet device.

[12] Limited repairs may be performed by homeowners or contractors as allowed by the Business and Professions Code (Bus. & Prof. Code, §§ 7044, 7048).

Septage is the liquid, solid, and semisolid material that results from wastewater treatment in a septic tank, which must be pumped, hauled, treated, and disposed of properly. (40 C.F.R. § 503.) Septage disposal shall only be to a legal disposal site that has been issued WDRs by a Regional Water Board allowing septage disposal. Septage shall be handled in such a manner as to prevent its reaching surface waters or watercourses.

Inspections of sludge and scum depth must be performed quarterly. Based on the results of quarterly inspections performed over the first operating year, when recommended by the maintenance provider, may be changed to annually. Pumping time intervals will be dependent upon use.

Deep rooted plants such as trees or shrubs shall not be planted in the dispersal area to prevent damage to the dispersal system by roots.

Burrowing animals active in areas that may result in wastewater leakage from the dispersal system shall be promptly controlled and repairs to the dispersal system completed as soon as possible.

2.3.1.1 Maintenance Activities by Primary System Component Manufacturers

ORENCO (treatment system manufacturer) maintenance requirements:

- Consult the Manufacturers Operations & Maintenance (O&M) manual provided with the AdvanTex system to help guide the operator on appropriate O&M for systems (Orenco Document No. AIM-OM-ATX-4). If additional information is needed, contact Orenco.

- Perform all recommended AdvanTex maintenance activities and intervals shown in
-
-

- Figure 3 (excerpt from manufacturers aforementioned O&M manual).

Figure 3 Orenco's suggested scheduled maintenance activities and times (from Orenco Document No. AIM-OM-ATX-4). However, system discharge limits and influent loads dictate actual O&M requirements.

Scheduled Maintenance Reference Chart		Recommended Activity Period					
		Monthly	Quarterly	Semi-annually	Annually	Biennially	
Activity	VIsually Inspect Tank Liquid Levels	•[1]	•				
	Check Biotube® Effluent Filters; Clean as Required	•[1]	•		•		
	Check Biotube® Pump Vault Filters; Clean as Required	•[1]	•		•		
	Record Elapsed Time Meters and Event Counters for All Pumps	•					
	Inspect Spin Nozzles, Clean as Required	•[2]		•			
	Confirm Proper Operation of Automatic Distributing Valve (if applicable)	•					
	Sample Influent and Effluent Quality Parameters[3]		•[1]	•			
	Confirm and Record Pump Voltages and Amperages		•[1]		•		
	Inspect Distribution of Effluent in AX-Max Units; Clean as Required			•			
	Record Scum and Sludge Accumulation in Tanks				•		
	Flush Distribution Laterals in AX-Max Units				•		
	Inspect Pumping System Components; Clean as Required				•		
	Replace Lithium Battery in TCOM Control Panel (if applicable)					•	

[1] This maintenance schedule is only required during the first year of system operation.
[2] This maintenance schedule is only required during the first quarter of system operation.
[3] Recommended guidelines only. Sampling should be scheduled according to regulatory requirements.

- The service provider should be present during installation, so they are familiar with the system, especially those service lies, conduits, and connections that get buried. Ideally all system components are documented using aerial photography to maintain an accurate record of all system components. A detailed as-built drawing must be maintained on-site.

- DO NOT dispose of toxics or chemicals into system, such as restaurant degreasers, cleansers, wax strippers for linoleum, carpet shampoo and its waste products, and other toxics. As a general

rule, nothing should go into any wastewater treatment system that hasn't been ingested, other than toilet tissue, mild detergents, and wash water. Every system user and qualified service provider should be familiar with the basic guidelines below:

- No septic additives
- No flammable or toxic products
- No excessive household cleaners
- No chlorine bleach, chlorides, and pool or spa products
- No pesticides, herbicides, or agricultural chemicals or fertilizers
- No RV waste (unless the system is specifically designed and engineered to treat such waste)
- No water softener backwash
- No surface runoff or stormwater runoff
- No excessive amounts of fats, oils and grease (FOG)
- No food byproducts
- No cigarette butts
- No paper towels, newspapers, sanitary napkins, diapers, disposable wipes, floss, gum or candy wrappers, etc.

- According to the manufacturer: Kitchen dishwashing appliances used in conjunction with AdvanTex treatment must be high-temperature appliances. For systems with low-temperature, chemical-type appliances, pre-aeration will be necessary. Grease and Oil contribution to the AX-Max unit must not exceed 25 mg/L.

GEOFLOW (dispersal system manufacturer) maintenance requirements:

- Consult the Manufacturers Design, Installation, and Maintenance Guide available on their website. If additional information is needed, contact Geoflow.

- The BioDisk Filter Battery is a T filter setup for self-cleaning via automatic back washing. Two filters, with a max flow rate of 70 gpm, are placed on the manifold, allowing clean water from one filter to wash the other filter.

- The field flush valves are automatic and flush the field once a day.

- Geoflow Specific Routine and Preventative Maintenance Includes:

    - With the pump in the "manual" position, check the pressure in the drip field by using a pressure gauge on the Schrader valve located on the air vents and by reading the pressure gauge located in the Wasteflow Headworks box. The pressure should be the same as shown on the initial installation records.

- Periodically remove and clean the air vents, field flush and filter flush valves.

- Visually check and report the condition of the drip field, including any noticeable wetness.

SANITRON (disinfection (UV Treatment) system manufacturer) maintenance requirements:

- Consult the Manufacturers Installation, Operation, and Maintenance Manual available on their website. If additional information is needed, contact Sanitron.

- Lamp replacement is recommended every 10,000 hours of operation, approximately 12 months of continuous service. Lamps contain small amounts of mercury and as such should not be placed in the trash. Properly dispose of lamps, in a manner suitable to the local authority.

- Cleaning of the quartz sleeve, when conditions warrant. It is recommended that the inspection of quartz sleeve be performed after one month of use. If quartz sleeve is found to be coated (not clear), then frequency of cleaning must be done more often. Deposits or discoloration on the surface of quartz sleeve are caused by excessive levels of the subject contaminant within the water that is in contact with the quartz sleeve. Most deposits on the quartz sleeve are caused by an excess of calcium (hardness), iron or manganese. If quartz sleeve is clean (clear) then frequency of cleaning may be extended.

- SANITRON® Ultraviolet water purifiers are equipped with a manual wiping mechanism making the process of routine cleaning easier and therefore, recommended weekly or at the very least monthly to insure your performance.

- During inspections, confirm that approved GFCI receptacle is still operational and that water purifier is plugged into this GFCI.

- The system must be connected to the Orenco Control Panel to monitor the level of germicidal ultraviolet energy that penetrates the quartz sleeve and the water within the water purifier. This will signal a need for system cleaning or repair.

GREASE INTERCEPTOR best practices and interceptor maintenance requirements: even the best-designed interceptors properly installed will fail if they are not maintained. The precise requirements for maintenance will be dependent upon the amount of F.O.G. and sediment in the wastewater.

- The interceptor has a rated retention capacity equal to twice its flow rate expressed in pounds. The user must determine the cleaning schedule by measuring how much grease has been trapped over a period of time. Grease typically weighs about 8 pounds per gallon.

- The amount of solids entering the grease trap will increase the frequency of cleaning the interceptor. Eliminate solids entering the interceptor as much as possible. If excessive solids are passing into the line, the user must install a solids interceptor ahead of the grease trap.

- Dishwashing personnel must thoroughly scrape cookware to remove all food waste, especially cooking oils and creamy sauces and gravies which are high in grease, before rinsing dishes. Thorough scraping of dishes will prevent the majority of grease in your waste stream from entering the OWTS.

- Frequency of cleaning helps eliminate most of the odors associated with interceptors and increases its efficiency.

- When the interceptor is being cleaned, extra attention should be given to make certain that inlet, outlet, and air relief ports are clear of obstructions. Always take proper care to ensure a safe and healthy environment while cleaning the interceptor.

- Follow all manufacturer requirements and service provider requirements for proper maintenance and disposal.

- Grease and any other waste matter that has been removed from the interceptor should not be introduced into any drain, sewer, or natural body of water. This waste matter should be placed in proper containers for disposal. Depending on the amount of grease generated, an appropriately sized indoor storage container or outdoor storage bin. The client shall have a service agreement with a service provider that is certified to properly dispose of grease, in a manner suitable to the local authority. The frequency of grease disposal depends on the size of the trap, volume of grease produced, and storage bin capacity.

2.3.1 Manufacturer (Orenco & Sanitron) Monitoring Requirements

Regulatory monitoring requirements applicable to the treatment disposal methods will be identified in the Notice of Applicability (NOA) Letter.

Manufacturer monitoring requirements include:

ORENCO:

Take and Test Influent and Effluent Samples: Samples should be taken quarterly for the first year to establish a baseline. Subsequent testing after the first year may be reduced based on the establishment of this baseline. Regular samples will provide valuable information for ongoing maintenance and troubleshooting. All results obtained should be reported to the appropriate people, including Orenco.

SANITRON:

To ensure proper operation of the water purifier, regular biological testing of the purifier output water should be performed at minimum; (1) at installation, (2) quarterly for the first year of service and annually after first year of service, (3) at lamp replacement. Additional testing should be performed

whenever modifications, change, or additions are made to plumbing system, pumps, well source water etc. to ensure adequate disinfection under new condition.

2.3.2 Treatment Operator Training and Qualifications Requirements

The MANUFACTURER shall provide the services of a trained representative for training the OWNER'S service provider, inspecting all AX-MAX units, wiring, and unit placement and installation. All the equipment and materials required to perform testing shall be the responsibility of the CONTRACTOR. The MANUFACTURER shall submit a detailed start-up checklist for each unit, according to the manufacturer's inspection and startup procedures.

Orenco offers training courses via webinars and live workshop, both at their corporate headquarters and through local distributors. Contact Orenco at their headquarters of your local Orenco distributor for training and certification questions.

2.3.3 Contingency plans for Repairs/Spills/Treatment Issues

The wastewater treatment components that require repairs are installed in duplicate systems (e.g. septic tank effluent pumps, recirculation pumps, discharge pumps, UV treatment units) that alternate or are installed in series, and in the event one requires repairs, the other continues to operate.

3.0 DESIGN REFERENCES

This design meets the minimum requirements of Tulare County Environmental Health Department, including the County Local Agency Management Program (LAMP) pertaining to onsite wastewater treatment systems (OWTS) and State Water Resources Control Board Order WQ 2014-0153-DWQ.

Advanced Treatment Design requirements are all based on Technical Data Sheets and Design Manuals published by the Manufacturer (form: NDA-ATX-1 and NDA-EFS-1). And the design is reviewed and approved by the Manufacturer's (Orenco) Engineers Prior to submittal (see attached manufacturers Final Design Review Letter).

Additionally, all subsurface drip dispersal sizing and design criteria is based on manufactured pre-engineered data published by Geoflow, Inc., titled Subsurface Drip Dispersal and Reuse – Design, Installation, and Maintenance Guidelines.

4.0 LIMITATIONS

Design Criteria is based on field data (e.g. soil profiles and percolation testing) collected under the professional responsibility of The Dirt Guys. We shall be notified if variations or undesirable conditions are encountered during installation so that a re-evaluation can be made. The client should recognize that exposure of unexpected adverse conditions would require additional costs at the rate of $125.00 per hour,

portal-to-portal. The same rate applies to additional inspections or trips to job site that are made due to circumstances beyond our control.

This project/technical report is based upon the calculated flows and waste strengths for the purpose of serving the Hampton Inn and Suites and frontage lot project. Influent flows, and influent and effluent waste strengths will need to be measured once the facility is operational to confirm design values. Adjustments may need to be made if actual waste strengths or flows differ from design values. Any changes in business operations that may affect flows or waste strength require a review by the system designer.

The choice to not include a pre-anoxic tank to allow for additional nitrogen reduction was based on the fact that the anticipated flow is below the threshold value that mandates nitrogen mitigations.

We prepared this report for the exclusive use of the owner, installer, and project design consultants and approval by the regulatory agencies. The report has been prepared in accordance with the Water Board State Water Resources Control Board Order WQ 2014-0153-DWQ. Services performed have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our agreement and included in this report.

General Conditions required for final installation approval:

- A shared well agreement must be established for the frontage lot.
- A utility easement must be established for the wastewater treatment facilities installed on the frontage lot (e.g. dispersal field, lines, 100-percent replacement area).

HAMPTON INN & SUITES THREE RIVERS

40758 SIERRA DRIVE, THREE RIVERS, CA 93271

SITE EVALUATION REPORT
APN: 068-100-010

PERCOLATION ABSORPTION CAPACITY

Location	Depth (ft)	Perc. Rate	(gal/sf/day)
P-1	4	0.74 Min/Inch	7.15
P-2	4	0.33 Min/Inch	10.71
P-3	4	0.57 Min/Inch	8.15
P-4	4	0.57 Min/Inch	8.15
P-5	4	0.12 Min/Inch	14.43
P-6	4	0.12 Min/Inch	14.43

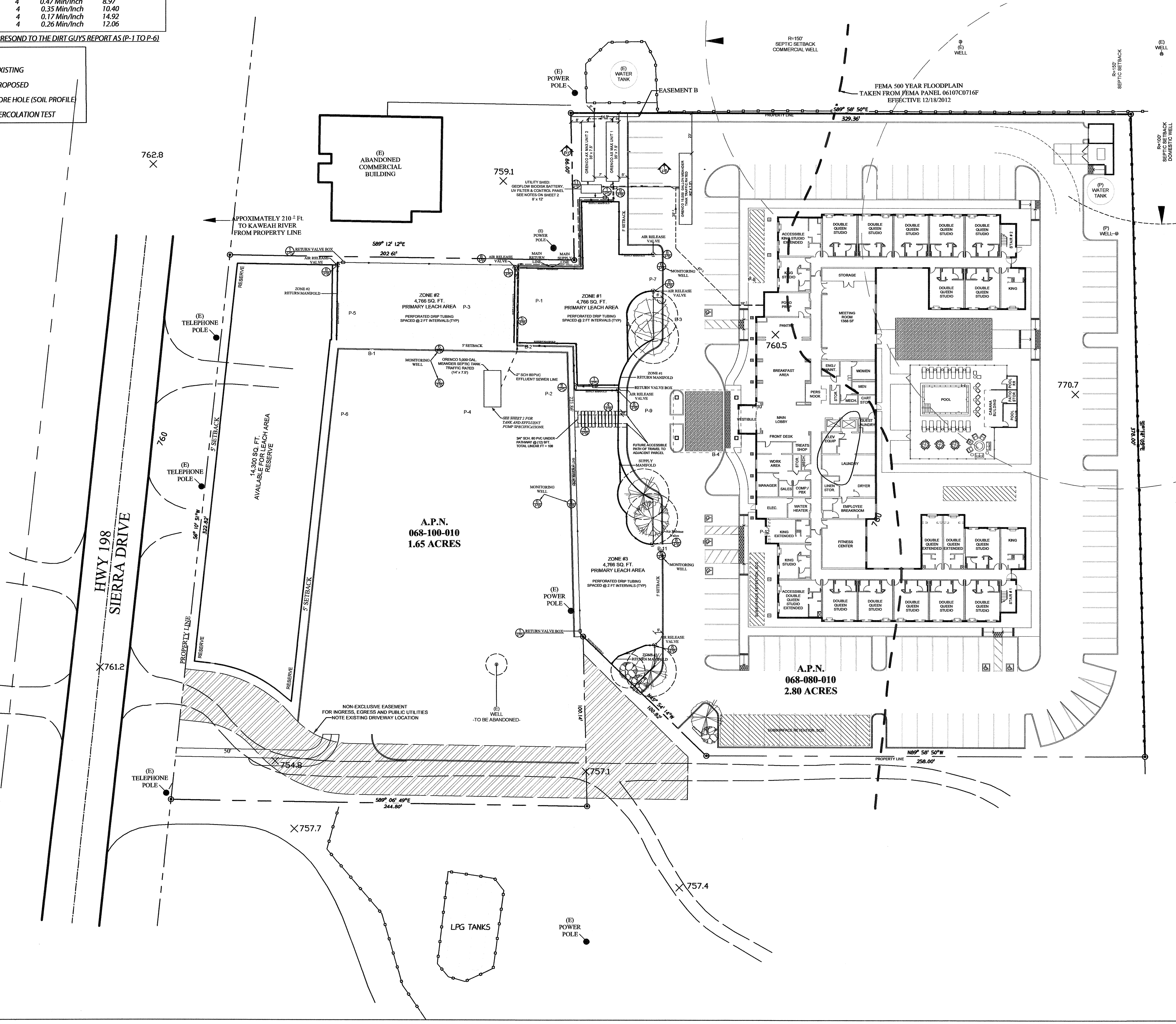
SITE EVALUATION REPORT
APN: 068-080-010

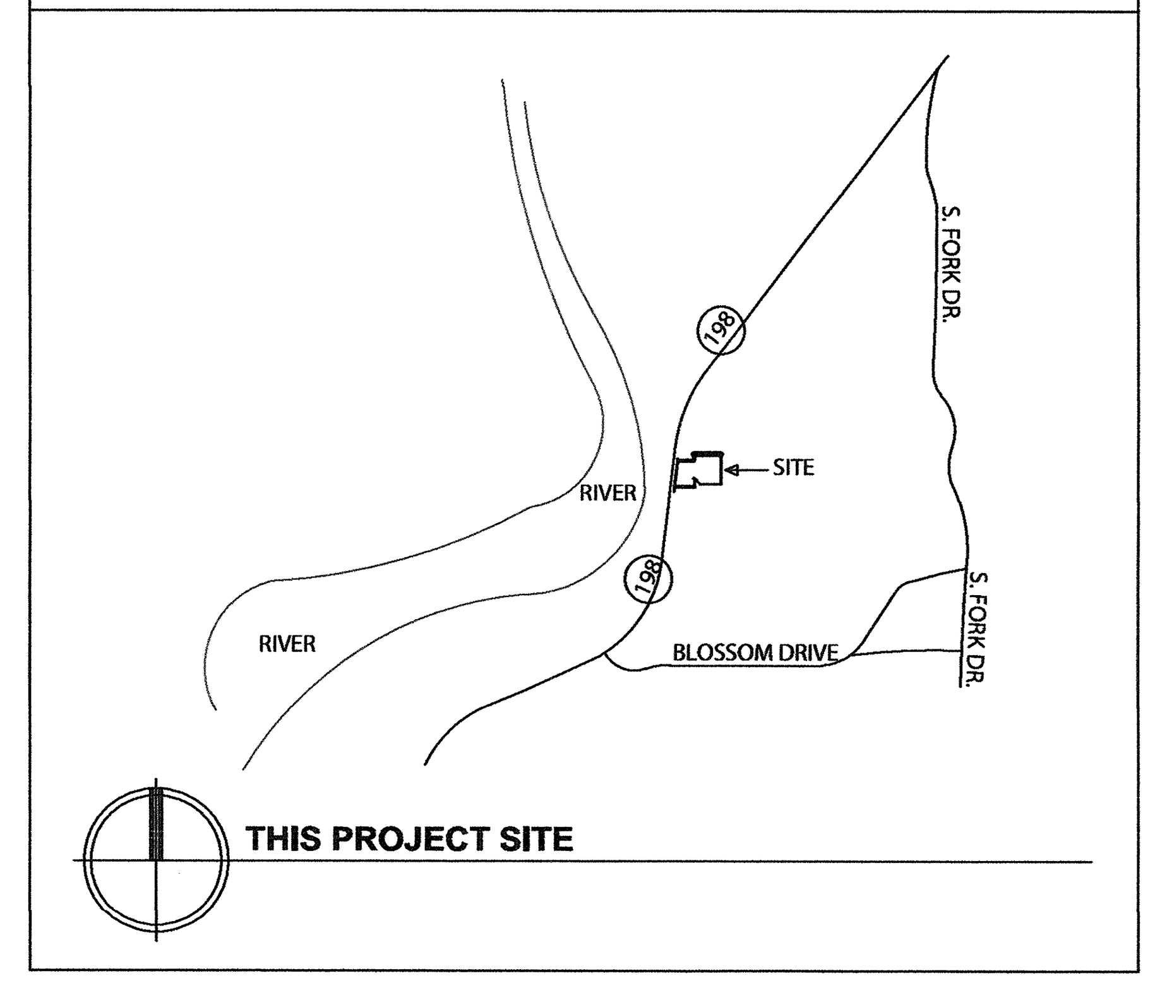
PERCOLATION ABSORPTION CAPACITY

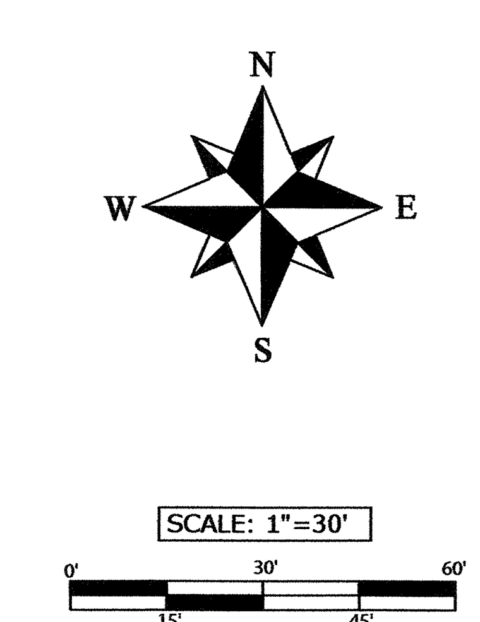
Location	Depth (ft)	Perc. Rate	(gal/sf/day)
P-7	4	0.80 Min/Inch	6.93
P-8	4	0.91 Min/Inch	6.45
P-9	4	0.47 Min/Inch	8.97
P-10	4	0.35 Min/Inch	10.40
P-11	4	0.17 Min/Inch	14.92
P-12	4	0.26 Min/Inch	12.06

PERC 7-12 CORRESOND TO THE DIRT GUYS REPORT AS (P-1 TO P-6)

KEY:
(E) = EXISTING
(P) = PROPOSED
(B) = BORE HOLE (SOIL PROFILE)
(PERC) = PERCOLATION TEST







APN# 068-100-010 1.65 ACRES
APN# 068-080-010 2.80 ACRES

WASTE WATER TREATMENT SYSTEM

SITE PLAN

A.L.D.
GENERAL ENGINEERING INC.
JOSHUA L.R. ANNIS
(559) 760-1155
LIC#1058320

THIS PLAN IS PREPARED BY ME OR UNDER MY PROFESSIONAL RESPONSIBILITY.

REGISTERED PROFESSIONAL ENGINEER RAFAEL D. DIVINA NO. 30,011 CIVIL STATE OF CALIFORNIA

Not for construction

SCALE: 1"=30'

DATE: 10/14/2020

SHEET NO. 1