



LAND USE SERVICES DEPARTMENT PLANNING COMMISSION STAFF REPORT

HEARING DATE: June 7, 2018

AGENDA ITEM # 2

Project Description

APN: 0305-241-14
Applicant: Christopher Drizzt Cook-High Trails Outdoor Science School
Community: Angelus Oaks/3rd Supervisorial District
Location: Generally north of Seven Oaks Road and traversed by portions of Patterson Road and Radford Camp Road, east of the intersection of Patterson Road and Radford Camp Road.
Project No: P201600633
Staff: Jim Morrissey, Planner
App Rep: Darryl Cartozian
Proposal: Conditional Use Permit (CUP) for the establishment of a camp/outdoor science school in two phases, with 20 separate buildings for lodging and dining in the southeast portion of a 40-acre parcel.

Vicinity Map



Hearing Notices Sent On: May 24, 2018

Report Prepared by: Jim Morrissey

SITE INFORMATION

Parcel Size: 40.0 Acres, development area within the southeasterly portion of property.
Terrain: Gentle consistent slope of 2% to 3% from east to west.
Vegetation: Ornamental Trees, grass, weeds.

SURROUNDING LAND DESCRIPTION:

AREA	EXISTING LAND USE	LAND USE ZONING DISTRICT
Site	Vacant, unimproved	Resource Conservation (RC)
North	Vacant, unimproved	Resource Conservation (RC)
South	Vacant, unimproved	Resource Conservation (RC)
East	Vacant, unimproved	Resource Conservation (RC)
West	Vacant, unimproved	Resource Conservation (RC)

AGENCY

COMMENT

City Sphere of Influence:

N/A

Water Service:

Well

See Analysis

Sewer Service:

Septic

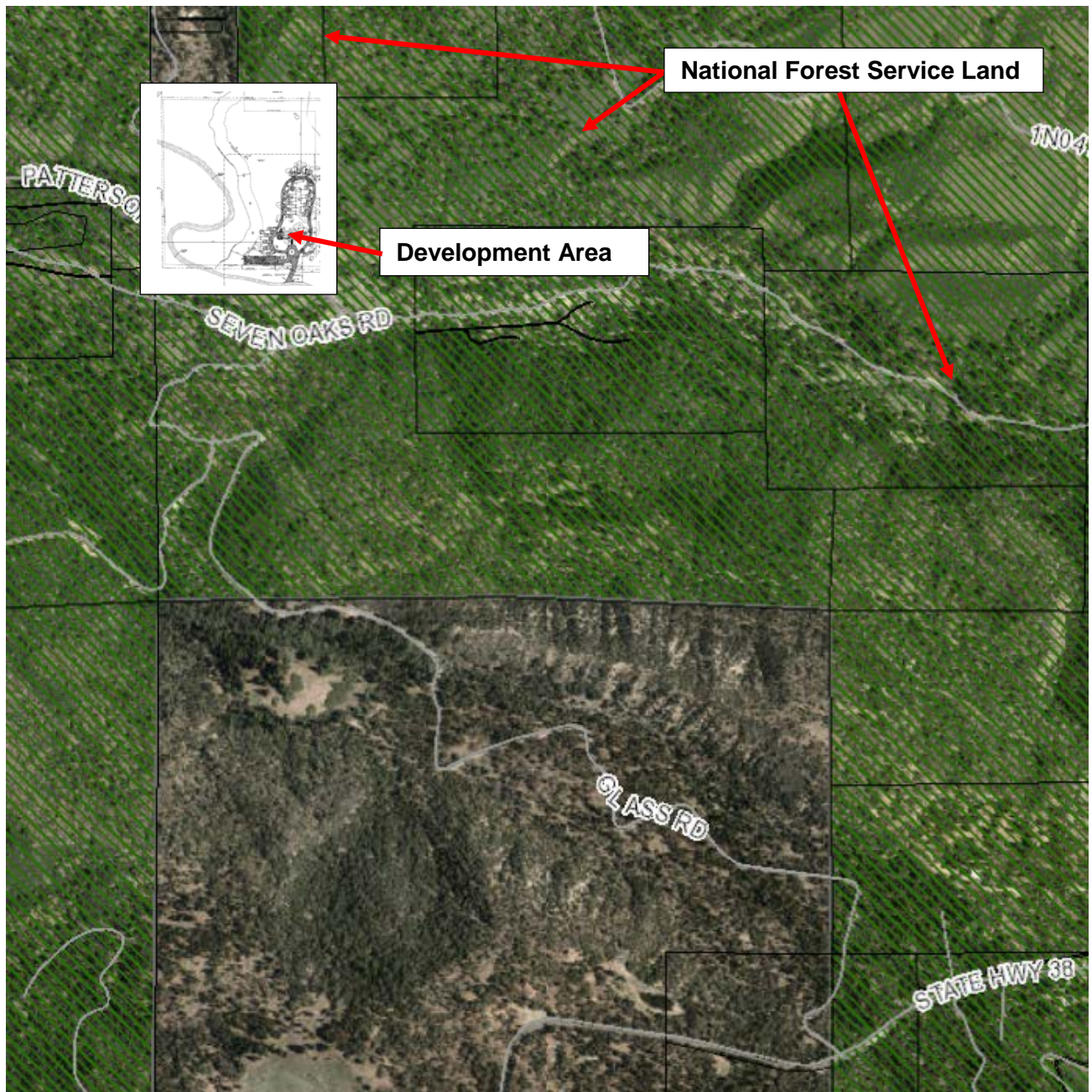
See Analysis

STAFF RECOMMENDATION: That the Planning Commission ADOPT the Mitigated Negative Declaration, APPROVE the Conditional Use Permit subject to the attached Conditions of Approval, ADOPT the Findings, and FILE a Notice of Determination.

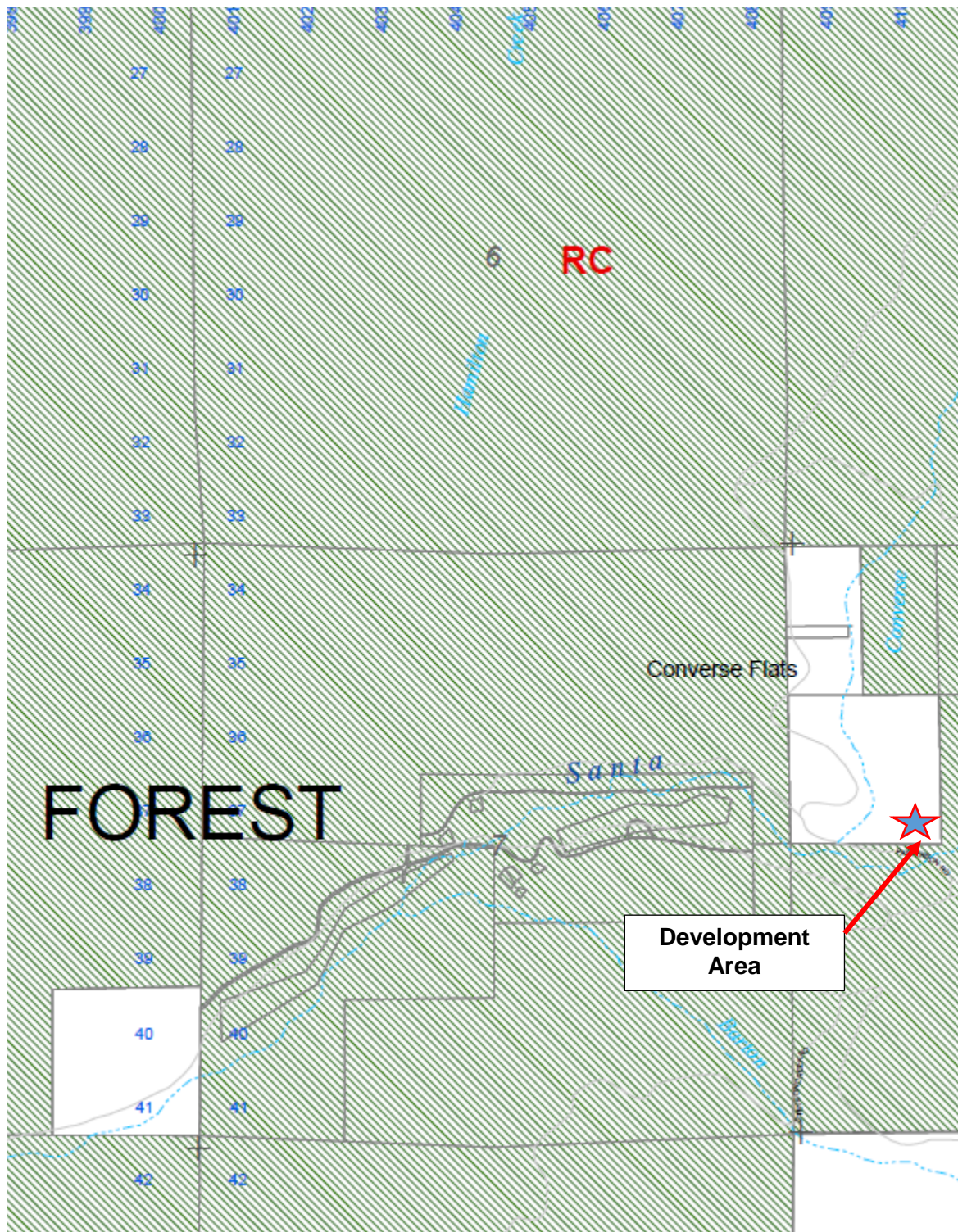
In accordance with Section 86.07.070 of the Development Code, the action taken by the Planning Commission may be appealed to the Board of Supervisors within ten (10) calendar days after the hearing.

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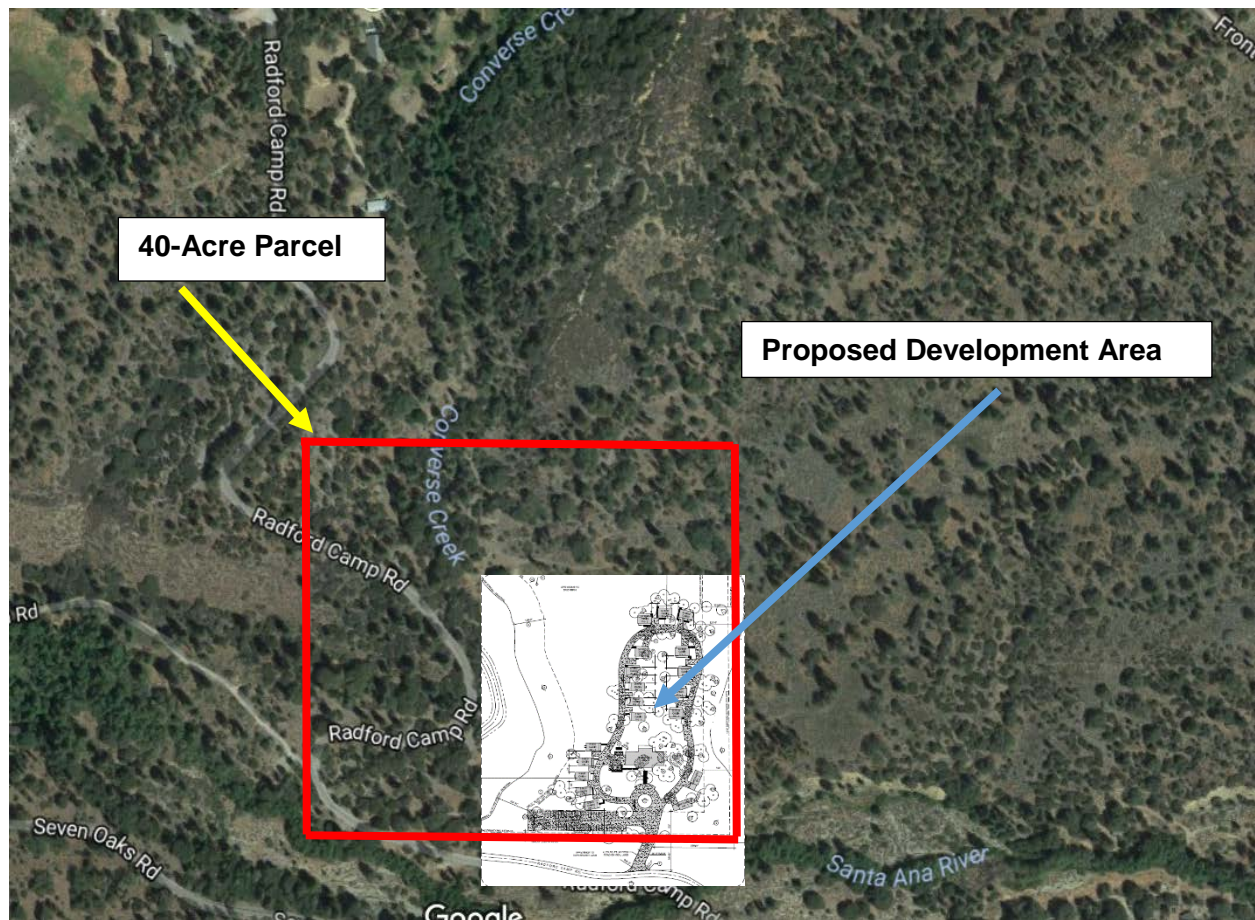
VICINITY MAP



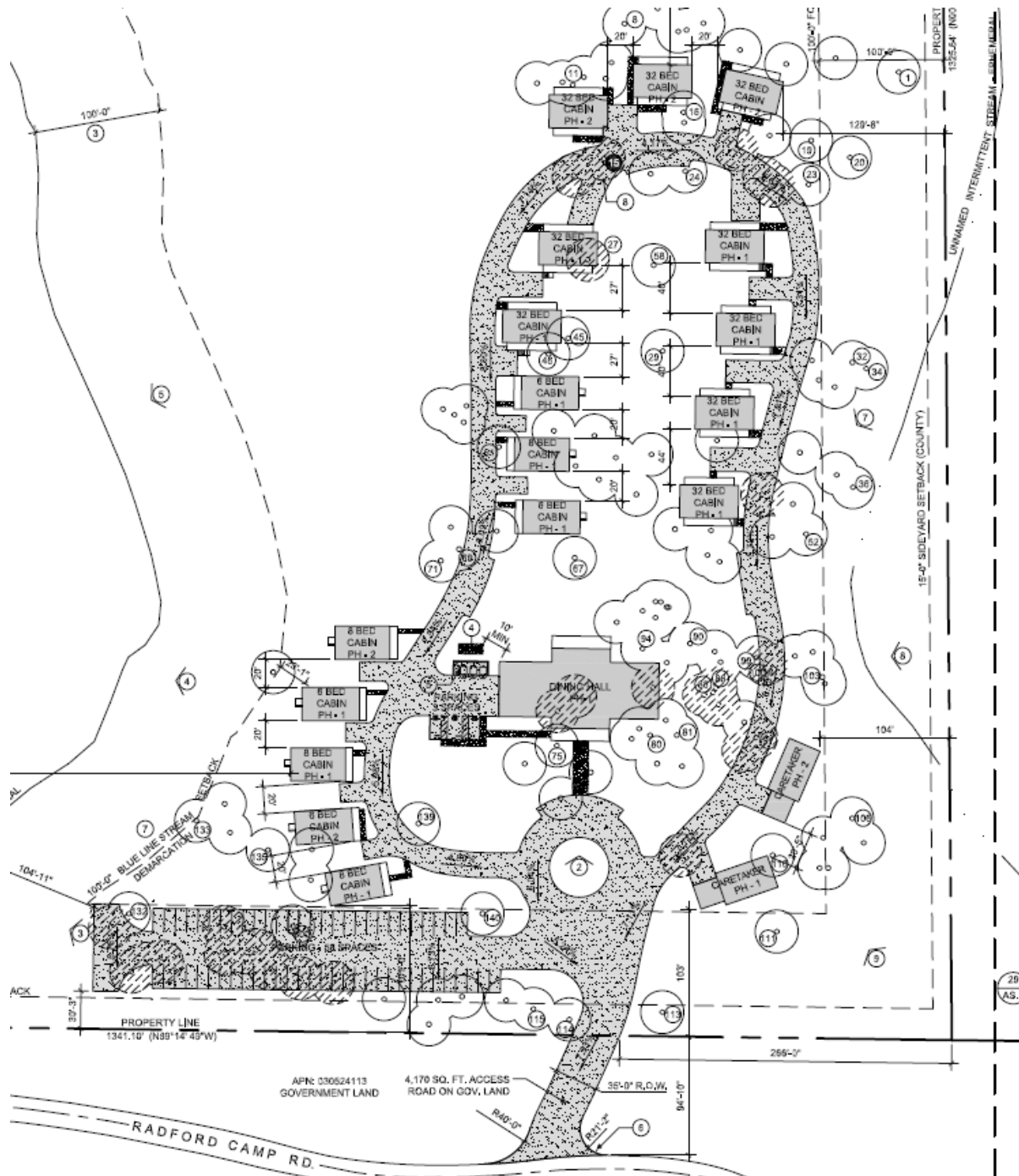
CURRENT OFFICIAL LAND USE DISTRICT MAP



DEVELOPMENT AREA/SITE LOCATION



SITE PLAN



SITE PHOTOS



View of entry from Radford Camp Road



View north from project entry



View to west across lower portion of project site



View north towards upper portion of project area



View north along Converse Creek on west side of project site



View west of proposed parking area near project entrance

PROJECT DESCRIPTION AND BACKGROUND:

The applicant is requesting approval of a Conditional Use Permit to construct and operate a camp/outdoor science school in two phases (Project). The applicant will open the facility upon completion of the first phase. The second phase would be developed based upon future needs, thus a timeframe for the entire Project build-out is unspecified at this time.

Phase 1

- 6,611 sq. ft. Dining Hall
- Three 6-bed cabins, each 1,227 sq. ft. in size.
- Three 8-bed cabins, each 1,173 sq. ft. in size.
- Six 32-bed cabins, each 1,253 sq. ft. in size.
- One 1,173 sq. ft. caretaker's cabin.
- All access roads and parking areas.

Phase 2

- One 6-bed cabin, 1,227 sq. ft.
- One 8-bed cabin, 1,173 sq. ft.
- Three 32-bed cabins, each 1,253 sq. ft.
- One 1,173 sq. ft. caretaker's cabin.

The site consists of a vacant parcel in its natural environmental state and is primarily surrounded by National Forest land. The site has a slope of approximately eight percent, with an elevation of 5,440 feet above mean sea level (amsl) at the north end of the development area and 5,375 feet amsl at the entrance. Access to the Project site will occur from Radford Camp Road, which is a paved two-lane roadway. The existing access entrance currently is a graded dirt road extending partially through the Project site. Final access approval from Radford Camp Road must be obtained from the U.S. Forest Service (Forest Service), since the parcel does not abut the roadway at the proposed entry point, but rather has a strip of intervening land maintained by the Forest Service. The Forest Service is aware of the Project and has indicated it will work with the applicant to assist in the processing of this request.

The proposed Project design attempts to integrate and maintain existing trees and avoid Converse Creek, the existing drainage course to the west of the proposed development area. That portion of the 40 acre parcel potentially affected by the proposed Project currently includes 141 trees and are noted on the site plan exhibit displayed above as part of the site plan. Additional trees cover the balance of the 40 acre property. However, a total of 24 trees are to be removed for the placement of the roadway and cabins, including 15 Yellow pine and 9 Canyon live oak. Twenty-three of these trees are listed

as regulated through the County's Development Code, since they are native trees with a six inch or greater stem diameter.

The applicant has prepared a number of environmental studies for the proposed Project, each of which is listed below. These reports were used in preparation of the Initial Study/Mitigated Negative Declaration.

- *Arborist Assessment*, June 17, 2017, FirstCarbon Solutions.
- *Biological California Environmental Quality Act Cumulative Analysis*, August 29, 2017, FirstCarbon Solutions.
- *Habitat Assessment for Mountain Yellow-legged Frog and Southern Rubber Boa*, May 30, 2016, FirstCarbon Solutions.
- *Letter Report for San Bernardino Flying Squirrel Habitat Assessment*, May 14, 2016, FirstCarbon Solutions.
- *Results of the Southwestern Willow Flycatcher Habitat Assessment*, June 7, 2017, FirstCarbon Solutions.
- *Biological Resources Assessment Report*, December 13, 2016, FirstCarbon Solutions.
- *E-mail correspondence, dated November 15, 2017, from Kimberly Boydston, Senior Biologist, FirstCarbon Solutions.*
- *Cultural Resource Assessment for the High Trails Outdoor Science School Project, San Bernardino County, California*, August 2017, prepared by Applied EarthWorks, Inc.
- *Cultural Resource Assessment for the High Trails Outdoor Science School Project, San Bernardino County, California*, October 2017, prepared by Applied EarthWorks, Inc.
- *Cultural Resource Constraints Analysis for the High Trails Outdoor Science School, Community of Angelus Oaks, San Bernardino County California*, October 11, 2016, prepared by Applied EarthWorks, Inc.

Upon distribution of the Initial Study/Mitigated Negative Declaration, comments were received from the California Department of Transportation (Caltrans) and California Department of Fish and Wildlife. Responses to those comments have been included within this report.

ANAYSIS:

Camp Operation. The proposed Project would utilize the southeast corner of a privately owned 40-acre parcel. This operation would involve a lease that extends during the typical school year, September through June, but ultimately the applicant would like to include the months of July and August. Students from public and private schools would visit the camp for a week, arriving by bus on Monday and departing on Friday. The applicant indicated its current clientele is approximately 99% public school students and 1% private school students. Students and instructors would reside and eat on-site in

cabins and a common dining hall. During the day they would hike and meet for instruction on various topics.

Project Design. The proposed Project design is intended to minimize the amount of grading and land disturbance. The proposed development area is located within a relatively less densely forested area of the property, where the number of trees to be removed can be minimized (see site plan that notes the location of area trees). In addition, the building layout has further attempted to minimize the number of trees potentially affected. Of the 141 trees located within the proposed development area, 24 are to be removed. The existing trees on the balance of the 40-acre parcel would remain. The proposed cabins are located around a loop roadway with the dining hall located generally central to the cabins. Parking has been placed at the perimeter of the site and immediately accessible to the Project entry.

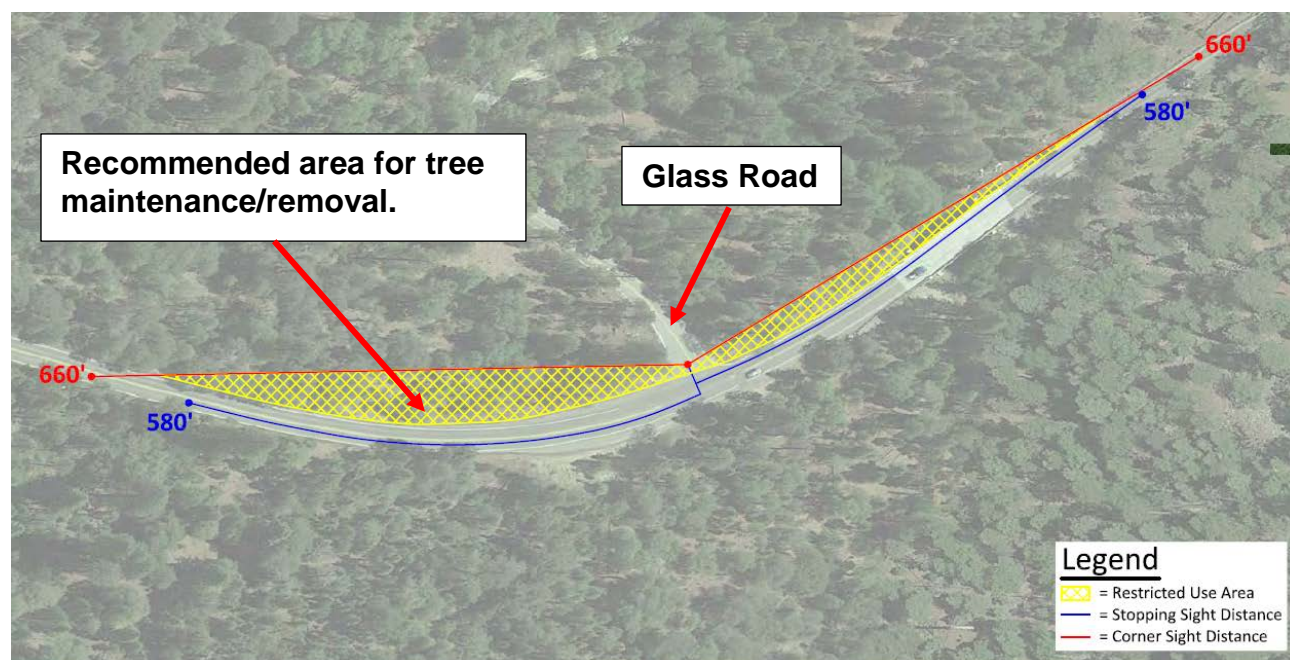
The proposed development area is situated between two drainage courses, with Converse Creek to the west and the Santa Ana River to the east, which is off-site. Vehicular access to the property is from Radford Camp Road, a County maintained roadway. However, because the land between the roadway and the property is owned by the Forest Service, the applicant will need to obtain access from that agency. Based upon correspondence and conversations with a representative of the Forest Service, access rights are expected to be granted for the use.

AB52 Tribal Cultural Resources. The proposed Project area exists within Serrano ancestral territory and, therefore, is of interest to the San Manuel Band of Mission Indians (SMBMI). While there are no known cultural resources identified in the area of disturbance, some earth-moving activities and site clearing may impact such resources through inadvertent discovery. Minimal site grading is contemplated at this time for the proposed buildings utilizing slab on grade design for the dining hall and stem wall construction for the cabins. Because of these designs, the San Manuel Tribe indicated that monitoring was not generally necessary, unless grading greater than three feet in depth occurs, which is envisioned only for the dining hall. In that instance, San Manuel recommended that an archaeologist be present on site, but a Tribal monitor is not necessary. In addition, any activities that pull large vegetation by the root will also need a monitor. If cultural resources are discovered during Project development a buffer area is to be created and an archaeologist is to be retained to evaluate the find. Appropriate mitigation measures have been incorporated into the Initial Study/Mitigated Negative Declaration and conditions of approval (COAs) to reduce impacts to less than significant.

Traffic/Transportation. A traffic study was not originally prepared for the Project. However, the California Department of Transportation (Caltrans) provided comments during the CEQA public review period, including a request by letter of December 21, 2017, for the preparation of a Traffic Impact Analysis (TIA). A follow-up conversation with Mark Roberts, the District 8 Caltrans Regional Planning Chief, indicated a letter could be provided in-lieu of a TIA. Mr. Roberts indicated a concern about vehicle movements onto

and off State Highway 38 and if additional improvements would be necessary. A *Focused Traffic Analysis (Analysis)* was prepared and evaluated turning lane movements and sight distance at Glass Road and Highway 38. The *Analysis* found the projected turn lane movement during weekday eastbound mid-day peak hour volume would be less than eight vehicles per hour. Typically, a turn lane is recommended when volumes exceed 100 vehicles per hour.

Sight distance from southbound Glass Road at Highway 38 is adequate for westbound vehicles, but not for eastbound vehicles. The *Analysis* recommended tree trimming maintenance to increase the canopy clearance or selective tree removal to allow for a line of sight between trees. A mitigation measure and COA have been inserted to address this particular issue based upon contact with Caltrans' Staff. This mitigation/COA involves obtaining an encroachment permit from Caltrans (see diagram below).



Biological Issues. The applicant prepared a variety of biological studies which are listed above. Although the potential exists for a number of species to be located on the property, site surveys did not identify any significant plant or animal species actually located on the property. In this regard, the California Department of Fish and Wildlife (CDFW) commented on the proposed Project. In general the various topics raised by CDFW were determined to be less than significant, based upon the recommended COAs and/or follow-up comments from the Project biologist. A general summary of those topics are listed below and noted in the attached Responses to Comments. Although some level of potential effect may occur due to Project operation, the resulting effects have been found to be less than significant.

CDFW Comments	Responses
Concern was expressed about the analysis of the Southern Rubber boa and CDFW requested a new mitigation measure to address this issue.	A specific survey was undertaken for this species. While the survey found the potential to support potential habitat, the evaluation indicated the potential for this specie is low due to lack of microhabitat necessary for its support. A response to the Department's comments by the Project biologist indicated the existing mitigation measure is adequate.
Concern was expressed about Project's potential effect upon Converse Creek. CDFW requested completion of a Streambed Alteration Agreement (SAA).	A specific analysis was undertaken on this topic. The Project site is located a distance from adjoining drainage courses. The Land Development Division requires a standard COA for the applicant to obtain a SAA. An additional mitigation measure has also been incorporated, as requested by CDFW.
Concern was expressed about the existence of the San Bernardino Flying Squirrel and the findings of the site survey.	A specific analysis was undertaken for this species. The habitat assessment found only low habitat quality and that the site is likely only for foraging. This was reiterated in the follow-up response from the Project biologist. The original 2016 report indicated mitigation measures should be included. However, a follow-up e-mail from the biologist stated there was no evidence that the specie was on-site and these mitigation measures should be removed.
Concern was expressed about the possibility of Special Status Plant Species and milk-vetch occurring on-site.	A specific analysis was undertaken on this topic. A habitat assessment and focused on-site survey did not find any special status species, including the milk-vetch, and the potential development area does not contain optimal habitat.
Concern was expressed about the timing of Nesting Bird Surveys and requested a modified COA to ensure ground level nesting is evaluated.	The modified measure is acceptable, but CDFW's suggested short time frame prior to grading could result in potentially adverse effects upon construction scheduling.
Concern was expressed about defensible space affecting adjacent public properties.	Contact with the County Fire Department found the County's defensible space criteria would require defensible space to be located on-site, within 100 feet of the building/roadway. The current building setback is 104 feet from property line and consistent with this requirement.

California Environmental Quality Act. An independent Initial Study in compliance with the California Environmental Quality Act (CEQA) has been completed for the Project and Staff determined that the Project will not cause any significant impacts on the environment with implementation of the proposed mitigation measures and COAs. The Initial Study was sent to the State Clearinghouse with the review period ending on January 17, 2018. Comments were received from Caltrans and CDFW. Responses to those comments have been provided in the attached Responses to Comments section. In addition to the items discussed above, the mitigation measures will ensure construction and operational impacts will not have a significant impact on the environment. The County exercised its independent judgment in making this determination. Therefore, a Mitigated Negative Declaration is recommended along with approval of the Project.

RECOMMENDATION:

- A) **ADOPT** the Mitigated Negative Declaration;
- B) **APPROVE** the Conditional Use Permit to establish a camp/outdoor science school in two phases with the ultimate development including 20 separate structures/cabins of varying sizes that provide lodging for students, instructors, support staff, and an on-site caretakers, along with a dining hall, in the southeast corner of a 40 acre parcel, subject to the Conditions of Approval;
- C) **ADOPT** the Findings as contained in the Staff Report; and
- D) **FILE** a Notice of Determination.

Attachments:

- Exhibit A: Findings
- Exhibit B: CUP Conditions of Approval
- Exhibit C: Initial Study
- Exhibit D: Technical Studies (Biological and Cultural Resources) Posted at:
<http://cms.sbcounty.gov/lus/Planning/Environmental/Mountain.aspx>
- Exhibit E: Responses to Comments
- Exhibit F: Caltrans Correspondence
- Exhibit G: California Department of Fish and Wildlife Correspondence
- Exhibit H: U.S. Forest Service Correspondence

EXHIBIT A

Findings

FINDINGS: CONDITIONAL USE PERMIT

Conditional Use Permit for the establishment of a camp/outdoor science school in two phases with the ultimate development including 20 separate buildings for administration, service, multi-purpose, lodging and dining, in the southeast portion of a 40-acre parcel (Project).

1. The site for the proposed use is adequate in terms of shape and size to accommodate the proposed use and all landscaping, loading areas, open spaces, parking areas, setbacks, walls and fences, yards, and other features pertaining to the application, because the proposed Project has been designed within only a portion of the existing 40 acre parcel that includes avoidance of drainage courses, maintenance of existing trees and consistency with all applicable County standards. Access is provided from the nearby street to the north with an allowed driveway connection through Forest Service land. Adequate parking has been provided within each phase of the Project. The Project design incorporates an adequate separation between the proposed development area and adjoining Forest Service land that provides adequate on-site defensible space for fire prevention.
2. The site for the proposed use has adequate access, which means that the site design incorporates appropriate street and highway characteristics to serve the proposed use, because the proposed Project will obtain access from a paved County maintained roadway. A single point of access, acceptable to the San Bernardino County Fire Department, will provide suitable emergency ingress and egress. The internal loop roadway adequately meets the Project's intended needs.
3. The proposed use will not have a substantial adverse effect on abutting property or the allowed use of the abutting property, which means that the use will not generate excessive noise, traffic, vibration, or other disturbance, because the proposed development area is substantially separated from adjoining Forest Service lands. Construction related activities, such as grading will be minimized by the type of intended construction and the desire to maintain existing trees. The closest building to the easterly property line is approximately 100 feet. The use will not substantially interfere with the present or future ability to use solar energy systems, due to the building design.
4. The proposed use and manner of development are consistent with the goals, maps, policies, and standards of the General Plan and any applicable community or specific plan, because the proposed land use is allowed as a conditionally permitted land use in the Resource Conservation Land Use District and implements the goals and policies of the County General Plan through its minimizing of impacts upon potential biological habitats for vegetation, animals, and birds; its locational characteristic of having limited site access, and; its purpose to encourage limited rural development that maximizes preservation of open space, watershed and wildlife habitat areas. The Project specifically implements the following goals:

General Plan Goal M/CO 1: Preserve the unique environmental features of the Mountain Region including native wildlife, vegetation and scenic vistas.

- Goal Implementation: A number of site specific studies were undertaken to evaluate the potential for County identified species to exist on the project site. The studies found the potential for Southern rubber boa and recommended a pre-construction survey to determine presence or absence. Nesting bird surveys were also required depending upon time of construction.

General Plan Goal M/CO 2: Maintain the health and vigor of the forest environment.

- Goal Implementation: An Arborist Assessment was prepared for the site to identify the number and types of trees potentially affected by the proposed Project. The Project was designed to minimize the number of trees to be removed.

General Plan Goal M/CO 4: Protect the cultural and paleontological resources within the Mountain Region.

- Goal Implementation: A Cultural Resource Assessment was undertaken for the property and did not identify any potential resources. AB 52 notices were also distributed to designated Tribes and a meeting was held with a representative of the San Manuel Tribe that resulted in specific comments based upon the depth of grading and the need for monitoring beyond three feet and clearing of trees.

5. There is supporting infrastructure, existing or available, consistent with the intensity of the development, to accommodate the proposed development without significantly lowering service levels, because water and wastewater will be obtained and disposed of on-site, electrical services can be extended to the property, and paved roadways exist from Highway 38 to the property.
6. The lawful conditions stated in the approval are deemed reasonable and necessary to protect the overall public health, safety and general welfare, because the Project has been evaluated by County departments and as part of the environmental review process to respond to specific development needs and reduce potential environmental impacts.
7. The design of the site has considered the potential for the use of solar energy systems and passive or natural heating and cooling opportunities, because the proposed Project will provide future opportunities for the installation of solar energy systems due to the proposed roof design and the proposed building height would not interfere with the placement of solar systems on adjoining properties.
8. There is no substantial evidence that the Project will have a significant effect on the environmental, because the proposed project has been evaluated through the preparation of an Initial Study/Mitigated Negative Declaration consistent with the California Environmental Quality Act, and the recommended inclusion of mitigation measures involving; 1) Conducting a pre-construction survey for the Southern Rubber Boa, 7-days prior to ground disturbance; 2) Obtaining written correspondence from California

Department of Fish and Wildlife that a Streambed Alteration Agreement is not necessary; 3) Conducting a pre-construction survey to confirm the absence of nesting birds on the property; 4) Obtaining an encroachment permit from Caltrans related to tree trimming and clearing for vehicular visibility, and; 5) Monitoring of ground disturbance by a qualified archaeologist and contact with the County Coroner if any human remains are uncovered. The implementation of these surveys and contact with identified entities will assist in verifying the non-existence of special or threatened species and ascertain whether potential remains involve Native Americans.

Therefore, it is determined, on the basis of staff's independent evaluation, that the Project will not have a significant adverse impact on the environment with the implementation of all the conditions of approval and environmental mitigation measures. The Mitigated Negative Declaration for this Project reflects the County's independent judgment in making this decision. Therefore, adoption of a Mitigated Negative Declaration is recommended.

EXHIBIT B

CUP Conditions of Approval

CONDITIONS OF APPROVAL

High Trails Outdoor Science School P201600633
Conditional Use Permit

GENERAL REQUIREMENTS

Ongoing and Operational Conditions

LAND USE SERVICES DEPARTMENT– Planning Division (909) 387-8311

1. Project Approval Description: This Conditional Use Permit (CUP) is conditionally approved to establish a camp/outdoor science school, with a number of separate buildings for dining and sleeping on a portion of a 40 acre parcel in the Seven Oaks area, in compliance with the San Bernardino County Code (SBCC), California Building Codes (CBC), the San Bernardino County Fire Code (SBCFC), the following Conditions of Approval, the approved site plan, and all other required and approved reports and displays (e.g. elevations).

The developer shall provide a copy of the approved conditions and the approved site plan to every current and future project tenant, lessee, and property owner to facilitate compliance with these Conditions of Approval and continuous use requirements for the Project Site with APN: 0305-241-14 Project No. P201600633.

2. Project Location: The Project site is located north of Seven Oaks Road, northeast of the intersection of Patterson Road and Radford Camp Road, in the southeast corner of the 40 acre parcel, in the Seven Oaks area.
3. Revisions: Any proposed change to the approved use/activity on the site or any increase in the developed area of the site or any expansion or modification to the approved facilities, including changes to the height, location, bulk or size of structure or equipment shall require an additional land use review and application subject to approval by the County. The developer shall prepare, submit with fees and obtain approval of the application prior to implementing any such revision or modification. (SBCC §86.06.070)
4. Indemnification: In compliance with SBCC §81.01.070, the developer shall agree, to defend, indemnify, and hold harmless the County or its "indemnitees" (herein collectively the County's elected officials, appointed officials (including Planning Commissioners), Zoning Administrator, agents, officers, employees, volunteers, advisory agencies or committees, appeal boards or legislative body) from any claim, action, or proceeding against the County or its indemnitees to attack, set aside, void, or annul an approval of the County by an indemnitee concerning a map or permit or any other action relating to or arising out of County approval, including the acts, errors or omissions of any person and for any costs or expenses incurred by the indemnitees on account of any claim, except where such indemnification is prohibited by law. In the alternative, the developer may agree to relinquish such approval.

Any condition of approval imposed in compliance with the County Development Code or County General Plan shall include a requirement that the County acts reasonably to promptly notify the developer of any claim, action, or proceeding and that the County cooperates fully in the defense. The developer shall reimburse the County and its indemnitees for all expenses resulting from such actions, including any court costs and attorney fees, which the County or its indemnitees may be required by a court to pay as a result of such action.

The County may, at its sole discretion, participate at its own expense in the defense of any such action, but such participation shall not relieve the developer of their obligations under this condition to reimburse the County or its indemnitees for all such expenses.

This indemnification provision shall apply regardless of the existence or degree of fault of indemnitees. The developer's indemnification obligation applies to the indemnitees' "passive" negligence but does not apply to the indemnitees' "sole" or "active" negligence or "willful misconduct" within the meaning of Civil Code Section 2782.

5. Expiration: This project permit approval shall expire and become void if it is not “exercised” within three (3) years of the effective date of this approval, unless an extension of time is approved. The permit is deemed “exercised” when either:
- The permittee has commenced actual construction or alteration under a validly issued building permit, or
 - The permittee has substantially commenced the approved land use or activity on the project site, for those portions of the project not requiring a building permit. (SBCC §86.06.060)
 - Occupancy of approved land use occupancy of completed structures and operation of the approved and exercised land use remains valid continuously for the life of the project and the approval runs with the land, unless one of the following occurs:
 - Construction permits for all or part of the project are not issued or the construction permits expire before the structure is completed and the final inspection is approved.
 - The land use is determined by the County to be abandoned or non-conforming.
 - The land use is determined by the County to be not operating in compliance with these conditions of approval, the County Code, or other applicable laws, ordinances or regulations. In these cases, the land use may be subject to a revocation hearing and possible termination.
- PLEASE NOTE: This will be the ONLY notice given of this approval's expiration date. The developer is responsible to initiate any Extension of Time application.
6. Continuous Effect/Revocation: All of the conditions of this project approval are continuously in effect throughout the operative life of the project for all approved structures and approved land uses/activities. Failure of the property owner or developer to comply with any or all of the conditions at any time may result in a public hearing and possible revocation of the approved land use, provided adequate notice, time and opportunity is provided to the property owner, developer or other interested party to correct the non-complying situation.
7. Extension of Time: Extensions of time to the expiration date (listed above or as otherwise extended) may be granted in increments each not to exceed an additional three years beyond the current expiration date. An application to request consideration of an extension of time may be filed with the appropriate fees no less than thirty days before the expiration date. Extensions of time may be granted based on a review of the application, which includes a justification of the delay in construction and a plan of action for completion. The granting of such an extension request is a discretionary action that may be subject to additional or revised conditions of approval or site plan modifications. (SBCC §86.06.060)
8. Project Account: The Project account number is P201600633. This is an actual cost project with a deposit account to which hourly charges are assessed by various county agency staff (e.g. Land Use Services, Public Works, and County Counsel). Upon notice, the “developer” shall deposit additional funds to maintain or return the account to a positive balance. The “developer” is responsible for all expense charged to this account. Processing of the project shall cease, if it is determined that the account has a negative balance and that an additional deposit has not been made in a timely manner. A minimum balance of \$1,000.00 must be in the project account at the time the Condition Compliance Review is initiated. Sufficient funds must remain in the account to cover the charges during each compliance review. All fees required for processing shall be paid in full prior to final inspection, occupancy and operation of the approved use.
9. Condition Compliance: In order to obtain construction permits for grading, building, final inspection and/or tenant occupancy for each approved building, the developer shall process a Condition Compliance Release Form (CCRF) for each respective building and/or phase of the development through the Planning Division in accordance with the directions stated in the Approval letter. The Planning Division shall release their holds on each phase of development by providing to County Building and Safety the following:
- Grading Permits: a copy of the signed CCRF for grading/land disturbance and two “red” stamped and signed approved copies of the grading plans.
 - Building Permits: a copy of the signed CCRF for building permits and three “red” stamped and signed approved copies of the final approved site plan.

- Final Occupancy: a copy of the signed CCRF for final inspection of each respective building or use of the land, after an on-site compliance inspection by the Planning Division.

10. Development Impact Fees: Additional fees may be required prior to issuance of development permits. Fees shall be paid as specified in adopted fee ordinances.
11. Additional Permits: The developer shall ascertain compliance with all laws, ordinances, regulations and any other requirements of Federal, State, County and Local agencies that may apply for the development and operation of the approved land use. These may include but not limited to:
- a. FEDERAL: U.S. Forest Service;
 - b. STATE: State Regional Water Quality Control Board, California Department of Fish and Wildlife, and Caltrans.
 - c. COUNTY: Land Use Services – Planning/Building and Safety/Code Enforcement/Land Development, County Fire/HazMat; Public Health – Environmental Health Services, Public Works –Traffic/ County Surveyor, and Solid Waste Management
 - d. LOCAL: N/A
12. Continuous Maintenance: The Project property owner shall continually maintain the property so that it is visually attractive and not dangerous to the health, safety and general welfare of both on-site users (e.g. employees) and surrounding properties. The property owner shall ensure that all facets of the development are regularly inspected, maintained and that any defects are timely repaired. Among the elements to be maintained, include but are not limited to:
- a) Annual maintenance and repair: The developer shall conduct inspections for any structures, fencing/walls, driveways, and signs to assure proper structural, electrical, and mechanical safety.
 - b) Graffiti and debris: The developer shall remove graffiti and debris immediately through weekly maintenance.
 - c) Landscaping: The developer shall maintain landscaping in a continual healthy thriving manner at proper height for required screening. Drought-resistant, fire retardant vegetation shall be used where practicable. Where landscaped areas are irrigated it shall be done in a manner designed to conserve water, minimizing aerial spraying.
 - d) Dust control: The developer shall maintain dust control measures on any undeveloped areas where landscaping has not been provided.
 - e) Erosion control: The developer shall maintain erosion control measures to reduce water runoff, siltation, and promote slope stability.
 - f) External Storage: The developer shall maintain external storage, loading, recycling and trash storage areas in a neat and orderly manner, and fully screened from public view. Outside storage shall not exceed the height of the screening walls.
 - g) Metal Storage Containers: The developer shall NOT place metal storage containers in loading areas or other areas unless specifically approved by this or subsequent land use approvals.
 - h) Screening: The developer shall maintain screening that is visually attractive. All trash areas, loading areas, mechanical equipment (including roof top) shall be screened from public view.
 - i) Signage: The developer shall maintain all on-site signs, including posted area signs (e.g. “No Trespassing”) in a clean readable condition at all times. The developer shall remove all graffiti and repair vandalism on a regular basis. Signs on the site shall be of the size and general location as shown on the approved site plan or subsequently a County-approved sign plan.
 - j) Lighting: The developer shall maintain any lighting so that they operate properly for safety purposes and do not project onto adjoining properties or roadways. Lighting shall adhere to applicable glare and night light rules.
 - k) Parking and on-site circulation: The developer shall maintain all parking and on-site circulation requirements, including surfaces, all markings and traffic/directional signs in an un-faded condition as identified on the approved site plan. Any modification to parking and access layout requires the Planning

Division review and approval. The markings and signs shall be clearly defined, un-faded and legible; these include parking spaces, disabled space and access path of travel, directional designations and signs, stop signs, pedestrian crossing, speed humps and "No Parking", "Carpool", and "Fire Lane" designations.

- l) Fire Lanes: The developer shall clearly define and maintain in good condition at all times all markings required by the Fire Department, including "No Parking" designations and "Fire Lane" designations.

13. Performance Standards: The approved land uses shall operate in compliance with the general performance standards listed in the County Development Code Chapter 83.01, regarding air quality, electrical disturbance, fire hazards (storage of flammable or other hazardous materials), heat, noise, vibration, and the disposal of liquid waste.
14. Lighting: Lighting shall comply with Table 83-7 "Shielding Requirements for Outdoor Lighting in the Mountain Region and Desert Region" of the County's Development Code (i.e. "Dark Sky" requirements). All lighting shall be limited to that necessary for maintenance activities and security purposes. This is to allow minimum obstruction of night sky remote area views. No light shall project onto adjacent roadways in a manner that interferes with on-coming traffic. All signs proposed by this project shall only be lit by steady, stationary, shielded light directed at the sign, by light inside the sign, by direct stationary neon lighting or in the case of an approved electronic message center sign, an alternating message no more than once every five seconds.
15. Clear Sight Triangle: Adequate visibility for vehicular and pedestrian traffic shall be provided at clear sight triangles at all 90 degree angle intersections of public rights-of-way and private driveways. All signs, structures and landscaping located within any clear sight triangle shall comply with the height and location requirements specified by County Development Code (SBCC§ 83.02.030) or as otherwise required by County Traffic.
16. Cultural Resources: During grading or excavation operations, should any potential paleontological or archaeological artifacts be unearthed or otherwise discovered, the San Bernardino County Museum shall be notified and the uncovered items shall be preserved and curated, as required. For information, contact the County Museum, Community and Cultural Section, telephone (909) 798-8570.
17. Underground Utilities: No new above-ground power or communication lines shall be extended to the site. All required utilities shall be placed underground in a manner that complies with the California Public Utilities Commission General Order 128, and avoids disturbing any existing/natural vegetation or the site appearance.
18. Construction Hours: Construction will be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday in accordance with the County of San Bernardino Development Code standards. No construction activities are permitted outside of these hours or on Sundays and Federal holidays.
19. Construction Noise: The following measures shall be adhered to during the construction phase of the project:
- All construction equipment shall be muffled in accordance with manufacturer's specifications.
 - All construction staging shall be performed as far as possible from occupied dwellings. The location of staging areas shall be subject to review and approval by the County prior to the issuance of grading and/or building permits.
 - All stationary construction equipment shall be placed in a manner so that emitted noise is directed away from sensitive receptors (e.g. residences and schools) nearest the project site.
20. GHG – Operational Standards (Residential): The developer shall implement the following as greenhouse gas (GHG) mitigation during the operation of the approved project:
- a. Waste Stream Reduction: The "developer" shall provide to all tenants and project employees County-approved informational materials about methods and need to reduce the solid waste stream and listing available recycling services.

- b. Vehicle Trip Reduction: The “developer” shall provide to all tenants and project employees County-approved informational materials about the need to reduce vehicle trips and the program elements this project is implementing. Such elements may include: participation in established ride-sharing programs, creating a new ride-share employee vanpool, designating preferred parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles with benches in waiting areas, and/or providing a web site or message board for coordinating rides.
 - c. Provide Educational Materials: The developer shall provide to all tenants and staff education materials and other publicity about reducing waste and available recycling services. The education and publicity materials/program shall be submitted to County Planning for review and approval.
 - d. Landscape Equipment: The developer shall require in the landscape maintenance contract and/or in onsite procedures that a minimum of 20% of the landscape maintenance equipment shall be electric-powered.
21. GHG – Operational Standards (Commercial): The developer shall implement the following as greenhouse gas (GHG) mitigation during the operation of the approved project:
- e. Waste Stream Reduction: The “developer” shall provide to all tenants and project employees County-approved informational materials about methods and need to reduce the solid waste stream and listing available recycling services.
 - f. Vehicle Trip Reduction: The “developer” shall provide to all tenants and project employees County-approved informational materials about the need to reduce vehicle trips and the program elements this project is implementing. Such elements may include: participation in established ride-sharing programs, creating a new ride-share employee vanpool, designating preferred parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles with benches in waiting areas, and/or providing a web site or message board for coordinating rides.
 - g. Provide Educational Materials: The developer shall provide to all tenants and staff education materials and other publicity about reducing waste and available recycling services. The education and publicity materials/program shall be submitted to County Planning for review and approval. The developer shall also provide to all tenants and require that the tenants shall display in their stores current transit route information for the project area in a visible and convenient location for employees and customers. The specific transit routes displayed shall include Omni Trans Route 8, San Bernardino-Mentone-Yucaipa.
 - h. Landscape Equipment: The developer shall require in the landscape maintenance contract and/or in onsite procedures that a minimum of 20% of the landscape maintenance equipment shall be electric-powered.

LAND USE SERVICES DEPARTMENT– Code Enforcement Division (909) 387-8311

22. Enforcement: If any County enforcement activities are required to enforce compliance with the conditions of approval, the property owner and “developer” shall be charged for such enforcement activities in accordance with the County Code Schedule of Fees. Failure to comply with these conditions of approval or the approved site plan design required for this project approval shall be enforceable against the property owner and “developer” (by both criminal and civil procedures) as provided by the San Bernardino County Code, Title 8 – Development Code; Division 6 – Administration, Chapter 86.09 – Enforcement.
23. Weed Abatement: The applicant shall comply with San Bernardino County weed abatement regulations and periodically clear the site of all non-complying vegetation. This includes removal of all Russian thistle (tumbleweeds).

LAND USE SERVICES DEPARTMENT – Land Development Division – Drainage Section (909) 387-8311

24. Tributary Drainage: Adequate provisions should be made to intercept and conduct the tributary off site - on site drainage flows around and through the site in a manner, which will not adversely affect adjacent or downstream properties at the time the site is developed.
25. Natural Drainage: The natural drainage courses traversing the site shall not be occupied or obstructed.

26. Additional Drainage Requirements: In addition to drainage requirements stated herein, other "on-site" and/or "off-site" improvements may be required which cannot be determined from tentative plans at this time and would have to be reviewed after more complete improvement plans and profiles have been submitted to this office.
27. Continuous BMP Maintenance: The property owner/"developer" is required to provide periodic and continuous maintenance of all Best Management Practices (BMP) devices/facilities listed in the County approved Water Quality Management Plan (WQMP) for the project. This includes but is not limited to, filter material replacement and sediment removal, as required to ensure peak performance of all BMPs. Furthermore, such maintenance activity will require compliance with all Local, State, or Federal laws and regulations, including those pertaining to confined space and waste disposal methods in effect at the time such maintenance occurs.
28. BMP Enforcement: In the event the property owner/"developer" (including any successors or assigns) fails to accomplish the necessary BMP maintenance within five (5) days of being given written notice by County Public Works, then the County shall cause any required maintenance to be done. The entire cost and expense of the required maintenance shall be charged to the property owner and/or "developer", including administrative costs, attorney's fees and interest thereon at the rate authorized by the County Code from the date of the original notice to the date the expense is paid in full.

PUBLIC HEALTH - Environmental Health Services (800) 442-2283

29. Refuse Storage/Removal: All refuse generated at the premises shall at all times be stored in approved containers and shall be placed in a manner so that environmental public health nuisances are minimized. All refuse not containing garbage shall be removed from the premises at least 1 time per week, or as often as necessary to minimize public health nuisances. Refuse containing garbage shall be removed from the premises at least 2 times per week, or as often if necessary to minimize public health nuisances, by a permitted hauler to an approved solid waste facility in conformance with San Bernardino County Code Chapter 8, Section 33.0830 et. seq. For information, please call DEHS/LEA at: (800) 442-2283.
30. Septic System Maintenance: The septic system shall be properly maintained, not create a public nuisance, and be serviced by a DEHS permitted sewage pumper. For information, call DEHS/Wastewater Section at: 1-800-442-2283.
31. Noise: Noise level(s) shall be maintained at or below County Standards, Development Code §83.01.080. For information, call DEHS camps program at 1-800-442-2283.

COUNTY FIRE DEPARTMENT–Community Safety Division (909)386-8465/LOCAL FIRE JURISDICTION

32. Construction Permits: Construction permits, including Fire Condition Letters, shall automatically expire and become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Suspension or abandonment shall mean that no inspection by the Department has occurred within 180 days of any previous inspection. After a construction permit or Fire Condition Letter, becomes invalid and before such previously approved work recommences, a new permit shall be first obtained and the fee to recommence work shall be one-half the fee for the new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year. A request to extend the Fire Condition Letter or Permit may be made in writing PRIOR TO the expiration date justifying the reason that the Fire Condition Letter should be extended.
33. Jurisdiction: The above referenced project is under the jurisdiction of the San Bernardino County Fire Department herein ("Fire Department"). Prior to any construction occurring on any parcel, the developer shall contact the Fire Department for verification of current fire protection requirements. All new construction shall comply with the

current Uniform Fire Code requirements and all applicable statutes, codes, ordinances and standards of the Fire Department.

34. FS-1: The County General Plan designates this property as being within the Fire Safety Review Area 1 (One) and all future construction shall adhere to all applicable standards and requirements of this overlay district. [F04A]

DEPARTMENT OF PUBLIC WORKS – Solid Waste Management – (909) 386-8701

35. Franchise Hauler Service Area: This project falls within a County Franchise Area. If subscribing for the collection and removal of construction and demolition waste from the project site, all developers, contractors, and subcontractors shall be required to receive services through the grantee holding a franchise agreement in the corresponding County Franchise Area (Burrtec).
36. Recycling Storage Capacity: The developer shall provide adequate space and storage bins for both refuse and recycling materials. This requirement is to assist the County in compliance with the recycling requirements of Assembly Bill (AB) 2176.
37. Mandatory Commercial Recycling: Beginning July 1, 2012 all businesses defined to include a commercial or public entity that generates 4 or more cubic yards of commercial waste a week or is a multi-family residential dwelling of 5 units or more to arrange for recycling services. The County is required to monitor commercial recycling and will require businesses to provide recycling information. This requirement is to assist the County in compliance with AB 341.
38. Mandatory Commercial Organics Recycling: As of April 2016, the State of California through AB 1826 (Enacted October 2014), requires businesses that generate eight (8) cubic yards of organics per week to recycle. A business generating organic waste shall arrange for the recycling services in a manner that is consistent with state and local laws and requirements, including a local ordinance or local jurisdiction's franchise agreement, applicable to the collection, handling, or recycling of solid and organic waste or arrange for separate organic waste collection and recycling services, until the local ordinance or local jurisdiction's franchise agreement includes organic waste recycling services. A business that is a property owner may require a lessee or tenant of that property to source separate their organic waste to aid in compliance. **Additionally, all businesses that contract for gardening or landscaping services must stipulate that the contractor recycle the resulting gardening or landscaping waste.** Residential multifamily dwellings of five (5) or more units are required to recycle organics though not required to arrange for recycling services specifically for food waste. Applicant will be required to report to the County on efforts to recycle organics materials once operational.

**PRIOR TO ISSUANCE OF GRADING PERMITS
OR LAND DISTURBING ACTIVITIES**

The Following Shall Be Completed

LAND USE SERVICES DEPARTMENT– Planning Division (909) 387-8311

39. GHG – Construction Standards (Residential): The developer shall submit for review and obtain approval from County Planning of a signed letter agreeing to include as a condition of all construction contracts/subcontracts requirements to reduce GHG emissions and submitting documentation of compliance. The developer/construction contractors shall do the following:
- a) Implement the approved Coating Restriction Plans.
 - b) Select construction equipment based on low GHG emissions factors and high-energy efficiency. All diesel/gasoline-powered construction equipment shall be replaced, where possible, with equivalent electric or CNG equipment.
 - c) Grading plans shall include the following statements:

- “All construction equipment engines shall be properly tuned and maintained in accordance with the manufacturers specifications prior to arriving on site and throughout construction duration.”
 - “All construction equipment (including electric generators) shall be shut off by work crews when not in use and shall not idle for more than 5 minutes.”
- d) Schedule construction traffic ingress/egress to not interfere with peak-hour traffic and to minimize traffic obstructions. Queuing of trucks on and off site shall be firmly discouraged and not scheduled. A flag person shall be retained to maintain efficient traffic flow and safety adjacent to existing roadways.
 - e) Recycle and reuse construction and demolition waste (e.g. soil, vegetation, concrete, lumber, metal, and cardboard) per County Solid Waste procedures.
 - f) The construction contractor shall support and encourage ridesharing and transit incentives for the construction crew and educate all construction workers about the required waste reduction and the availability of recycling services.

40. GHG – Construction Standards (Commercial): The developer shall submit for review and obtain approval from County Planning of a signed letter agreeing to include as a condition of all construction contracts/subcontracts requirements to reduce GHG emissions and submitting documentation of compliance. The developer/construction contractors shall do the following:
- a) Implement the approved Coating Restriction Plans.
 - b) Select construction equipment based on low GHG emissions factors and high-energy efficiency. All diesel/gasoline-powered construction equipment shall be replaced, where possible, with equivalent electric or CNG equipment.
 - c) Grading contractor shall provide and implement the following when possible:
 - 1) Training operators to use equipment more efficiently.
 - 2) Identifying the proper size equipment for a task can also provide fuel savings and associated reductions in GHG emissions.
 - 3) Replacing older, less fuel-efficient equipment with newer models.
 - 4) Use GPS for grading to maximize efficiency.
 - d) Grading contractor shall provide and implement the following when possible:
 - “All construction equipment engines shall be properly tuned and maintained in accordance with the manufacturers specifications prior to arriving on site and throughout construction duration.”
 - “All construction equipment (including electric generators) shall be shut off by work crews when not in use and shall not idle for more than 5 minutes.”
 - e) Schedule construction traffic ingress/egress to not interfere with peak-hour traffic and to minimize traffic obstructions. Queuing of trucks on and off site shall be firmly discouraged and not scheduled. A flag person shall be retained to maintain efficient traffic flow and safety adjacent to existing roadways.
 - f) Recycle and reuse construction and demolition waste (e.g. soil, vegetation, concrete, lumber, metal, and cardboard) per County Solid Waste procedures.
 - g) The construction contractor shall support and encourage ridesharing and transit incentives for the construction crew and educate all construction workers about the required waste reduction and the availability of recycling services.

41. Air Quality: Although the Project does not exceed South Coast Air Quality Management District thresholds, the Project proponent is required to comply with all applicable rules and regulations as the Air Basin is in non-attainment status for ozone and suspended particulates [PM₁₀ and PM_{2.5} (State)]. To limit dust production, the Project proponent must comply with Rules 402 nuisance and 403 fugitive dust, which require the implementation of Best Available Control Measures for each fugitive dust source. This would include, but not be limited to, the following Best Available Control Measures. Compliance with Rules 402 and 403 are mandatory requirements and thus not considered mitigation measures:

- a. The Project proponent shall ensure that any portion of the site to be graded shall be pre-watered prior to the onset of grading activities.

1. The Project proponent shall ensure that watering of the site or other soil stabilization method shall be employed on an on-going basis after the initiation of any grading. Portions of the site that are actively being graded shall be watered to ensure that a crust is formed on the ground surface, and shall be watered at the end of each workday.
2. The Project proponent shall ensure that all disturbed areas are treated to prevent erosion.
3. The Project proponent shall ensure that all grading activities are suspended when winds exceed 25 miles per hour.

b. Exhaust emissions from vehicles and equipment and fugitive dust generated by equipment traveling over exposed surfaces, will increase NO_x and PM₁₀ levels in the area. Although the Project will not exceed adopted District thresholds during operations, the Project proponent will be required to implement the following requirements:

1. All equipment used for grading and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.
2. The operator shall maintain and effectively utilize and schedule on-site equipment and on-site and off-site haul trucks in order to minimize exhaust emissions from truck idling.

42. Diesel Regulations: The operator shall comply with all existing and future California Air Resources Board and South Coast Air Quality Management District regulations related to diesel-fueled trucks, which among others may include: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment. South Coast Air Quality Management District rules for diesel emissions from equipment and trucks are embedded in the compliance for all diesel fueled engines, trucks, and equipment with the statewide California Air Resources Board Diesel Reduction Plan. These measures will be implemented by the California Air Resources Board in phases with new rules imposed on existing and new diesel-fueled engines.

43. *Written correspondence from the California Department of Fish and Wildlife stating that notification under Section 1602 of the California Fish and Game Code is not required for the project; or a copy of a Department-executed Lake or Streambed Alteration Agreement, authorizing impacts to California Fish and Game Code, section 1602 resources associated with the project."*

44. *Pre-construction nesting bird surveys shall be conducted by a qualified biologist within three (3) days prior to any ground disturbing activities within the project footprint and appropriate buffer. If active nests are detected, an appropriate buffer shall be established by the qualified biologist. The buffer area shall be avoided until the nest becomes inactive for reasons unrelated to project activities. The qualified biologist will monitor active nests to ensure established buffers are effective.*

45. Affect Upon Mixed Oak/Coniferous Forest:

- a) *Avoid damage during construction by erecting barriers around existing trees to be retained. Fencing should be placed one foot from the trunk for each inch of trunk diameter.*
- b) *Limit access to construction crews, allowing only one route in and out of the Project area.*
- c) *Intentions to protect the trees should be communicated and written into the construction specifications.*

46. Cultural Resources:

- 1) *All ground disturbing activity taking place below 3 feet of the current surface, in addition to any disturbance as a result of the clearing of trees (and other similarly large vegetation), will be monitored by a qualified archaeologist. In the event that Native American cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and the retained archaeologist shall assess the find. If the archaeologist cannot make an assessment, an archaeologist meeting Secretary of Interior standards will be contacted to assist. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, San Manuel Band of Mission Indians (SMBMI) will be contacted if any such find occurs and be provided information and permitted/invited to perform a site visit, if requested by SMBMI, when the archaeologist makes his/her assessment, so as to provide Tribal input.*
- 2) *If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the retained archaeologist, with assistance from an SOI-qualified archaeologist, shall develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, the drafts of which shall be provided to San Manuel Band of Mission Indians (SMBMI) for review and comment.*
 - a. *All in-field investigations, assessments, and/or data recovery enacted pursuant to the finalized Treatment Plan shall be monitored by a SMBMI Tribal Participant(s), if deemed necessary by SMBMI staff.*
 - b. *The Lead Agency and/or applicant shall, in good faith, consult with SMBMI on the disposition and treatment of any artifacts or other cultural materials encountered during the project.*
- 3) *If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.*

LAND USE SERVICES DEPARTMENT – Building and Safety Division (909) 387-8311

47. Retaining Wall Plans: Submit plans and obtain separate building permits for any required walls or retaining walls.
48. Geology Report: A geology report shall be submitted to the Building and Safety Division for review and approval by the County Geologist and fees paid for the review prior to final project approval.
49. Geotechnical (Soil) Report: A geotechnical (soil) report shall be submitted to the Building and Safety Division for review and approval prior to issuance of grading permits.
50. Grading Plans: Grading plans shall be submitted to Building and Safety for review and approval prior to grading/land disturbance.
51. Erosion & Sediment Control Plan: An erosion and sediment control plan and permit shall be submitted to and approved by the Building Official.
52. Erosion Control Installation: An erosion control permit must be obtained and devices installed prior to any land disturbance. No sediment is to leave the job site.
53. NPDES Permit: An NPDES permit - Notice of Intent (NOI) - is required on all grading of one (1) acre or more prior to issuance of a grading/construction permit. Contact your Regional Water Quality Control Board for specifics.
www.swrcb.ca.gov

54. Regional Board Permit Letter: CONSTRUCTION projects involving one or more acres must be accompanied by a copy of the Regional Board permit letter with the WDID #. Construction activity includes clearing, grading, or excavation that results in the disturbance of at least one (1) acre of land total.

LAND USE SERVICES DEPARTMENT – Land Development Division – Drainage Section (909) 387-8311

55. Drainage Improvements: A Registered Civil Engineer shall investigate and design adequate drainage improvements to intercept and conduct the off-site and on-site drainage flows around and through the site in a manner, which will not adversely affect adjacent or downstream properties.
56. FEMA Flood Zone: The Project is located within Flood Zone D according to FEMA Panel Numbers 06071C8010H and 06071C8020H dated 08/28/2008. Flood Hazards are undetermined in this area but possible. The requirements may change based on the recommendations of a drainage study accepted by the Land Development Division and the most current Flood Map prior to issuance of grading permit.
57. Topo Map: A topographic map shall be provided to facilitate the design and review of necessary drainage facilities.
58. Grading Plans: Grading plans shall be submitted for review and approval obtained, prior to construction. All Drainage and WQMP improvements shall be shown on the Grading plans according to the approved Drainage study and WQMP reports. Fees for grading plans will be collected upon submittal to the Land Development Division and are determined based on the amounts of cubic yards of cut and fill. Fee amounts are subject to change in accordance with the latest approved fee schedule.
59. On-site Flows: On-site flows need to be directed to the drainage facilities unless a drainage acceptance letter is secured from the adjacent property owners and provided to Land Development.
60. WQMP: A completed Water Quality Management Plan (WQMP) shall be submitted for review and approval obtained. A \$2,650 deposit for WQMP review will be collected upon submittal to the Land Development Division. Deposit amounts are subject to change in accordance with the latest approved fee schedule. The report shall adhere to the current requirements established by the Santa Ana Watershed Region. Copies of the WQMP guidance and template can be found at: (<http://cms.sbcounty.gov/dpw/Land/WQMPTemplatesandForms.aspx>)
61. WQMP Inspection Fee: The developer shall provide a \$3,600 deposit to Land Development Division for inspection of the approved WQMP. Deposit amounts are subject to change in accordance with the latest approved fee schedule.
62. Streambed Alteration Agreement: California Department of Fish and Wildlife (CDFW) must be notified per Fish and Game Code (FGC) §1602. A streambed alteration agreement shall be provided prior to Grading permit issuance. Link to CDFW website at <https://www.wildlife.ca.gov/Conservation/LSA>.

COUNTY FIRE DEPARTMENT – Community Safety Division (909) 386-8465/LOCAL FIRE JURISDICTION

63. Water System: Prior to any land disturbance, the water systems shall be designed to meet the required fire flow for this development and shall be approved by the Fire Department. The required fire flow shall be determined by using Appendix IIIA of the Uniform Fire Code.
64. Fire Fee: The required fire fees (currently \$699.00 x 3; and \$999.99 for Dining area) shall be paid to the San Bernardino County Fire Department/Community Safety Division (909) 386-8400. This fee is in addition to fire fees that are paid to other City or County offices.

DEPARTMENT OF PUBLIC WORKS – Surveyor – (909) 387-8149

65. Survey Monumentation: If any activity on this project will disturb **any** land survey monumentation, including but not limited to vertical control points (benchmarks), said monumentation shall be located and referenced by or under the direction of a licensed land surveyor or registered civil engineer authorized to practice land surveying **prior** to commencement of any activity with the potential to disturb said monumentation, and a corner record or record of survey of the references shall be filed with the County Surveyor (Section 8771(b) Business and Professions Code).
66. Record of Survey: Pursuant to Sections 8762 (b) and/or 8773 of the Business and Professions Code, a Record of Survey or Corner Record shall be filed under any of the following circumstances:
- a. Monuments set to mark property lines or corners;
 - b. Performance of a field survey to establish property boundary lines for the purposes of construction staking, establishing setback lines, writing legal descriptions, or for boundary establishment/mapping of the subject parcel;
 - c. Any other applicable circumstances pursuant to the Business and Professions Code that would necessitate filing a Record of Survey.

DEPARTMENT OF PUBLIC WORKS – Traffic Division – (909) 387-8186

67. Construction Management Plan is Required: The applicant's engineer shall provide a construction management plan to the Department of Public Works, Transportation Operations Division to determine if a maintenance agreement (during construction) with the County will be required. The construction management plan shall show the number of trucks, type of trucks (size), the total number of Equivalent Single Axle Loads (ESALs), and the truck routes to the site for construction. If it is determined that a maintenance agreement is required, the developer shall enter into a maintenance agreement with the County Department of Public Works to insure all County maintained roads utilized by the construction traffic shall remain in acceptable condition during construction. Prior to issuance of grading permits, the developer/contractor shall contact the Transportation Operations Division at (909) 387-7995 in order to process the maintenance agreement with the County. Please allow a minimum of 12 weeks for the processing of an agreement and obtain approval from the Board of Supervisors. For additional information regarding the maintenance agreement, please contact the Transportation Operations Division at (909) 387-7995. For additional information about the construction management plan, please contact the Department of Public Works – Traffic Division at (909) 387-7995. For additional information about the construction management plan, please contact the Department of Public Works – Traffic Division at (909) 387-8186.

PRIOR TO ISSUANCE OF BUILDING PERMITS

The Following Shall Be Completed:

LAND USE SERVICES DEPARTMENT – Planning (909) 387-8311

68. Architecture: Architectural elevations are considered conceptual. Final details with colors and material samples shall be submitted to the Planning Division for approval prior to building plan check submittal.
69. Lighting Plans: The developer shall submit for review and approval to County Planning a photometric study demonstrating that the project light does not spill onto the adjacent properties, or public streets. Lighting fixtures shall be oriented and focused to the onsite location intended for illumination (e.g. walkways). Lighting shall be shielded away from adjacent sensitive uses, including the adjacent residential development, to minimize light spillover. The glare from any luminous source, including on-site lighting, shall not exceed 0.5 foot-candle at the property line. This shall be done to the satisfaction of County Planning, in coordination with County Building and Safety.

70. Landscape and Irrigation Plan: Landscape and Irrigation Plans shall be prepared in conformance with Chapter 83.10, Landscaping Standards, of the County Development Code. The developer shall submit four copies of a landscape and irrigation plan to County Planning.
71. Encroachment Permits. Any proposed alterations to existing improvements within State right-of-way may only be performed upon issuance of a valid encroachment permit and must conform to current Caltrans design standards and construction practices. Review and approval of street, grading and drainage construction plans and related studies will be necessary prior to Caltrans permit issuance. More information regarding permit application and submittal requirements may be obtained by contacting:
- Office of Encroachment Permits, California Department of Transportation, 464 West 4th Street, 6th Floor, MS 619, San Bernardino, CA 92401-1400, (909) 383-4526.
72. Additional Tree Trimming or Tree Removal. If tree trimming or tree removal is necessary beyond the vegetation located within the State Highway right of way, the applicant would be responsible for contacting the adjoining property owner. This activity would also need to be coordinated with Caltrans as part of obtaining an Encroachment Permit.
73. GHG – Design Standards (Residential): The developer shall submit for review and obtain approval from County Planning that the following measures have been incorporated into the design of the project. These are intended to reduce potential project greenhouse gas (GHGs) emissions. Proper installation of the approved design features and equipment shall be confirmed by County Building and Safety prior to final inspection of each structure.
- Meet Title 24 Energy Efficiency requirements: The Developer shall document that the design of the proposed structures meets the current Title 24 energy-efficiency requirements. County Planning shall coordinate this review with the County Building and Safety. Any combination of the following design features may be used to fulfill this requirement, provided that the total increase in efficiency meets or exceeds the cumulative goal (100%+ of Title 24) for the entire project (Title 24, Part 6 of the California Code of Regulations; Energy Efficiency Standards for Residential and Non Residential Buildings, as amended:
 - Incorporate dual paned or other energy efficient windows,
 - Incorporate energy efficient space heating and cooling equipment,
 - Incorporate energy efficient light fixtures, photocells, and motion detectors,
 - Incorporate energy efficient appliances,
 - Incorporate energy efficient domestic hot water systems,
 - Incorporate solar panels into the electrical system,
 - Incorporate cool roofs/light colored roofing,
 - Incorporate other measures that will increase energy efficiency.
 - Increase insulation to reduce heat transfer and thermal bridging.
 - Limit air leakage throughout the structure and within the heating and cooling distribution system to minimize energy consumption.
 - Plumbing: All plumbing shall incorporate the following:
 - All showerheads, lavatory faucets, and sink faucets shall comply with the California Energy Conservation flow rate standards.
 - Low flush toilets shall be installed where applicable as specified in California State Health and Safety Code Section 17921.3.
 - All hot water piping and storage tanks shall be insulated. Energy efficient boilers shall be used.
 - If possible, utilize grey water systems and dual plumbing for recycled water.
 - Lighting: Lighting design for building interiors shall support the use of:
 - Compact fluorescent light bulbs or equivalently efficient lighting.
 - Natural day lighting through site orientation and the use of reflected light.

- Skylight/roof window systems.
- Light colored building materials and finishes shall be used to reflect natural and artificial light with greater efficiency and less glare.
- A multi-zone programmable dimming system shall be used to control lighting to maximize the energy efficiency of lighting requirements at various times of the day.
- Provide a minimum of 2.5 percent of the project's electricity needs by on-site solar panels.
- **Building Design:** Building design and construction shall incorporate the following elements:
 - Orient building locations to best utilize natural cooling/heating with respect to the sun and prevailing winds/natural convection to take advantage of shade, day lighting and natural cooling opportunities.
 - Utilize natural, low maintenance building materials that do not require finishes and regular maintenance.
 - Roofing materials shall have a solar reflectance index of 78 or greater.
 - All supply duct work shall be sealed and leak-tested. Oval or round ducts shall be used for at least 75 percent of the supply duct work, excluding risers.
 - Energy Star or equivalent appliances shall be installed.
 - A building automation system including outdoor temperature/humidity sensors will control public area heating, vent, and air conditioning units
- **Landscaping:** The developer shall submit for review and obtain approval from County Planning of landscape and irrigation plans that are designed to include drought tolerant and smog tolerant trees, shrubs, and groundcover to ensure the long-term viability and to conserve water and energy. The landscape plans shall include shade trees around main buildings, particularly along southern and western elevations, where practical.
- **Irrigation:** The developer shall submit irrigation plans that are designed, so that all common area irrigation areas shall be capable of being operated by a computerized irrigation system, which includes either an on-site weather station, ET gauge or ET-based controller capable of reading current weather data and making automatic adjustments to independent run times for each irrigation valve based on changes in temperature, solar radiation, relative humidity, rain and wind. In addition, the computerized irrigation system shall be equipped with flow sensing capabilities, thus automatically shutting down the irrigation system in the event of a mainline break or broken head. These features will assist in conserving water, eliminating the potential of slope failure due to mainline breaks and eliminating over-watering and flooding due to pipe and/or head breaks.
- **Recycling:** Exterior storage areas for recyclables and green waste shall be provided. Where recycling pickup is available, adequate recycling containers shall be located in public areas. Construction and operation waste shall be collected for reuse and recycling.
- **Transportation Demand Management (TDM) Program:** The project shall include adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. Preferred carpool/vanpool spaces shall be provided and, if available, mass transit facilities shall be provided (e.g. bus stop bench/shelter). The developer shall demonstrate that the TDM program has been instituted for the project or that the buildings will join an existing program located within a quarter mile radius from the project site that provides a cumulative 20% reduction in unmitigated employee commute trips. The TDM Program shall publish ride-sharing information for ride-sharing vehicles and provide a website or message board for coordinating rides. The Program shall ensure that appropriate bus route information is placed in each building.

74. **GHG – Design Standards (Commercial):** The developer shall submit for review and obtain approval from County Planning that the following measures have been incorporated into the design of the project. These are intended to reduce potential project greenhouse gas (GHGs) emissions. Proper installation of the approved design features and equipment shall be confirmed by County Building and Safety prior to final inspection of each structure.

- a. Meet Title 24 Energy Efficiency requirements implemented July 1, 2014: The Developer shall document that the design of the proposed structures meets the current Title 24 energy-efficiency requirements. County Planning shall coordinate this review with the County Building and Safety. Any combination of the following design features may be used to fulfill this requirement, provided that the total increase in efficiency meets or exceeds the cumulative goal (100%+ of Title 24) for the entire project (Title 24, Part 6 of the California Code of Regulations; Energy Efficiency Standards for Residential and Non Residential Buildings, as amended January 24, 2013; Cool Roof Coatings performance standards as amended January 24, 2013):
- Incorporate dual paned or other energy efficient windows,
 - Incorporate energy efficient space heating and cooling equipment,
 - Incorporate energy efficient light fixtures, photocells, and motion detectors,
 - Incorporate energy efficient appliances,
 - Incorporate energy efficient domestic hot water systems,
 - Incorporate solar panels into the electrical system,
 - Incorporate cool roofs/light colored roofing,
 - Incorporate other measures that will increase energy efficiency.
 - Increase insulation to reduce heat transfer and thermal bridging.
 - Limit air leakage throughout the structure and within the heating and cooling distribution system to minimize energy consumption.
- b. Plumbing: All plumbing shall incorporate the following:
- All showerheads, lavatory faucets, and sink faucets shall comply with the California Energy Conservation flow rate standards.
 - Low flush toilets shall be installed where applicable as specified in California State Health and Safety Code Section 17921.3.
 - All hot water piping and storage tanks shall be insulated. Energy efficient boilers shall be used.
- c. Lighting: Lighting design for building interiors shall support the use of:
- Compact fluorescent light bulbs or equivalently efficient lighting.
 - Natural day lighting through site orientation and the use of reflected light.
 - Skylight/roof window systems.
 - Light colored building materials and finishes shall be used to reflect natural and artificial light with greater efficiency and less glare.
 - A multi-zone programmable dimming system shall be used to control lighting to maximize the energy efficiency of lighting requirements at various times of the day.
 - Provide a minimum of 2.5 percent of the project's electricity needs by on-site solar panels.
- d. Building Design: Building design and construction shall incorporate the following elements:
- Orient building locations to best utilize natural cooling/heating with respect to the sun and prevailing winds/natural convection to take advantage of shade, day lighting and natural cooling opportunities.
 - Utilize natural, low maintenance building materials that do not require finishes and regular maintenance.
 - Roofing materials shall have a solar reflectance index of 78 or greater.
 - All supply duct work shall be sealed and leak-tested. Oval or round ducts shall be used for at least 75 percent of the supply duct work, excluding risers.
 - Energy Star or equivalent appliances shall be installed.
 - A building automation system including outdoor temperature/humidity sensors will control public area heating, vent, and air conditioning units.
- e. Landscaping: The developer shall submit for review and obtain approval from County Planning of landscape and irrigation plans that are designed to include drought tolerant and smog tolerant trees, shrubs, and groundcover to ensure the long-term viability and to conserve water and energy. The landscape plans shall include shade trees around main buildings, particularly along southern and western elevations, where practical.

- f. Irrigation: The developer shall submit irrigation plans that are designed, so that all common area irrigation areas shall be capable of being operated by a computerized irrigation system, which includes either an on-site weather station, ET gauge or ET-based controller capable of reading current weather data and making automatic adjustments to independent run times for each irrigation valve based on changes in temperature, solar radiation, relative humidity, rain and wind. In addition, the computerized irrigation system shall be equipped with flow sensing capabilities, thus automatically shutting down the irrigation system in the event of a mainline break or broken head. These features will assist in conserving water, eliminating the potential of slope failure due to mainline breaks and eliminating over-watering and flooding due to pipe and/or head breaks.
 - g. Recycling: Exterior storage areas for recyclables and green waste shall be provided. Where recycling pickup is available, adequate recycling containers shall be located in public areas. Construction and operation waste shall be collected for reuse and recycling.
 - h. Transportation Demand Management (TDM) Program: The project shall include adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. Preferred carpool/vanpool spaces shall be provided and, if available, mass transit facilities shall be provided (e.g. bus stop bench/shelter). The developer shall demonstrate that the TDM program has been instituted for the project or that the buildings will join an existing program located within a quarter mile radius from the project site that provides a cumulative 20% reduction in unmitigated employee commute trips. The TDM Program shall publish ride-sharing information for ride-sharing vehicles and provide a website or message board for coordinating rides. The Program shall ensure that appropriate bus route information is placed in each building.
75. Signs: All proposed on-site signs shall be shown on a separate plan, including location, scaled and dimensioned elevations of all signs with lettering type, size, and copy. Scaled and dimensioned elevations of buildings that propose signage shall also be shown. The applicant shall submit sign plans to County Planning for all existing and proposed signs on this site. The applicant shall submit for approval any additions or modifications to the previously approved signs. All signs shall comply with SBCC Chapter 83.13, Sign Regulations, SBCC §83.07.040, Glare and Outdoor Lighting Mountain and Desert Regions, and SBCC Chapter 82.19, Open Space Overlay as it relates to Scenic Highways (§82.19.040), in addition to the following minimum standards:
- a. All signs shall be lit only by steady, stationary shielded light; exposed neon is acceptable.
 - b. All sign lighting shall not exceed 0.5 foot-candle.
 - c. No sign or stationary light source shall interfere with a driver's or pedestrian's view of public right-of-way or in any other manner impair public safety.
 - d. Monument signs shall not exceed four feet above ground elevation and shall be limited to one sign per street frontage.

LAND USE SERVICES DEPARTMENT – Building and Safety (909) 387-8311

76. Construction Plans: Any building, sign, or structure to be constructed or located on site, will require professionally prepared plans based on the most current County and California Building Codes, submitted for review and approval by the Building and Safety Division.

LAND USE SERVICES DEPARTMENT – Land Development Division – Road Section (909) 387-8311

77. Road Dedication/Improvements: The developer shall submit for review and obtain approval from the Land Use Services Department the following dedications and plans for the listed required improvements, designed by a Registered Civil Engineer (RCE), licensed in the State of California.

Radford Camp Rd (Local – 40')

- Road Dedication: A 40-foot grant of easement is required to provide a full-width right-of-way of 40 feet.

Off-site Street Improvement – Truck/Auto Route

- Access Road: Design the access road for a minimum width of 26 feet and a densification of 96%.

78. Encroachment Permits: Prior to installation of driveways, an encroachment permit is required from San Bernardino County Special Districts, (909) 387-5940, as well as other agencies prior to work within their jurisdiction.

COUNTY FIRE DEPARTMENT – Community Safety Division (909) 386-8465/LOCAL FIRE JURISDICTION

79. Building Plans: No less than three (3) complete sets of Building Plans shall be submitted to the Fire Department for review and approval. [F42]

80. Fire Flow Test: Your submittal did not include a flow test report to establish whether the public water supply is capable of meeting your project fire flow demand. You will be required to either produce a current flow test report from your water purveyor demonstrating that the fire flow demand is satisfied or you must install an approved fire sprinkler system. This requirement shall be completed prior to combination inspection by Building and Safety.

81. Access: The development shall have a minimum 1 point of vehicular access. These are for fire/emergency equipment access and for evacuation routes. Standard 902.2.1 Single Story Road Access Width: All buildings shall have access provided by approved roads, alleys and private drives with a minimum twenty-six (26) foot unobstructed width and vertically to fourteen (14) feet six (6) inches in height. Other recognized standards may be more restrictive by requiring wider access provisions. Multi-Story Road Access Width: Buildings three (3) stories in height or more shall have a minimum access of thirty (30) feet unobstructed width and vertically to fourteen (14) feet six (6) inches in height. [F41]

82. Combustible Vegetation: Combustible vegetation shall be removed as follows: "Where the average slope of the site is less than 15% - Combustible vegetation shall be removed a minimum distance of thirty (30) feet from all structures or to the property line, whichever is less." Where the average slope of the site is 15% or greater - Combustible vegetation shall be removed a minimum one hundred (100) feet from all structures or to the property line, whichever is less. County Ordinance # 3586. [F52]

83. Fire Sprinkler-NFPA #13 Dining Hall Building: An automatic fire sprinkler system complying with NFPA Pamphlet #13 and the Fire Department standards is required. The applicant shall hire a Fire Department approved fire sprinkler contractor. The fire sprinkler contractor shall submit three (3) sets of detailed plans to the Fire Department for review and approval. The plans (minimum 1/8" scale) shall include hydraulic calculations and manufacture's specification sheets. The contractor shall submit plans showing type of storage and use with the applicable protection system. The required fees shall be paid at the time of plan submittal. Standard 101.1

84. Fire Sprinkler-NFPA #13 Bed Cabins: An automatic fire sprinkler system complying with NFPA Pamphlet #13 and the Fire Department standards for light Hazard Occupancies under 5,000 sq. ft. and Multi-Residential Occupancies is required. The applicant shall hire a Fire Department approved fire sprinkler contractor. The fire sprinkler contractor shall submit three (3) sets of detailed plans to the Fire Department for review and approval. The plans (minimum 1/8" scale) shall include hydraulic calculations and manufacture's specification sheets. The contractor shall submit plans showing type of storage and use with the applicable protection system. The required fees shall be paid at the time of plan submittal. Minimum water supply shall be a two (2) inch water meter for Commercial and one and one half (1½) inch for Residential. Standard 101.1RC [F60]. 6, 8 and 32 Bed Cabin.

85. Fire Alarm: A manual, automatic or manual and automatic fire alarm system complying with the California Fire Code, NFPA and all applicable codes is required for 100 heads or more. The applicant shall hire a Fire Department approved fire alarm contractor. The fire alarm contractor shall submit three (3) sets of detailed plans to the Fire Department for review and approval. The required fees shall be paid at the time of plan submittal. Standard 1007.1.1FA. [F62A]
86. Additional Requirements: In addition to the Fire requirements state herein, other on-site and off-site improvements may be required which cannot be determined from tentative plans at this time and would have to be reviewed after more complete improvement plans and profiles have been submitted to this office. [F01A]
87. Spark Arrestor: An approved spark arrestor is required. Every chimney that is used in conjunction with any fireplace or any heating appliance in which solid or liquid fuel are used, shall have an approved spark arrestor visible from the ground that is maintained in conformance with the Uniform Fire Code. [F87]
88. Primary Access Paved. Prior to building permits being issued to any new structure, the primary access road shall be paved or an all-weather surface shall be installed as specified in the General Requirement conditions (Fire # F-9), including width, vertical clearance and turnouts, if required. [F89]
89. Street Sign: This project is required to have an approved street sign (temporary or permanent). The street sign shall be installed on the nearest street corner to the project. Installation of the temporary sign shall be prior to any combustible material being placed on the construction site. Prior to final inspection and occupancy of the first structure, the permanent street sign shall be installed. Standard 901.4.4 [F72]
90. Private On-Site Hydrants: Private on-site hydrants may be required if any portion of the building(s) to be protected exceeds three hundred (300) feet from the public fire hydrant as measured along vehicular travel-ways.
91. Fire Extinguishers: Hand portable fire extinguishers are required. The location, type, and cabinet design shall be approved by the Fire Department. [F88]

PUBLIC HEALTH – Environmental Health Services (800) 442-2283

92. Water Purveyor: Water purveyor shall be DEHS approved.
93. Water Permit: A water system permit will be required and concurrently approved by the State Water Resources Control Board – Division of Drinking Water. Applicant shall submit preliminary technical report at least 6 months before initiating construction of any water-related development. Source of water shall meet water quality and quantity standards. Test results, which show source meets water quality and quantity standards shall be submitted to the Division of Environmental Health Services (DEHS). For information, contact the Water Section at 1-800-442-2283 and SWRCB-DDW at 916-449-5577.
94. Existing Well: The existing well shall be installed, pump tested, and the pump test results reviewed and approved by EHS and meet community well grade standards prior to the issuance of building permits. A Well Completion Report must be provided to DEHS verifying that the annular seal is a minimum of fifty (50) feet in depth from the surface.
95. Sewage Disposal: The method of sewage disposal shall be EHS approved.
96. New Onsite Wastewater Treatment:
- If sewer connection and/or service are unavailable, onsite wastewater treatment system(s) may then be allowed under the following conditions: A soil percolation report shall be submitted to DEHS for review and approval. If the percolation report cannot be approved, the project may require an alternative OWTS. For information, please contact the Wastewater Section at 800-442-2283.

- Written clearance shall be obtained from the designated California Regional Water Quality Control Board (listed below) and a copy forwarded to the Division of Environmental Health Services
 - Santa Ana Region, 3737 Main St., Suite 500, Riverside, CA 92501 (951) 782-4130

97. Acoustical Study: Preliminary acoustical information must be submitted demonstrating that the proposed project maintains noise levels at/or below County Noise Standard(s), San Bernardino Development Code (§ 83.01.080, 87.0905). The purpose is to evaluate potential future on-site and/or adjacent off-site noise sources. If the preliminary information cannot demonstrate compliance to noise standards, a project specific acoustical analysis shall be required. Submit information/analysis to DEHS for review and approval. For more information and acoustical checklist go to:
<http://www.sbcounty.gov/dehs/Depts/EnvironmentalHealth/FormsPublications/documents/projectacousticalinformation.pdf> or contact DEHS at 800-442-2283.
98. Vector Requirements:
- All demolition of structures shall have a vector inspection prior to the issuance of any permits pertaining to demolition or destruction of any such premises. For information, contact DEHS Vector Section at 1-800-442-2283.
 - The project area has a high probability of containing vectors. DEHS Vector Control Section will determine the need for vector survey and any required control programs. A vector clearance letter shall be submitted to DEHS/Land Use. For information, contact Vector Control at (800) 442-2283.
99. Camp Grounds: All modifications/additions or construction of an organized camp shall be reviewed and approved by DEHS. For information, call DEHS camps program at 1-800-442-2283.
100. Food: Plans for food establishments shall be reviewed and approved by DEHS. For information, call DEHS/Plan Check at: 1-800-442-2283.

PRIOR TO FINAL INSPECTION OR OCCUPANCY

The Following Shall Be Completed

LAND USE SERVICES DEPARTMENT – Planning Division (909) 387-8311

101. Fees Paid: Prior to final inspection by Building and Safety Division and/or issuance of a Certificate of Conditional Use by the Planning Division, the applicant shall pay in full all fees required under actual cost job number P201600633.
102. Shield Lights: Any lights used to illuminate the site shall include appropriate fixture lamp types as listed in SBCC Table 83-7 and be hooded and designed so as to reflect away from adjoining properties and public thoroughfares and in compliance with SBCC Chapter 83.07, "Glare and Outdoor Lighting" (i.e. "Dark Sky Ordinance).
103. CCRF/Occupancy: Prior to occupancy/use, all Condition Compliance Release Forms (CCRF) shall be completed to the satisfaction of County Planning with appropriate authorizing signatures from each reviewing agency.
104. Screen Rooftop: All rooftop mechanical equipment is to be screened from ground vistas.
105. Landscaping/Irrigation: All landscaping, dust control measures, all fences, etc. as delineated on the approved Landscape Plan shall be installed. The developer shall submit the Landscape Certificate of Completion verification as required in SBCC Section 83.10.100. Supplemental verification should include photographs of the site and installed landscaping.

106. Installation of Improvements: All required on-site improvements shall be installed per approved plans.
107. GHG – Installation/Implementation Standards (Residential): The developer shall submit for review and obtain approval from County Planning of evidence that all applicable GHG performance standards have been installed, implemented properly and that specified performance objectives are being met to the satisfaction of County Planning and County Building and Safety. These installations/procedures include the following:
- a) Design features and/or equipment that cumulatively increases the overall compliance of the project to exceed Title 24 minimum standards by five percent.
 - b) All interior lighting shall support the use of fluorescent light bulbs or equivalent energy-efficient lighting.
 - c) Installation of both the identified mandatory and optional design features or equipment that have been constructed and incorporated into the facility/structure.
108. GHG – Installation/Implementation Standards (Commercial): The developer shall submit for review and obtain approval from County Planning of evidence that all applicable GHG performance standards have been installed, implemented properly and that specified performance objectives are being met to the satisfaction of County Planning and County Building and Safety. These installations/procedures include the following:
- a) Design features and/or equipment that cumulatively increases the overall compliance of the project to exceed Title 24 minimum standards by five percent.
 - b) All interior lighting shall support the use of fluorescent light bulbs or equivalent energy-efficient lighting.
 - c) Installation of both the identified mandatory and optional design features or equipment that have been constructed and incorporated into the facility/structure.

LAND USE SERVICES DEPARTMENT – Building and Safety (909) 387-8311

109. Condition Compliance Release Form Sign-off: Prior to occupancy all Department/Division requirements and signoffs shall be completed.

LAND USE SERVICES DEPARTMENT – Land Development Division – Drainage Section (909) 387-8311

110. Drainage Improvements: All required drainage improvements shall be completed by the applicant. The private Registered Civil Engineer (RCE) shall inspect improvements outside the County right-of-way and certify that these improvements have been completed according to the approved plans. Certification letter shall be submitted to Land Development Division, Drainage Section.
111. WQMP Improvements: All required WQMP improvements shall be completed by the applicant, inspected and approved by County Public Works. An electronic file of the final and approved WQMP shall be submitted to Land Development Division, Drainage Section.

LAND USE SERVICES DEPARTMENT – Land Development Division – Road Section (909) 387-8311

112. LDD Requirements: All LDD requirements shall be completed by the applicant prior to occupancy.
113. Private Roads/Improvements: All required on-site and off-site improvements shall be completed by the applicant. Construction of private roads and private road related drainage improvements shall be inspected and certified by the engineer. Certification shall be submitted to Land Development by the engineer identifying all supporting engineering criteria.

COUNTY FIRE DEPARTMENT – Community Safety Division (909) 386-8465/LOCAL FIRE JURISDICTION

114. Commercial Addressing Dining Cabin: Commercial and industrial developments of 100,000 sq. ft. or less shall have the street address installed on the building with numbers that are a minimum six (6) inches in height and with a

three quarter (3/4) inch stroke. The street address shall be visible from the street. During the hours of darkness, the numbers shall be electrically illuminated (internal or external). Where the building is two hundred (200) feet or more from the roadway, additional non-illuminated contrasting six (6) inch numbers shall be displayed at the property access entrances. Standard 901.4.4 [F82]

115. Residential Addressing All Sleeping Cabins: The street address shall be installed on the building with numbers that are a minimum four (4) inches in height and with a one half (1/2) inch stroke. The street address shall be visible from the street. During the hours of darkness, the numbers shall be electrically illuminated with low voltage power source. Numbers shall contrast with their background and be legible from the street. Where the building is fifty (50) feet or more from the roadway, additional contrasting four (4) inch numbers shall be displayed at the property access entrances. Standard 901.4.4 [F81]
116. Hydrant Marking: Blue reflective pavement markers indicating fire hydrant locations shall be installed as specified by the Fire Department. In areas where snow removal occurs or non-paved roads exist, the blue reflective hydrant marker shall be posted on an approved post along the side of the road, no more than three (3) feet from the hydrant and at least six (6) feet high above the adjacent road. Standard 901.4.3. [F80]
117. Fire Lanes: The applicant shall submit a fire lane plan to the Fire Department for review and approval. Fire lane curbs shall be painted red. The "No Parking, Fire Lane" signs shall be installed on public/private roads in accordance with the approved plan. Standard 901.4 [93]

COUNTY FIRE DEPARTMENT – Hazardous Materials – (909) 386-8401

118. Permit Requirements: Prior to Occupancy, the business operator shall be required to apply for one or more of the following permits, or apply for exemption from hazardous materials laws and regulations: A Hazardous Materials Handler Permit, a Hazardous Waste Generator Permit, an Aboveground Storage Tank Permit, and/or an Underground Storage Tank Permit.

Application for one or more of these permits shall occur by submitting a hazardous materials business plan using the California Environmental Reporting System (CERS) <http://cers.calepa.ca.gov/>

For additional information, please contact The Office of the Fire Marshal, Hazardous Materials Division at (909) 386-8401.

END OF CONDITIONS

EXHIBIT C

Initial Study

SAN BERNARDINO COUNTY INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

This form and the descriptive information in the application package constitute the contents of Initial Study pursuant to County Guidelines under Ordinance 3040 and Section 15063 of the State CEQA Guidelines.

PROJECT LABEL:

APNs:	0305-241-14
Applicant:	Christopher Drizzt Cook
Community Location	Angeles Oaks Generally north of Seven Oaks Road and traversed by portions of Patterson Road and Radford Camp Road, specifically east of the Intersection of Patterson Road and Radford Camp Road.
Project No:	P201600633
Staff:	Jim Morrissey, Planner
Rep	Darryl Cartozian
Proposal:	Conditional Use Permit for the establishment of a camp/outdoor science school, with a number of separate buildings for dining and sleeping on the southeast portion of the 40 acre parcel.

USGS Quad: Angeles Oaks
Lat/Long: 34°18'80.6"N/116°90'81.05"W
T, R, Section: T01N R01E Sec. 8

Community Plan: N/A
LUZD: RC
Overlays: Biotic Overlay, Fire Safety Area 1

PROJECT CONTACT INFORMATION:

Lead agency: County of San Bernardino
Land Use Services Department
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

Contact person: Jim Morrissey, Planner
Phone No: (909) 387-4234 **Fax No:** (909) 387-3223
E-mail: Jim.Morrissey@lus.sbcounty.gov

PROJECT DESCRIPTION:

Summary

The application is a Conditional Use Permit for the construction and operation of a camp/outdoor science school on undeveloped land. The camp is to be constructed in two phases with the following features:

Phase 1

- 6,611 sq. ft. Dining Hall
- Three, 6-bed cabins, each 1,227 sq. ft. in size.
- Three, 8-bed cabins, each 1,173 sq. ft. in size.
- Six, 32-bed cabins, each 1,253 sq. ft. in size.
- One, 1,173 sq. ft. caretaker's cabin.
- All access roads and parking areas.

Phase 2

- One, 6-bed cabin, 1,227 sq. ft.
- One, 8-bed cabin, 1,173 sq. ft.
- Three, 32-bed cabins, each 1,253 sq. ft.
- One, 1,173 sq. ft. caretaker's cabin.

Very few trees are to be removed, due to the Project design and the limited number of on-site trees. Access to the proposed Project site can be obtained from Radford Camp Road, which is a paved non-stripped roadway. The proposed Project improvements are located to the east of Converse Creek, which is a dry stream bed. Converse Creek is located east of Radford Camp Road. Converse Creek is a designated Blue Line Stream, but seems to be a non-jurisdictional swale due to the lack of an ordinary high water mark or bed and bank delineation.

The development portion of the Project site elevations range from 5,375 feet above mean sea level (AMSL) to 5,540 AMSL.

Existing General Plan Land Use Zoning Designations

Land uses on the project site and surrounding parcels are governed by the County's Development Code, and Bear Valley Community Plan. The following table lists the existing land uses and zoning districts.

Existing Land Use and Land Use Zoning Districts		
Location	Existing Land Use	Land Use District
Project Site	Vacant	RC (Resource Conservation)
North	Multi-Purpose Building	RC (Resource Conservation)
South	Vacant	RC (Resource Conservation)
East	Vacant	RC (Resource Conservation)
West	Vacant	RC (Resource Conservation)

Project Site Location, Existing Site Land Uses and Conditions

The site consists of one vacant parcel in its natural environmental state as shown on Figure 3. The site has a slope of approximately eight percent, with an elevation of 5,440 feet above mean sea level (amsl) at the north end of the development area and 5,375 feet amsl at the entrance. Radford Campus Road is a paved two-lane roadway and the proposed entrance site includes a graded dirt road extending partially through the Project site.

Converse Creek traverses the property from north to south, although it is not a well-defined water course, because the site does not have a consistently demarcated bed and

bank. The property includes oak/coniferous forest around the periphery of the development area and big sagebrush scrub over most of the development area.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

Federal: Forest Service. **State of California:** Regional Water Quality Control Board, California Department of Fish and Wildlife; **County of San Bernardino:** Land Use Services - Building and Safety, Planning, Land Development, and Code Enforcement; Public Works; Environmental Health, and; County Fire: **Local:** None

Figure 1
Proposed Project/Site Plan/Elevations

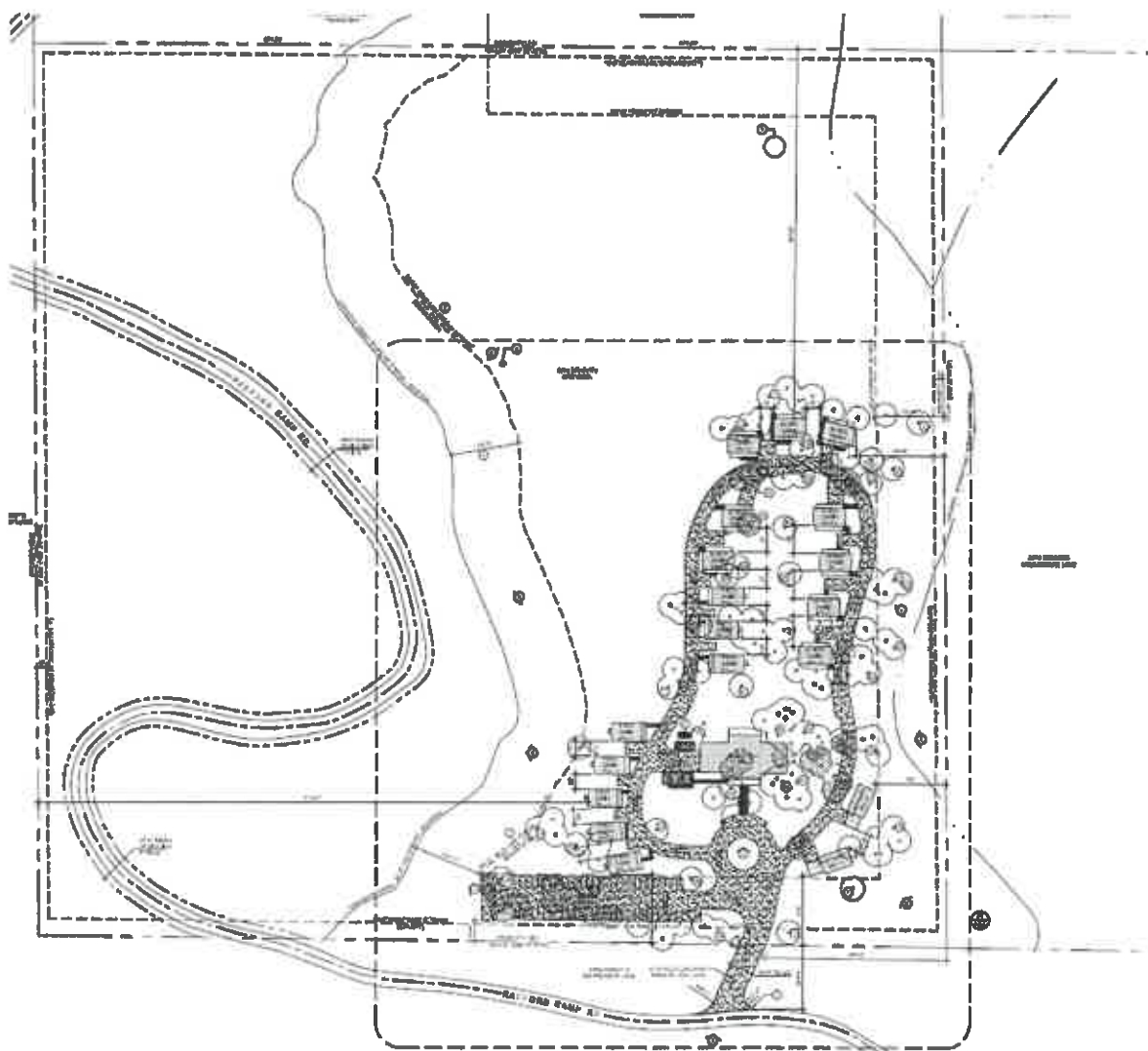


Figure 2
Area Map

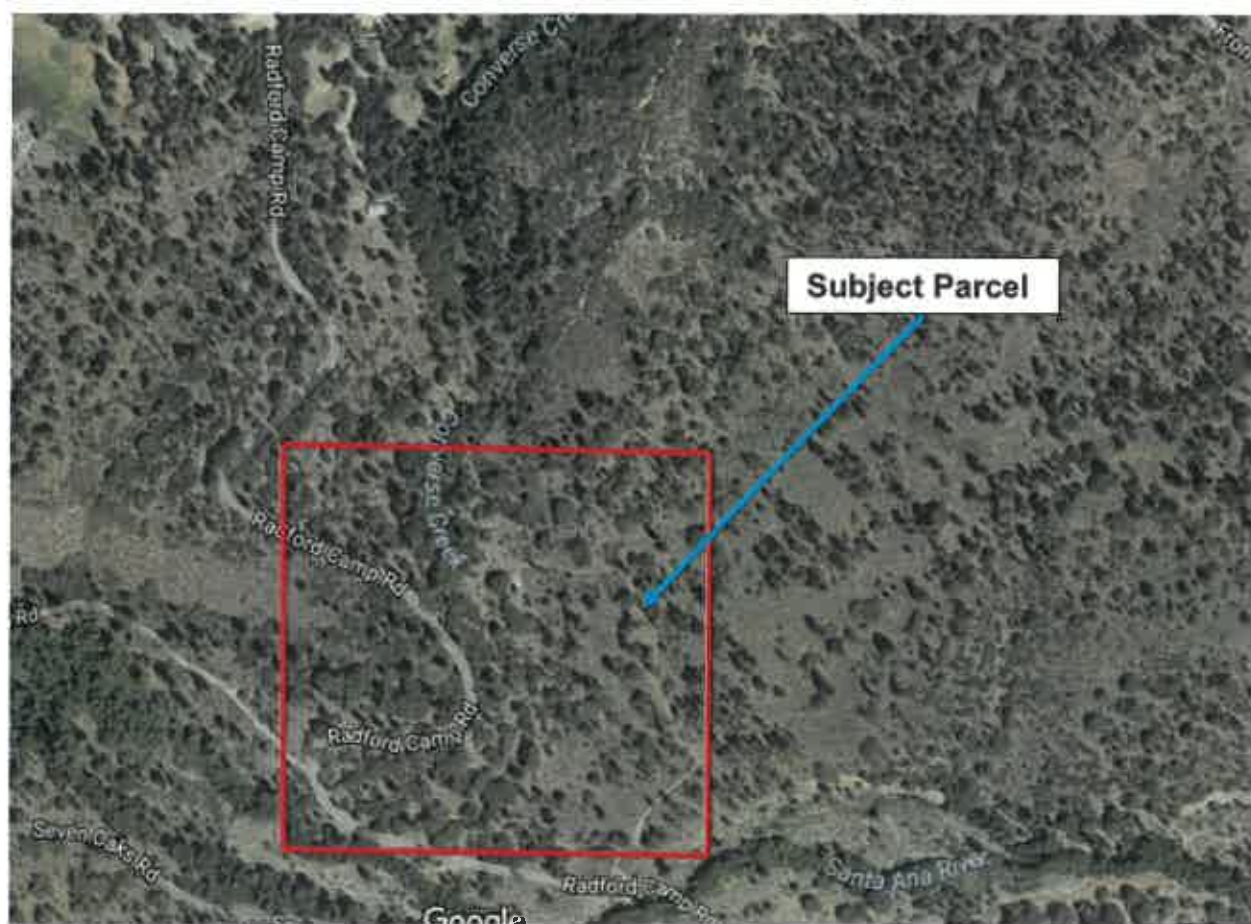
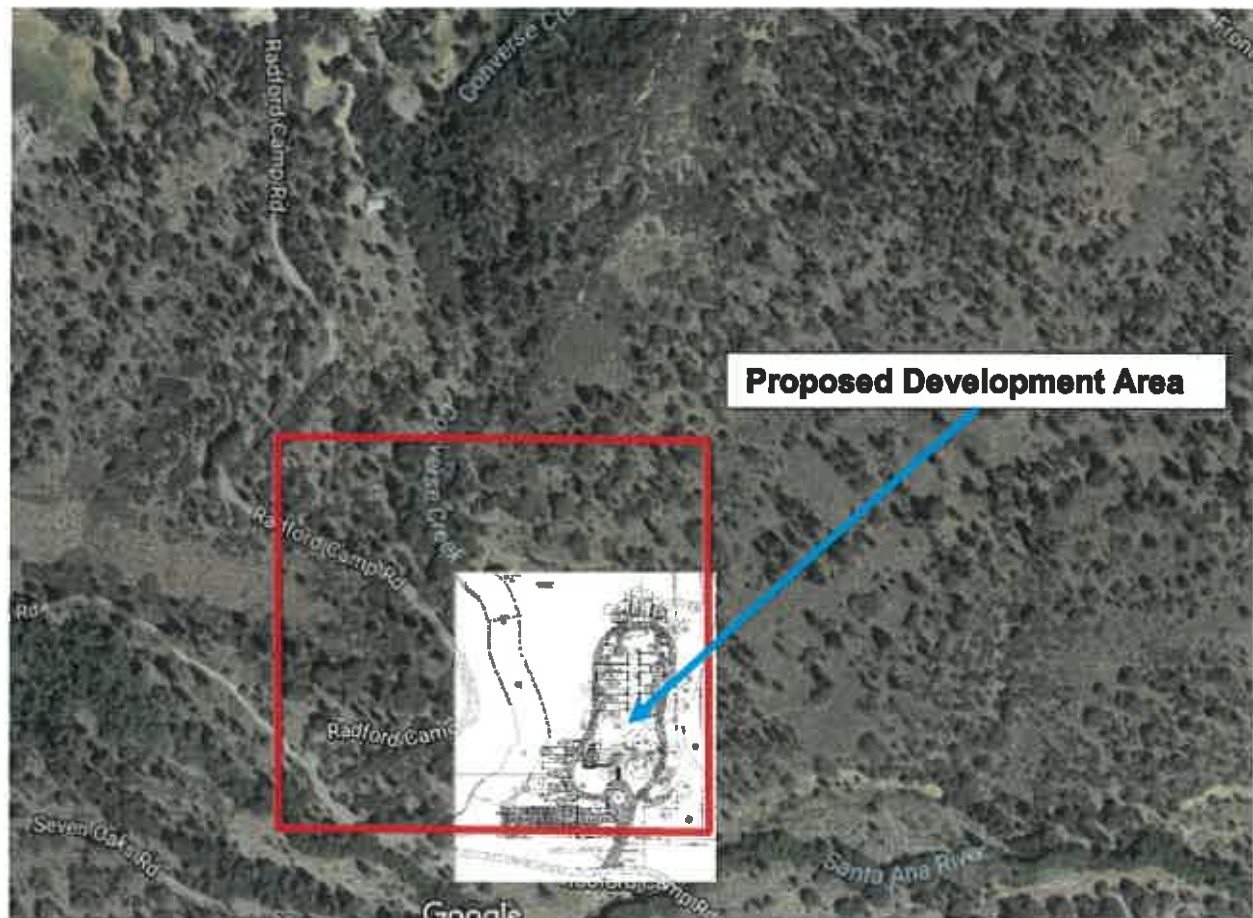


Figure 3
Site Plan Overlay on Aerial



**Figure 4
Vicinity Map**



EVALUATION FORMAT

This initial study is prepared in compliance with the California Environmental Quality Act (CEQA) pursuant to Public Resources Code Section 21000, et seq. and the State CEQA Guidelines (California Code of Regulations Section 15000, et seq.). Specifically, the preparation of an Initial Study is guided by Section 15063 of the State CEQA Guidelines. This format of the study is presented as follows. The project is evaluated based on its effect on 18 major categories of environmental factors. Each factor is reviewed by responding to a series of questions regarding the impact of the project on each element of the overall factor. The Initial Study checklist provides a formatted analysis that provides a determination of the effect of the project on the factor and its elements. The effect of the project is categorized into one of the following four categories of possible determinations:

Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant	No Impact
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Substantiation is then provided to justify each determination. One of the four following conclusions is then provided as a summary of the analysis for each of the major environmental factors.

1. **No Impact:** No impacts are identified or anticipated and no mitigation measures are required.
2. **Less than Significant Impact:** No significant adverse impacts are identified or anticipated and no mitigation measures are required.
3. **Less than Significant Impact with Mitigation Incorporated:** Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of project approval to reduce these impacts to a level below significant. The required mitigation measures are: (List of mitigation measures)
4. **Potentially Significant Impact:** Significant adverse impacts have been identified or anticipated. An Environmental Impact Report (EIR) is required to evaluate these impacts, which are (List of the impacts requiring analysis within the EIR).

At the end of the analysis the required mitigation measures are restated and categorized as being either self- monitoring or as requiring a Mitigation Monitoring and Reporting Program.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below will 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.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use/ Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities / Service Systems |
| <input type="checkbox"/> Mandatory Findings of Significance | | |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION shall be prepared.
<input checked="" type="checkbox"/>	Although the proposed project could have a significant effect on the environment, there shall not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION shall be prepared.
<input type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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 (prepared by Jim Morrissey, Contract Planner)

Signature: (David Prusch, Supervising Planner)
 Land Use Services Department/Planning Division

Date

Date

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
I. AESTHETICS - Will the project				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located within the view-shed of any Scenic Route listed in the General Plan):

- a) **Less than Significant Impact.** The proposed Project site is primarily surrounded by National Forest land. An *Arborist Assessment*, dated June 17, 2017, has been prepared for the proposed Project and noted 24 total trees are to be removed, including 15 Yellow pine and 9 Canyon live oak. 23 of these trees are listed as regulated through the County's Development Code, since they are native trees with a six inch or greater stem diameter. The portion of the property potentially affected by development currently includes 141 trees. Additional trees cover the balance of the 40 acre property. As such, most of the property's trees within the proposed development area will remain, in addition to those trees beyond the development area, but within the parcel ownership boundaries that are around the development area and along Radford Camp Road. The perimeter and on-site trees would assist in screening the site and individual buildings from public view. The selective removal of the trees will allow the proposed Project to retain the general pattern of tree cover and not result in a clear cut or barren area that would adversely affect the area's tree cover. In addition, the building height for the cabins is less than 16 feet. Approximately 80 percent of the remaining trees within the development area will be over 20 feet in height and enable adequate screening of the proposed development from aerial view.

Due to the limited building height and maintenance of most of the existing trees on the property, the scenic value of the site would not be adversely affected and the potential impact less than significant.

- b) **Less than Significant with Mitigation Incorporated.** The site is not adjacent to a State scenic highway. There are no protected trees, rock outcroppings, or historic buildings on the project site that will be displaced by the building. As discussed in the previous Section, the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings. However, it is important that the remaining

trees be adequately protected. To achieve this, the *Arborist Assessment* has recommended the following measures, referred to as AES-1:

- a) Avoid damage during construction by erecting barriers around existing trees to be retained. Fencing should be placed one foot from the trunk for each inch of trunk diameter.
- b) Limit access to construction crews, allowing only one route in and out of the Project area.
- c) Intentions to protect the trees should be communicated and written into the construction specifications.

Utilization of these measures and maintenance of existing trees would reduce the potential impact to less than significant.

- c) **Less than Significant Impact.** The County Development Code provides that removal of native trees with a six inch or greater stem diameter or 19 inches in circumference measured 4.5 feet above natural grade level shall be required to obtain a Tree Removal Permit. Since the tree removal discussed in this Initial Study is associated with a development project, the Code criteria is utilized as a significance threshold for CEQA purposes. The Arborist report indicated 24 trees would be removed, based upon the existing site plan. The processing of a Tree Removal Permit includes required findings that a minimum of 20 percent of natural vegetation will be maintained for commercial, industrial, and administrative/professional uses and 35 percent for multi-family residential uses. It also requires at least half of the natural areas for all uses be located in the front yard setback area or are located to obscure public rights of way. Although the proposed use is not commercial, industrial, administrative/professional or multi-family residential use, the amount of trees removed would remain less than the significant thresholds listed above and all existing trees within the setback area would be retained.

Therefore, the Project will not degrade the existing visual character or quality of the site and its surroundings and impacts will be less than significant.

- d) **Less Than Significant Impact.** The proposed Project will include the use of exterior motion activated lighting for security and parking lot lighting, which may include bollards and lighting standards. The County's Development Code requires shielding of lighting to prevent seepage onto adjoining properties. Due to the location of the lighting, the limited amount of lighting, and compliance with existing County standards, the proposed lighting would result in a less than significant impact.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Will the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located in the Important Farmlands Overlay):

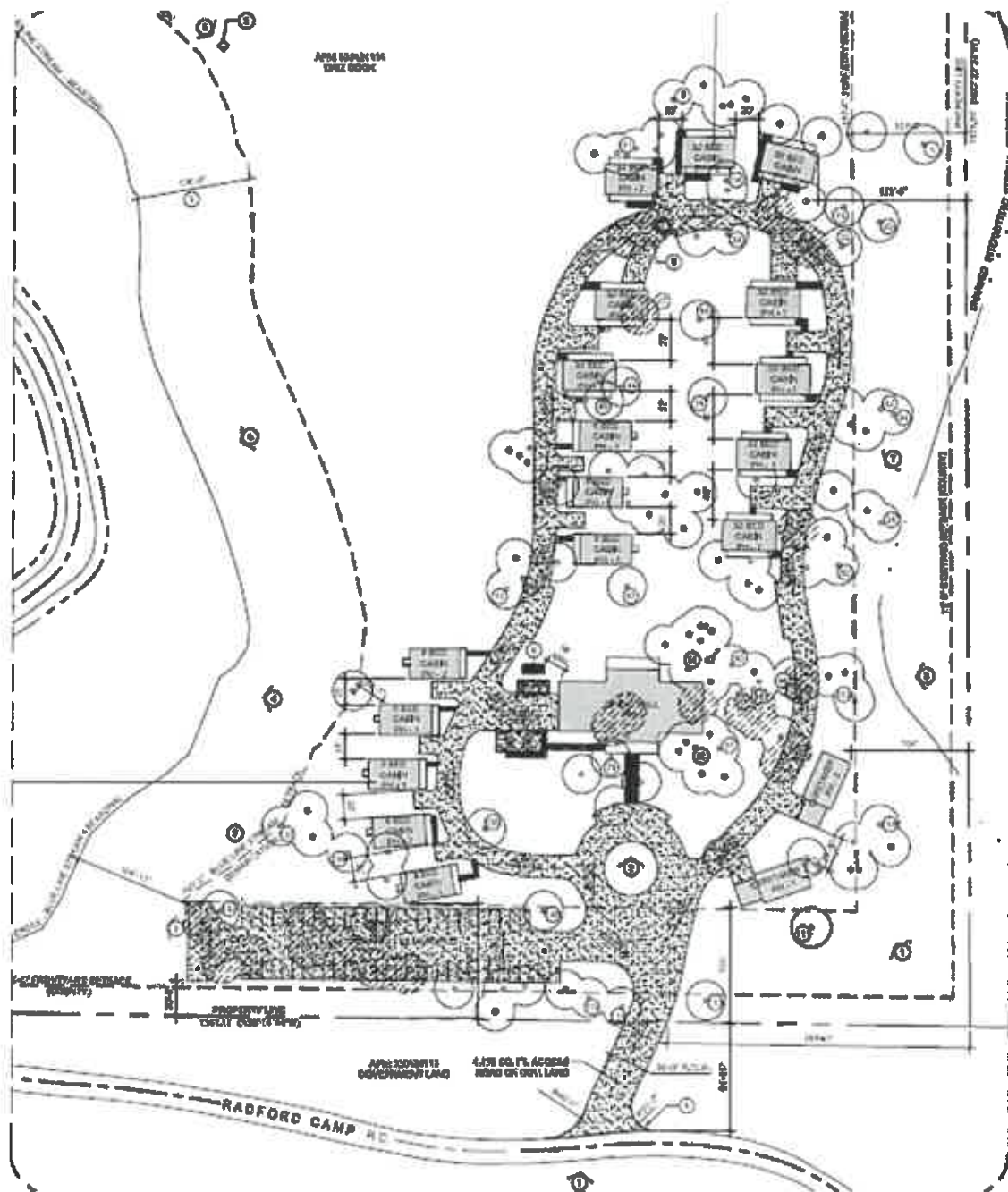
- a) **No Impact.** The California Department of Conservation, Farmland Mapping and Monitoring Program, is responsible with mapping Prime Farmland, Unique Farmland, Farmland of

Statewide Importance, and Farmland of Local Importance (Farmland) across the state. This site is unimproved and nonagricultural land. The San Bernardino County Important Farmland 2014 Map, Sheet 2 of 2, does not designate this area related to agricultural resources, since it is beyond the boundary of the survey mapping area. However, the area is not used as farmland and contains vegetation native to the area. The proposed Project would not convert Farmland to non-agricultural use, since the project site is not utilized nor designated for use. There is no impact and no further analysis is warranted.

- b) **No Impact.** The proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. The proposed Project area is not under a Williamson Act contract, based upon a review of the San Bernardino County Williamson Act FY 2015/2016, Sheet 2 of 2 map for this area, prepared by the California Department of Conservation. In addition, no such areas are designated within approximately 12 miles. As such, there is no impact and no further analysis is warranted.
- c) **Less Than Significant Impact.** Forest Land, as defined in Section 12220 of the Public Resources Code, is "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Timberland as defined in Section 4526 of the Public Resources Code as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis."

The subject property is privately owned and almost entirely surrounded by National Forest Land. The property currently supports native tree cover and could grow trees of commercial value. The proposed use is not related to timber production or directly related to management of forest resources. However, the proposed use is indirectly related to forest land use as an outdoor education school for students. The facility would operate between September and May and serve various school districts throughout Southern California providing science and ecology based classes for elementary and middle school students. The Project design is reflective of a camp ground arrangement with a number of cabins placed around a loop drive with a centralized dining facility.

As noted in the responses to Section I c) above, some of the existing trees will be removed to provide for the planned driveway and cabin placement. However, the applicant has attempted to minimize the number of trees affected. (See exhibit on next page.) The subject parcel is approximately 40 acres in size, with a generally affected development area of approximately 6.0 acres. The Arborist report indicated the affected development area contains 141 trees of which 24 would be affected. The County Development Code provides that a minimum of 20 percent of the native trees are to remain for multiple family residential uses, for example. The number of trees to be removed would not be greater than the minimum percent allowed under the provisions of the Development Code. As such, the potential impact is less than significant.



- d) **Less Than Significant Impact.** The proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. As cited above in II c), the project will include the removal of some trees on the property. However, over 80 percent of the trees within the proposed development area will be retained, in addition to the balance of the trees on the 40 acre parcel. As such, the potential impact to forest land will be less than significant.

- e) **Less Than Significant Impact.** The proposed Project would result in the removal of some existing trees from a portion of the subject property. However, the property would maintain its forest land appearance due to the limited number of trees removed and their selective and intermittent location. The proposed purpose of the Project is an educational facility devoted to forest land ecology and the maintenance of the property as forest land is essential to it functioning as a science camp. The land surrounding the property is within the National Forest and would remain as such. Therefore, the proposed Project would not adversely affect forest land nor cause the conversion of forest land to non-forest use. As such, the proposed project would result in a less than significant impact.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
III. AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district might be relied upon to make the following determinations. Will the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **Less Than Significant Impact.** A project is consistent with the regional Air Quality Management Plan (AQMP) if it does not exceed the SCAQMD daily threshold levels or cause a significant impact on air quality, or if the project is already included in AQMP development projections. The conclusion of the air quality analysis was that the project does not exceed the thresholds of concern. (See Section b) below).
- b) **Less Than Significant Impact.** The proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation as the proposed Project will be required to mitigate emissions to a less than significant level. Air quality impacts include both construction and operational emissions. Construction emissions include exhaust emissions generated from diesel- and gasoline-powered construction equipment, vegetation clearing, grading, fugitive dust, construction worker commuting, construction material deliveries, and operational activities upon project completion. Construction emissions are discussed below.

Construction Phase

Construction emissions were estimated utilizing CalEEMod to evaluate the construction of the building and construction vehicles. The proposed Project would be constructed in two separate phases, with the first phase significantly larger than the first. The first phase is to have a dining hall, one caretaker cabin, 3-six bed cabins, 3-eight bed cabins, and 6-

32-bed cabins. The second phase is to have one caretaker cabin, 1-six bed cabin, 1-eight bed cabin, and 3-32 bed cabins. However, for analytical purposes the proposed Project was evaluated utilizing the CalEEMod computer modeling program as if it would be constructed at one time. The potentially affected area was also reduced to 3.3 acres (building and parking areas, plus a 30% additional area) to reflect the fact that the overall development area would not be mass graded, but rather would utilize a more selective grading process involving a bobcat machine, according to the Project Architect, rather than a bulldozer. Some fugitive dust would arise during construction of the building foundations. Fugitive dust emissions include particulate matter and are a potential concern because the project is in a non-attainment area for PM-10 and PM-2.5, as well as ozone. However, the proximity of ground disturbance activities to surrounding properties is relatively far removed, due to the size of the subject parcel and the fact the surrounding property is part of the National Forest. Due to the lack of adjoining land uses and the distance to adjoining properties would reduce the potential for any adverse effects upon those adjoining properties.

**Construction Activity Emissions
 Maximum Daily Emissions (pounds/day)**

Maximal Construction Emissions	VOC	NOx	CO	SO₂	PM-10	PM-2.5
Peak Daily	35.86	66.97	55.1	0.07	22.06	13.41
SCAQMD Thresholds	75	100	550	150	150	55

Operational Impacts

The proposed Project would not cause any operational emissions to exceed their respective SCAQMD CEQA significance thresholds as the primary trips will occur at the beginning and end of each week's activities when students and instructors arrive and are subsequently discharged or return home. Based upon information provided by the applicant, a total of 32 bus round trips (16 trips up and back) will occur at the beginning and end of each week, in addition to 48 resident staff trips. A minor number of trips are projected for non-residential staff and delivery personnel during the week. This level of trip activity would only occur during the school year. Based this level of trips the emission impacts are projected to be less than significant.

Project operations would neither violate air quality standards nor contribute substantially to an existing or projected air quality violation. Impacts are less than significant and no mitigation measures are required.

- c) **Less than Significant Impact.** As discussed above in Section III b), the Project would not exceed SCAQMD criteria pollutant emission thresholds. Cumulative emissions are part of the emission inventory included in the AQMP for the project area due to consistency with existing land use. Therefore, there would be no cumulatively considerable net increase of

the criteria pollutants that are in nonattainment status in the South Coast Air Basin. Impacts are less than significant and no mitigation measures are required.

- d) **Less than Significant Impact.** The proposed Project would not expose sensitive receptors to substantial pollutant concentrations. See Items III a) through III c) regarding criteria pollutants. The Project's construction and operations would not result in any significant air pollutant emissions, and would not adversely affect sensitive receptors (consisting of residences) due to the substantial distance separating the uses. Therefore the project will result in a less than significant impact.
- e) **Less than Significant Impact.** The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities. Standard AQMD construction requirements would minimize odor impacts resulting from construction activity. Any construction odor emissions generated would be temporary, short-term, and intermittent in nature and would cease upon completion of construction activity and is thus considered less than significant. Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the County's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operation would be less than significant and no mitigation is required.

SIGNIFICANCE: No significant adverse impacts have been identified nor are anticipated. However, as part of the standard measures incorporated into development projects to reduce potential air quality impacts, the following measures are required as conditions of Project approval and would ensure potential Project impacts would be less than significant:

AIR QUALITY MITIGATION MEASURES:

AQ-1 Construction Mitigation. The "developer" shall submit for review and obtain approval from County Planning of a signed letter agreeing to include as a condition of all construction contracts/subcontracts requirements to reduce vehicle and equipment emissions and other impacts to air quality by implementing the following measures and submitting documentation of compliance: The developer/construction contractors shall do the following:

- a) Provide documentation prior to beginning construction demonstrating that the project will comply with all SCAQMD regulations including 402, 403, 431.1, 431.2, 1113 and 1403.
- b) Each contractor shall certify to the developer prior to construction-use that all equipment engines are properly maintained and have been tuned-up within last 6 months.
- c) Each contractor shall minimize the use of diesel-powered vehicles and equipment through the use of electric, gasoline or CNG-powered equipment. All diesel engines shall have aqueous diesel filters and diesel particulate filters.
- d) All gasoline-powered equipment shall have catalytic converters.
- e) Provide onsite electrical power to encourage use of electric tools.

- f) Minimize concurrent use of equipment through equipment phasing.
- g) Provide traffic control during construction to reduce wait times.
- h) Provide on-site food service for construction workers to reduce offsite trips.
- i) Implement the County approved Dust Control Plan (DCP)
- j) Suspend use of all construction equipment operations during second stage smog alerts. NOTE: For daily forecast, call (800) 367-4710 (San Bernardino and Riverside counties).

AQ-2 Operational Mitigation. The “developer” shall implement the following air quality mitigation measures, during operation of the approved land use: All on-site equipment and vehicles (off-road/ on-road), shall comply with the following:

- a) County Diesel Exhaust Control Measures [SBCC §83.01.040 (c)]
- b) Signs shall be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use.
- c) All engines shall not idle more than five minutes in any one-hour period on the project site. This includes all equipment and vehicles.
- d) Engines shall be maintained in good working order to reduce emissions.
- e) Ultra low-sulfur diesel fuel shall be utilized.
- f) Electric, CNG and gasoline-powered equipment shall be substituted for diesel-powered equipment, where feasible.
- g) On-site electrical power connections shall be made available, where feasible.
- h) All transportation refrigeration units (TRU's) shall be provided electric connections, when parked on-site.

AQ-3 Dust Control Plan. The “developer” shall prepare, submit for review and obtain approval from County Planning of both a Dust Control Plan (DCP) consistent with SCAQMD guidelines and a signed letter agreeing to include in any construction contracts/ subcontracts a requirement that project contractors adhere to the requirements of the DCP. The DCP shall include the following requirements:

- a) Exposed soil shall be kept continually moist to reduce fugitive dust during all grading and construction activities, through application of water sprayed a minimum of two times each day.
- b) During high wind conditions (i.e., wind speeds exceeding 25 mph), areas with disturbed soil shall be watered hourly and activities on unpaved surfaces shall cease until wind speeds no longer exceed 25 mph.
- c) Storage piles that are to be left in place for more than three working days shall be sprayed with a non-toxic soil binder, covered with plastic or revegetated.
- d) Storm water control systems shall be installed to prevent off-site mud deposition.
- e) All trucks hauling dirt away from the site shall be covered.
- f) Construction vehicle tires shall be washed, prior to leaving the project site.
- g) Rumble plates shall be installed at construction exits from dirt driveways.
- h) Paved access driveways and streets shall be washed and swept daily when there are visible signs of dirt track-out.
- i) Street sweeping shall be conducted daily when visible soil accumulations occur along site access roadways to remove dirt dropped or tracked-out by construction

vehicles. Site access driveways and adjacent streets shall be washed daily, if there are visible signs of any dirt track-out at the conclusion of any workday and after street sweeping.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
IV. BIOLOGICAL RESOURCES - Will the project:				
a) Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

(Check if project is located in the Biological Resources Overlay or contains habitat for any species listed in the California Natural Diversity Database ☒):

The proposal has included the following biologically related studies that evaluated the entire 40 acre parcel. However, only approximately 6 acres of the property is to be developed.

- *Arborist Assessment*, June 17, 2017, FirstCarbon Solutions.
- *Biological California Environmental Quality Act Cumulative Analysis*, August 29, 2017, FirstCarbon Solutions.

- *Habitat Assessment for Mountain Yellow-legged Frog and Southern Rubber Boa*, May 30, 2016, FirstCarbon Solutions.
- *Letter Report for San Bernardino Flying Squirrel Habitat Assessment*, May 14, 2016, FirstCarbon Solutions.
- *Results of the Southwestern Willow Flycatcher Habitat Assessment*, June 7, 2017, FirstCarbon Solutions.
- *Biological Resources Assessment Report*, December 13, 2016, FirstCarbon Solutions.
- *E-mail correspondence, dated November 15, 2017, from Kimberly Boydston, Senior Biologist, FirstCarbon Solutions.*

a) **Less than Significant with Mitigation Incorporated.**

Vegetation/Plants

The 40 acre parcel contains mixed oak/coniferous forest, big sagebrush scrub, white alder riparian forest and developed land. Radford Camp Road traverses a portion of the parcel and is considered the developed portion of the property, as referenced in the *Biological Assessment* prepared for the property. However, most of the proposed development area is to be located in the area containing big sagebrush scrub, with the balance oak/coniferous scrub. The initial *Biological Resources Assessment Report* issued December 16, 2016, included a California Natural Diversity Data Base (CNDDB) search and a site survey. The CNDDB found 32 special status plant species potentially occurring within the Project vicinity. Although, no special-status species were detected during the survey, several have the potential to occur within the Project site. The report identified the following potential plants and recommended follow-up surveys to confirm or deny their existence:

- San Bernardino milk-vetch
- Big Bear Valley milk-vetch
- Big Bear Valley woollypod
- Palmer's mariposa lily
- Western sedge
- Parish's daisy
- San Bernardino Mountain gilia
- Parish's alumroot
- Lemon lily
- San Bernardino Mountains Monkey flower
- Parish's yampah
- San Bernardino bluegrass
- California dandelion
- Slender-petaled mustard

An updated report, entitled *Biological California Environmental Quality Act Cumulative Analysis*, August 29, 2017, was prepared that included a data base search and field reconnaissance. The *Analysis* referenced the previous study and involved focused surveys to determine the presence/absence of special status rare plant species, a tree survey, and the southwestern willow flycatcher, southern rosy boa, yellow-legged frog, and San Bernardino Flying Squirrel.

The updated focus survey did not find any of the potentially listed species indicating they were not observed and were not expected to be impacted and the Lemon lily was not expected to occur due to lack of suitable habitat.

Wildlife

As noted above, the *Biological California Environmental Quality Act Cumulative Analysis*, dated, August 29, 2017, conducted a data base search and an on-site field survey and evaluated the following four state-and/or federally-listed species:

- Southern Mountain Yellow Legged Frog (MYLF)
- Southwestern Willow Flycatcher (SWFL)
- Southern Rubber Boa
- Yellow-legged frog

In addition, the following California Department of Fish and Wildlife Species of Special Concern were also determined through the data base search to have the potential to occur on-site and were evaluated with the following conclusion:

- San Bernardino northerly flying squirrel: Not observed, moderate potential to occur
- Silvery legless lizard: Not observed, moderate potential to occur
- Coastal rosy boa: Not observed, low potential to occur due to suitable habitat present
- San Bernardino ringneck snake: Not observed, low-moderate potential to occur due to suitable habitat conditions
- Large-blotched ensatina Salamander: Not observed, low potential to occur due to suitable habitat present
- California mountain kingsnake: Not observed, low-moderate potential to occur due to suitable habitat present.
- Coast horned lizard: Not observed, potential to occur. Observed within three miles.
- Two-striped garter snake: Not observed, low-moderate potential to occur due to suitable habitat present.
- Cooper's hawk: Not observed, potential to occur due to suitable habitat present.
- Yellow warbler: Not observed, potential to occur due to suitable nesting and foraging riparian habitat associated with the Santa Ana River.
- Long-eared owl: Not observed, potential to occur due to suitable nesting habitat present.

- Yellow-breasted chat: Not observed, potential to occur due to suitable nesting and foraging riparian habitat associated with the Santa Ana River.
- Loggerhead Shrike: Not observed, moderate potential to adequate nesting and foraging habitat present.
- Pallid bat: Not observed, low potential to occur due to lack of suitable night roost habitat within the Project site and low quality day/maternity roost bridge location south of site.
- Townsend's big-eared bat: Not observed, low potential to occur due to lack of suitable night roost habitat within the Project site and low quality day/maternity roost bridge location south of site.
- Lodgepole chipmunk: A single chipmunk was observed during the 2017 field visit, but the species could not be identified. This species is known to occur in the area and habitat is suitable. (Note: subsequent e-mail information from the on-site biologist indicated limber pine is their source of food, but no such trees were located on the property. In addition, he noted the site elevation is low for limber pine trees and no species of this type were reported south of the ridgeline between Big Bear and the project site.

Based upon the completion of the above referenced data base analysis and field survey, incorporation of the following Mitigation Measures would reduce the potential impact to less than significant.

BIO-1: Provide a biological monitor during construction in locations where suitable wildlife habitat is present.

BIO-2: Provide species-specific resource training for all construction personnel.

BIO-3: Nesting Birds

If construction occurs during the nesting bird season (March 1-August 15), pre-construction surveys will likely be required. If identified nests may be adversely affected by construction activities, the qualified biologist will propose a no work, or limited buffer if appropriate.

BIO-4: Southern Rubber Boa

Due to the potential of this species to occur on site, it is recommended that a specialized monitor familiar with this species conduct a pre-construction clearance survey in locations within the Project impact area that has suitable habitat (i.e., boulders, logs, etc.). This survey should be conducted within 7-days of the start of construction. If SRB is encountered, it may be relocated by a permitted biologist that is recognized by the U.S. Fish and Wildlife Service for handling and translocating this species. If deemed necessary, exclusionary fencing is to be placed during construction activities to discourage animals from returning to the impact area.

BIO-5: Mixed Oak/Coniferous Forest

- **Avoid damage during construction by erecting barriers around existing trees to be retained. Fencing should be placed one foot from the trunk for each inch of trunk diameter.**
- **Limit access to construction crews, allowing only one route in and out of the Project area.**
- **Intentions to protect the trees should be communicated and written into the construction specifications.**

It should be noted for clarification purposes that variations to the above listed mitigation measures occurred outside of the printed reports previously referenced and included the following correspondence:

- The *May 2016 Flying Squirrel* report identified mitigation measures that were not contained in the *August 2017 Biological CEQA Cumulative Analysis*. Contact was made with the biologist and her October 23, 2017 e-mail response to County Staff on the necessity of maintaining the mitigation measures is as follows: "No, as there was no indication that the species was currently on site, nor it is expected to be. Please strike the mitigation measures as they are not necessary."
- County Staff was unclear about the locational reference for the Flying Squirrel and requested clarification on the potential nesting habitat of the Flying Squirrel. The biologist responded in her October 23, 2017 e-mail with two separate comments:
 - ✓ "There were no observations of San Bernardino flying squirrel during the site visit. Multiple habitat features were observed that could provide low quality foraging habitat in the Southeastern quad of the project site and moderate quality foraging habitat in the North half of the project site."
 - ✓ "There is a low likelihood that the project site provides potential nesting habitat in the Northwest of the project site and low to moderate quality foraging habitat in the Southeast corner of the project site. The proposed project impacts (project footprint) are confined the Southeast quadrant of the project site, where habitat is low quality and likely only potential foraging habitat. Thus, development in the southeast corner of the project site is not likely to have substantial impact for San Bernardino flying squirrels. Furthermore, because the southeast corner of the project site has a discontinuous canopy cover and does not directly connect to adjacent continuous canopy forest the proposed development is unlikely to cause habitat fragmentation. With the current project footprint and the location of development, the proposed project affect is unlikely to adversely affect San Bernardino flying squirrels."
- County Staff requested clarification related to the mitigation measure contained in the *Habitat Assessment for Mountain Yellow-legged Frog and Southern Rubber Boa*, May 30, 2016 report indicating a buffer should be established along the Santa Ana River. Since the River is off-site the need for the measure was questioned. The biologist responded: "Yes, since

suitable habitat is restricted to the creek, and project design features do not impact the creek, these mitigation measures can be eliminated.”

- b, c) **Less than Significant Impact.** The proposed development area is located east of Converse Creek and north of the Santa Ana River. Based a field observation conducted as part of the *Biological Resources Assessment Report*, dated December 13, 2016, water was flowing with a defined course. However, the biological observer was unable to identify a consistent bed and back, because the Creek does not appear to have enough water that regularly flows through the site. No significant impacts are expected due to the distance of the proposed development area from these water courses.

BIO-6: Development of a Storm Water Pollution Prevention Plan and Implementation of Best Management Practices (BMPs) will likely be required to avoid impacts to jurisdictional wetlands and waters.

- d) **Less than Significant Impact.** The proposed Project would develop a portion of a 40-acre parcel. The proposed development area has been located away from Converse Creek, which has the potential to be a migration corridor. In addition, vehicle trips associated with the proposed use would be intermittent and, according to the *Biological California Environmental Quality Act Cumulative Analysis* “will not likely have a substantial effect on wildlife movement through the area.” (p. 20)
- e) **Less than Significant Impact.** The County of San Bernardino Development Code includes Section 88.01.070 (Mountain Forest and Valley Tree Conservation) and Section 88.01.080 (Riparian Plant Conservation). The proposed Project included an *Arborist Assessment*, dated June 17, 2017. The report found 141 trees were located on the potential development area, of which 24 are to be removed and 23 of those have six inch or greater diameter stems and are defined as regulated trees under the County of San Bernardino Development Code. The Development Code provides for the removal of trees based upon land use, such as 20 percent for commercial uses and 35 percent for multiple family uses. No thresholds are identified for the Resource Conservation Land Use District. However, as noted previously, the Project design has attempted to maintain the greatest number of trees possible and perimeter trees will remain, thereby screening the development area from view. Impacts will be less than significant.
- f) **Less than Significant Impact.** The proposed Project will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan, because no such plan exists for the area. Impacts will be less than significant.

SIGNIFICANCE: Possible significant adverse Impacts have been identified or are anticipated and the above referenced mitigation measures BIO-1 through BIO-6 are required as conditions of project approval to reduce these Impacts to a level considered less than significant.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
V. CULTURAL RESOURCES - Will the project				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: (Check if the project is located in the Cultural ☐ or Paleontologic ☐ Resources overlays or cite results of cultural resource review):

- a) **Less than Significant Impact.** Historic resources generally consist of buildings, structures, improvements, and remnants associated with a significant historic event or person(s) and/or have a historically significant style, design, or achievement. Damaging or demolition of historic resources is typically considered to be a significant impact. Impacts to historic resources can occur through direct impacts, such as destruction or removal, and indirect impacts, such as a change in the setting of a historic resource.

CEQA Guidelines §15064.5(a) clarifies that historical resources include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.
2. A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements [of] section 5024.1(g) of the Public Resources Code.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

The site exists primarily within its natural environmental state as a forested area, although some level of ground clearance occurred in the not so distant past. A *Cultural Resource Assessment for the High Trails Outdoor Science School Project*, dated August 2017, (referred to as *Assessment*) and prepared by Applied EarthWorks noted that a records search was conducted through the California Historical Resources Information System (CHRIS) and "that 12 known cultural resources are present within a one-mile radius of the Project area. Of these resources, only the Seven Oaks Recreation Residence District (District) lies within the Project area; no features (i.e., historical refuse scatter and water conveyance features) or structures

(i.e., historical cabins) associated with the District have been documented within the Project area.” (p. iv) A subsequent Phase I pedestrian survey was conducted of the Project area on August 11, 2017. The *Assessment* noted that “No cultural resources were identified within the Project area. Furthermore, there is little to no potential for the Project area to contain intact buried cultural deposits. Based on these findings, no further cultural resource management of the Project area is recommended.” (p. iv) This statement was reiterated in the October 2017 updated report. Based upon this evaluation, there will be no impact to historical resources as a result of the Project and no mitigation measures are required. Impacts will be less than significant.

- b) **Less Than Significant With Mitigation Incorporated:** Archaeological sites are locations that contain resources associated with former human activities, and may contain such resources as human skeletal remains, waste from tool manufacture, tool concentrations, and/or discoloration or accumulation of soil or food remains.

On July 1, 2015 AB 52 (Gatto, 2014) went into effect. AB 52 established “Tribal Cultural resources” as a resource subject to CEQA review. Tribal Cultural Resources are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also created a process for consultation with California Native American Tribes in the CEQA process. Tribal Governments can request consultation with a lead agency and provide input into potential impacts to tribal cultural resources before the lead agency decides what kind of environmental assessment is appropriate for a proposed project. On March 13, 2017, the County Land Use Services Department notified the following tribes of the proposed Project:

- Morongo Band of Mission Indians
- Soboba Band Luiseño Indians
- Colorado River Indian Tribe
- San Manuel Band of Mission Indians
- Twenty-Nine Palms Band of Mission Indians

Upon receipt of a project notice, tribes have thirty (30) days to request consultation on a project. The 30-day response period concluded on May 13, 2017. The County Land Use Services Department received a request for consultation from the San Band of Mission Indians.

As noted previously, an *Assessment* was prepared for the Project site. The *Assessment* noted that "Holocene alluvium underlies the remainder of the Project area. It is possible that cultural remains dating to the early or middle Holocene deposits may be buried in Holocene alluvium. However, this portion of the Project area exhibits moderate slopes that are covered by a thin soil layer (1-3 feet). As such, there is a low potential for these areas to contain deeply buried deposits. In addition, the surface terrain throughout the entire Project area has been disturbed by some forest clearing/removal activities. Consequently, there is little to no potential for the Project area to contain intact buried cultural deposits. No further cultural resource management of the Project area is recommended." (p. 25, October 2017 report) The *Assessment* also noted that the "San Manuel Band of Mission Indians requested a qualified archaeologist monitor all ground disturbing activity taking place below three feet of the current ground surface, including any disturbance as a result of the clearing of trees (and other similarly large vegetation)." (p. 25)

This latter comment was based upon a meeting held on October 17, 2017 at the San Bernardino County Offices with County Staff, Project representatives, and Jessica Mauck from the San Manuel Band of Mission Indians (Tribe). At the meeting it was noted the Project would not disturb soil below a 3 foot depth in all areas, except the Dining Hall, where disturbance would go no more than 5 ft. The geotechnical report indicates the potential to go below 3 feet and the Tribe recommended an archaeologist be on site for that level of disturbance. Furthermore, any ground disturbing activities that include pulling large vegetation by the root would also require a monitor, since tree removal can be very destructive at varying levels of subsurface soils. The Tribe did not recommend a Tribal monitor be present for this work, nor was it requested that an archaeological monitor meets SOI-standards. Below is recommended language for addition within the conditions of approval, which incorporates the use of an archaeological monitor and the process to follow if any inadvertent discoveries occur:

CR-1:

1. All ground disturbing activity taking place below 3 feet of the current surface, in addition to any disturbance as a result of the clearing of trees (and other similarly large vegetation), will be monitored by a qualified archaeologist. In the event that Native American cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and the retained archaeologist shall assess the find. If the archaeologist cannot make an assessment, an archaeologist meeting Secretary of Interior standards will be contacted to assist. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, San Manuel Band of Mission Indians (SMBMI) will be contacted if any such find occurs and be provided information and

permitted/invited to perform a site visit, if requested by SMBMI, when the archaeologist makes his/her assessment, so as to provide Tribal input.

2. If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the retained archaeologist, with assistance from an SOI-qualified archaeologist, shall develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, the drafts of which shall be provided to San Manuel Band of Mission Indians (SMBMI) for review and comment.
 - a. All in-field investigations, assessments, and/or data recovery enacted pursuant to the finalized Treatment Plan shall be monitored by a SMBMI Tribal Participant(s), if deemed necessary by SMBMI staff.
 - b. The Lead Agency and/or applicant shall, in good faith, consult with SMBMI on the disposition and treatment of any artifacts or other cultural materials encountered during the project.
3. If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

The County utilizes a number of standard conditions of approval, including one that references the use of the San Bernardino County Museum for preservation and curation should any finds be uncovered.

Upon implementation of Mitigation Measure CR-1, impacts are determined to be less than significant.

- c) **Less than Significant Impact.** Paleontological resources are the preserved fossilized remains of plants and animals. Fossils and traces of fossils are preserved in sedimentary rock units, particularly fine- to medium grained marine, lake, and stream deposits, such as limestone, siltstone, sandstone, or shale, and in ancient soils. They are also found in coarse-grained sediments, such as conglomerates or coarse alluvium sediments. Fossils are rarely preserved in igneous or metamorphic rock units. Fossils may occur throughout a sedimentary unit and, in fact, are more likely to be preserved subsurface, where they have not been damaged or destroyed by previous ground disturbance, amateur collecting, or natural causes such as erosion.

Paleontological Resources Assessment for the High Trails Outdoor Science School Project (Paleontological Assessment), September 23, 2015, prepared by Applied EarthWorks, completed a records search through the Los Angeles County Museum of Natural History (LACM) on September 14, 2015. The search found there were no previously recorded vertebrate fossil localities in the area. One vertebrate locality was recorded east of the Project area, west of Landers in a similar geologic deposit. The *Assessment* noted that the geologic mapping for the area is underlain by Quaternary alluvium and Quaternary older alluvial fan

deposits. The *Paleontological Assessment* asserted these conditions have “a low paleontological resource potential because they are likely too coarse and too young to contain fossilized material. These Quaternary alluvial deposits may be underlain at moderate depth by older Pleistocene-age deposits that have been known to yield significant paleontological resources throughout the region. However, Project excavation is expected to be shallow and older buried units are unlikely to be impacted by the Project development. As a result, the potential for encountering fossil resources during Project-related ground disturbance is low. Therefore, impacts to paleontological resources are not anticipated and no further paleontological mitigation is recommended at this time.” (p. 4)

The site is primarily undisturbed, although some ground clearance occurred years ago according to the applicant. As noted previously for archaeological resources the County’s standard condition also references paleontological resources that may be unearthed. In this particular circumstance, the standard condition of approval would be adequate to address potential resources and reduce the potential level of impact to less than significant.

- d) **Less Than Significant Impact.** The Project site does not contain a cemetery and no known formal cemeteries are located within the immediate site vicinity, based upon the completion of the previously referenced *Assessment*. In the event that human remains are discovered during Project grading or other ground disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code §7050.5 as well as Public Resources Code §5097 et. seq. California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin. Pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made by the Coroner.

If the Coroner determines the remains to be Native American, the California Native American Heritage Commission (NAHC) must be contacted and the NAHC must then immediately notify the “most likely descendant(s)” of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
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VI. GEOLOGY AND SOILS - Will the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map Issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii. Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii. Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv. Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 181-B of the California Building Code (2001) creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

SUBSTANTIATION: (Check ☐ if project is located in the Geologic Hazards Overlay District):

- a) i) **No Impact.** The proposed project site is not located within an Alquist-Priolo Earthquake Fault Zone based upon a review of the County's Geologic Hazards Overlays Map for the subject area. While the potential for onsite ground rupture cannot be totally discounted (e.g., unmapped faults could conceivably underlie the project site), the likelihood of such an occurrence is considered low due to the absence of known faults within the property. There is no impact related to the exposure of persons or structures to rupture of a known earthquake fault.

ii) **Less Than Significant Impact.** The Project site is within a seismically active region and is potentially subject to strong ground acceleration from earthquake events along major regional faults in southern California. Known regionally active and potentially active faults could produce the most significant ground shaking at the site.

The design of any structures on-site would incorporate measures to accommodate projected seismic loading, pursuant to existing California Building Code (CBC) and local building regulations. Specific measures that may be used for the proposed Project include proper fill composition and compaction; anchoring (or other means for securing applicable structures); and the use of appropriate materials and flexible joints. Based on the incorporation of applicable measures into project design and construction to comply with CBC, potential project impacts associated with strong seismic ground shaking would be less than significant.

iii) **No Impact.** Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow behavior. The Project site is not identified as an area susceptible to liquefaction or subsidence on the County's Geologic Hazard Overlays exhibit for the area. As a standard measure, all construction activities are subject to the building standards of the California Building Codes with respect to potential liquefaction conditions with the Project site.

iv) **Less Than Significant Impact.** The County's Geologic Hazard Overlays exhibit for the area displays a low to moderate susceptibility for landslides. Landslides are the downslope movement of geologic materials. The stability of slopes is related to a variety of factors, including the slope's steepness, the strength of geologic materials, and the characteristics of bedding planes, joints, faults, vegetation, surface water, and groundwater conditions. The Project area is sloped, but not steep in its terrain contours and landslides have not been known as an issue historically. Therefore, a less than significant impact is anticipated with respect to seismic-related (or other) landslide hazards.

b) Less than Significant Impact.

Topsoil

The *Soils Investigation for On-Site Sewage Disposal Systems* identified the surface soils as silty fine to coarse sand. The Project is designed to limit the amount of land disturbance, including the retention of native vegetation. The proposed structures are of a modular design and will be assembled on-site. Each structure is relatively small and would not require deep trenching or significant soil removal. As a result, impacts would be less than significant.

Erosion

A Preliminary Water Quality Management Plan (WQMP) has been prepared and accepted by the County Land Development Division for the Project site. The Plan identifies the method of retaining the incremental increase in stormwater runoff and reducing off-site erosion potential through the use of relatively small, but numerous, infiltration trenches placed near

or adjoining proposed impervious ground materials, such as the parking lot or structures. Based upon this design and an effort to retain most of the on-site vegetation, off-site discharge of stormwater runoff and associated pollutants would be significantly reduced.

The Project area is covered with trees and under-brush. No construction runoff is anticipated to occur and the applicant will implement Best Management Practices (BMPs) during construction to prevent any potential runoff. Erosion runoff is not anticipated to occur and impacts will be less than significant.

- c, d) **Less than Significant Impact.** The project is not identified as being located on a geologic unit or soil that has been identified as being unstable or containing expansive soils as defined in Table 18-1B of the California Building Code. A review of material from the *Geologic Map of the San Geronio Mountain Quadrangle, San Bernardino and Riverside Counties, California* (1964) found the underlying rock conditions are Quartz monzonite, defined as generally massive, medium-grained granitic rock. The older surficial sediments overlying the rock are slightly consolidated alluvial deposits and derived from rocks from the adjacent mountains that are preserved only as erosional remnants, composed of conglomerate, which is crudely bedded and unsorted boulders of cobbles, pebbles, and sand derived mostly from gneiss and quartz monzonite that are deposited as alluvial fans. The more recent sediments are generally undissected alluvial fill that are present in the canyons, unconformable on older formations. Recent age material is derived from landslide rubble, talus rubble, alluvium that is mostly cobble-pebble gravel and coarse sand.

The Project is not located in an area that is susceptible to liquefaction or subsidence. Adherence to the standards and requirements in the Building Code for design of the proposed structures would reduce potential adverse effects. Therefore, impacts related to landslide, lateral spreading, subsidence, liquefaction or collapse is considered less than significant.

- e) **No Impact.** A soils investigation has been undertaken to determine the potential for subsurface sewage disposal. 45 test pits were dug to determine potential percolation rates and 11 exploratory pits were dug to a depth of 15 feet to determine potential groundwater levels. Percolation rates varied between 1.6 and 6.2 inches per minute and are within acceptable levels. Therefore, less than significant impacts are anticipated

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
VII GREENHOUSE GAS EMISSIONS - Will the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** In December September 2011, the County of San Bernardino adopted the *Greenhouse Gas Emissions Reduction Plan* (GHG Plan). The purpose of the GHG Plan is to reduce the County's internal and external Green House Gas (GHG) emissions by 15 percent below current (2011) levels by year 2020 consistent with State climate change goals pursuant to AB32. The GHG Plan has been designed in accordance with Section 15183.5 of the State CEQA Guidelines which provides for streamline review of climate change issues related to development projects when found consistent with an applicable greenhouse gas emissions reduction plan.

According to CEQA Guidelines section 15064.4, when making a determination of the significance of greenhouse gas emissions, the "lead agency shall have discretion to determine, in the context of a particular project, whether to (1) use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use." Moreover, CEQA Guidelines section 15064.7(c) provides that "a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts" on the condition that "the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

According to the County of San Bernardino GHG Plan, measurable reductions of GHG emissions will be achieved through the County's GHG Development Review Process by applying appropriate reduction requirements as part of the discretionary approval of new development projects. A review screening guidance standard of 3,000 MTCO₂e is applied to all land uses when the County is the lead agency. Projects that exceed 3,000 MTCO₂e per year of GHG emissions are required to calculate GHG reduction measures and the determination of a significant finding using the County's GHG Plan Screening Tables. Projects that garner 100 or more points on the Screening Tables do not require quantification of project specific GHG emissions. The applicant has utilized the screening tables and identified those features to be provided for each development area, applying commercial screening standards to the dining hall and residential screening standards to the sleeping cabins and caretaker's residence. A total of 130 points were identified for the dining hall and 119 points for the caretaker's residence.

As discussed in Section III of this document, the proposed project's main contribution to air emissions is attributable to construction activities. Project construction would result in greenhouse gas (GHG) emissions from construction equipment and construction workers personal vehicles traveling to and from the site. Construction-related GHG emissions vary depending on the level of activity, length of construction period, specific construction operations, types of equipment, and number of personnel.

The primary emissions that would result from the proposed project occur as carbon dioxide (CO₂) from gasoline and diesel combustion, with more limited vehicle tailpipe emissions of nitrous oxide (N₂O) and methane (CH₄), as well as other GHG emissions related to vehicle cooling systems. Although construction emissions are a one-time event, GHG emissions such as CO₂ can persist in the atmosphere for decades.

The proposed project is consistent with the Greenhouse Gas Emissions Reduction Plan, adopted by the County on December 6, 2011. The proposed use and size of the project is expected to produce far less than the threshold of 3,000 metric tons of carbon dioxide equivalent (CO₂e), which is the average amount of GHG produced annually by 60 to 75 residences. The County's *Greenhouse Gas Emissions Reduction Plan* provides that development projects reaching at least 100 points are not required to prepare a GHG analysis, which has been achieved. Emissions from the proposed Project will be further reduced with implementation of the mitigation measures previously outlined in AQ-1, AQ-2 and AQ-3.

- b) **Less than Significant Impact.** The State and local regulatory programs for GHG emissions and climate change are described in the response to Section VII a) above. The findings cited above will ensure that there would be no conflict with any applicable plan, policy, or regulation; therefore, impacts will be less than significant.

No significant adverse impacts are identified or anticipated and no mitigation measures are required

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
VIII	HAZARDS AND HAZARDOUS MATERIALS - Will the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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, will it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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, will the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	For a project within the vicinity of a private airstrip, will the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a, b) **Less than Significant Impact.** Equipment and vehicle maintenance servicing may produce waste oils, lubricants and solvents. It is projected that maintenance of processing equipment will generally occur offsite, but occasionally it may take place onsite. When onsite maintenance does occur, all servicing of equipment will be performed consistent with San Bernardino County Department of Environmental Health Services regulations for draining/collecting waste oils and other hazardous materials. All collected waste oils, lubricants and solvents shall be placed in covered containers and stored within secondary containment structures while onsite. These collected materials will continue to be transferred to a County-approved hazardous waste handler for proper disposal or to an approved re-use facility. Ordinary refuse will continue to be collected in bins and disposed of at permitted landfills. Other chemicals or hazardous materials are not proposed during normal operations at the project site. No flotation, amalgamation, smelting, leaching or other processes are proposed throughout the life of the project. Based on the analysis above, impacts are less than significant.
- c) **Less Than Significant Impact.** The proposed Project involves the use of materials common to the construction industry and includes the transport, storage and use of fuels, and lubricants. The operator would continue to comply with all applicable federal and state safety rules and regulations regarding hazardous materials. During operation, diesel exhaust would be generated by heavy construction equipment. However, no school facilities or proposed school facilities are located within one-quarter mile radius of the Project Site. Therefore, impacts are less than significant.
- d) **No Impact.** The Project Site is not identified on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The operator would comply with all applicable federal and state safety rules and regulations regarding hazardous materials. Therefore, a less than significant impact is anticipated.
- e) **No Impact.** The Project site is not located within the boundaries of an airport land use plan or within the vicinity of a private airstrip. The Project site is approximately six miles from the Big Bear City Airport and is beyond the Airport Safety Review Areas, as displayed on the adopted Big Bear City Airport Master Plan. As such, no impacts would result.
- f) **No Impact.** The Project site is not located within the vicinity of a private airstrip.
- g) **No Impact.** Activities associated with the Project would not impede existing emergency response plans for the Project site and/or other land uses in the Project vicinity. Access to site will be provided from Radford Camp Road. All vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. Therefore, implementation of the Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

- h) **No Impact.** As shown on San Bernardino County General Plan, Hazards Overlay Map, the Project site is not located within a Fire Safety Overlay District. The Project will be plan checked by the County Fire Department. Upon implementation of the required fire prevention measures for the building, impacts due to risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, will be less than significant.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
IX HYDROLOGY AND WATER QUALITY - Will the project:					
a)	Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level, which will not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that will result in substantial erosion or siltation on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which will result in flooding on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g)	Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Place within a 100-year flood hazard area structure which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j)	Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** The Project will not violate any water quality standards or waste discharge requirements. During the construction period, potential erosion/sedimentation and construction materials impacts will be avoided or reduced below a level of significance through conformance with Best Management Practices (BMPs) and the approved Water Quality Management Plan (WQMP) in effect to mitigate off-site waste discharges. Measures may include the installation of straw bale barriers, silt fences, stockpile coverings and other similar measures. All potentially hazardous materials would be contained, stored and used in accordance with the manufacturers' instructions and handled in compliance with the applicable standards and regulations.

Implementation of standard site design BMPs, and post-construction BMPs, would ensure that water quality impacts are less than significant.

The proposed Project will also utilize an on-site subsurface septic system. This system would require approval from County Environmental Health Services (DEHS) as part of the standard review and approval process. Once approved it would then be sent to the Regional Water Quality Control Board for clearance.

- b) **Less Than Significant Impact.** The proposed Project would not affect or deplete groundwater supplies or interfere with groundwater recharge. The proposed Project intends to utilize an existing on-site well for domestic water purposes. Information on the well operation will need to be provided to the County to determine acceptable withdrawal thresholds. Due to the periodic use of the facility, no significant impact to the aquifer will result from the operation of the proposed use. Consequently, no impacts will result.
- c) **Less than Significant Impact.** The proposed school/camp facility will not substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site, because the proposed Project does not propose any substantial alteration to the existing drainage pattern. Although the 40-acre parcel is traversed by Converse Creek the proposed development area has been designed to avoid the Creek and the Santa Ana River is off-site from the parcel. The proposed Project is required to submit and implement an erosion control plan, consistent with the standard County development requirements.
- d) **Less Than Significant Impact.** The proposed facility operation 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site, because the proposed Project intends to utilize a series of infiltration basins distributed throughout the development area. County Land Use Services and Public Works Departments have reviewed the proposed Project drainage and all necessary drainage improvements both on and off site have been required as conditions of the construction of the project.

- e, f) **Less than Significant Impact.** The Project will not 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, because no storm drain facilities exist in the area. All necessary drainage improvements will be required as conditions of Project construction. There will be adequate capacity in the proposed infiltration basins to retain the incremental increase in stormwater runoff so that downstream properties are not negatively affected by any increases or changes in volume, velocity or direction of stormwater flows originating from or altered by the Project.
- g, h) **No Impact.** The Project site is not located within a FEMA Flood Hazard Area. FEMA Panel numbers 06071C8010H and 06071C8020H include the subject property. Panel 8010H is printed and identifies the area as Zone D zone, where flood hazards are possible, but undetermined. No analysis of flood hazards has been conducted by FEMA. The proposed Project does not knowingly place structures within a 100-year flood plain, nor does it include the construction of housing within a flood plain. No impacts are anticipated.
- i) **No Impact.** The Project site and surrounding area is located outside of any designated dam inundation area. The Project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, as no levee or dam is proposed as part of this Project nor located upstream of this site. Therefore, no impacts are anticipated.
- j) **No Impact.** A seiche is an oscillating surface wave in a restricted or enclosed body of water generated by ground motion, usually during an earthquake. Inundation can occur if the wave overflows a containment wall or the banks of a water body. However, inundation from a seiche, tsunami or mudflow is not identified on the County's Hazards Overlays exhibit. Therefore, no impacts are anticipated.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
X. LAND USE AND PLANNING - Will the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **No Impact.** The Project will not physically divide an established community, because development in the area is sparse and the subject property is under private ownership surrounded by the San Bernardino National Forest. Therefore, no impacts are anticipated.
- b) **Less Than Significant Impact.** The proposed Project will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect, because the Project is consistent with all applicable land use policies and regulations of San Bernardino County Code and General Plan.
- c) **No Impact.** The proposed Project does not conflict with any applicable habitat conservation plans or natural community conservation plans, because no such plan exists in the area.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XI. MINERAL RESOURCES - Will the project:					
a)	Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located within the Mineral Resource Zone Overlay):

- a, b) **Less Than Significant Impact.** The Project would not result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state, because there are no identified important mineral resources on the project site and the site is not within a Mineral Resource Zone Overlay. No mineral extraction occurs on the property or within the surrounding area.

The subject property and surrounding lands have been designated MRZ-3a, as displayed on the map exhibit entitled California Department of Conservation, Mineral Land Classification of a Part of Southwestern San Bernardino County: The Big Bear Lake – Lucerne Valley Area, California, 1994. The MRZ-3a Zone, as noted in the map legend, refers to "Areas containing known mineral occurrences of undetermined mineral resource significance. Further exploration work within these areas could result in the reclassification of specific localities into MRZ-2a or MRZ-2b categories." The type of use proposed would result in the limited development of the area. The type of construction undertaken would not remove potential future mineral extraction due to the ability to easily remove the proposed facilities, because of their limited building footprint. As such, the proposed Project would result in a less than significant impact.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XII. NOISE - Will the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check if the project is located in the Noise Hazard Overlay District ☐ or is subject to severe noise levels according to the General Plan Noise Element ☐):

a, c) **No Impact.** The operation of the proposed Project will not expose persons to or generate noise levels in excess of standards established in the General Plan or noise ordinance. Most of the subject parcel will remain in its natural environmental state and is sufficiently setback from surrounding properties to minimize potential noise disturbances. Most of the surrounding properties are within the National Forest and are vacant, except for a portion of the land north of the subject 40-acre parcel, which contains a structure approximately 600 feet from the northerly property boundary.

Construction noise generated by the proposed Project will exceed ambient noise levels, but only for limited periods. Section 83.01.080(g) (3) of the County Development Code permits "Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays." Due to the lack of development in the area, construction noise would not generate a significant impact on adjoining properties. Since the Project has been conditioned to comply with the noise standards of the County Development Code, no noise exceeding these standards is anticipated to be generated by the proposed use and the potential impact would be less than significant.

- b) **Less than Significant Impact.** The proposed Project will not create exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels, because the Project has been conditioned to comply with the vibration standards of the County Development Code and no vibration exceeding these standards is anticipated to be generated by the proposed use that would adversely affect adjoining properties, due to the distance to surrounding area uses.
- d) **Less than Significant Impact.** It is expected that temporary periodic increases in noise levels will occur during construction activities. However, these will be of a limited duration and occur over a limited time period. Due to the distance to other uses, noise events of this nature are not expected to be significant. Noise occurring during construction related activities is exempt from County noise requirements between the hours of 7:00 am and 7:00 pm, except on Sunday and Federal holidays.
- e, f) **No Impact.** The Project site is not located within the boundaries of an airport land use plan or within the vicinity of a private airstrip. As such, proposed Project will not expose individuals to excessive noise levels.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XIII. POPULATION AND HOUSING - Will the project:				
a) Induce substantial 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **No Impact.** The proposed Project would not induce population growth in the area either directly or indirectly, because the proposed Project consists of a camp/outdoor science school utilized by school students between the months of September and May. No impacts are anticipated.
- b, c) **No Impact.** The proposed Project would not displace substantial numbers of existing housing units, or require the construction of replacement housing, as the site is substantially within its natural environmental state. Implementation of the Project will also not displace substantial numbers of people necessitating the construction of replacement housing elsewhere, as no housing exists on the Project site.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XIV. PUBLIC SERVICES				
a) Will 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:				
Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

a) **Less Than Significant Impact.**

Fire Protection: The nearest fire station is County Fire Angelus Oaks Station # 98 located at 5766 Frontage Road, approximately five miles to the southwest, measured in a direct line distance. Due to circuitous roadway access, the actual travel distance would be greater. The Station is a volunteer station with one Type 6 initial attack engine, one Type 3 wildland engine, and one Type 2/3 medical vehicle. The proposed Project plans to include an on-site water storage tank connected to the existing water well to provide water for adequate fire suppression capability. Building and Safety Division and Fire Department related Codes would require each proposed structure to include sprinklers for fire suppression.

The National Forest Service Converse Station is also located approximately on-half mile north of the Project site. This Station is open from approximately May to the end of November (fire season), 9:00 am to 6:00 pm, seven days a week. The Station is manned by five fire personal and has one Type 3 Engine. The Station responds to fire-related services and will not respond to medical calls for service.

To offset the increased the potential demand for fire protection services, the proposed Project would be conditioned by the County to provide a minimum of fire safety and support fire suppression activities, including compliance with State and local fire codes, use of fire

sprinklers, a fire hydrant system or adequate connection to a water tank, paved access, and adequate on-site water storage capacity.

Police Protection: The San Bernardino County Sheriff Department provides police protection for unincorporated areas of San Bernardino County. The closest area station is in the City of Yucaipa, approximately 14 miles from the Project site, measured in a direct line. The Yucaipa Station provides law enforcement services to the area, including Angelus Oaks, Forest Falls, Oak Glen and Mentone. The proposed Project demand on police protection services would not be significant on a direct demand basis as a school and camp facility for elementary and middle school students. The property is accessible from paved roadways. As such, the proposed Project would not require an increase in law enforcement capability.

Schools: The Project site is located in the Bear Valley Unified School District. Non-residential school fees would be applied to the proposed project. The nearest schools are located a substantial distance from the project site, due to the rural nature of the area. A school related operation of this type would not create an additional need for housing that would directly increase the overall population of the District's attendance area, since existing students from area Districts would attend. Contact with Bear Valley Unified School District found they would not require the payment of development impact fees for the proposed use.

Parks: The Project will not create a demand for additional park service in that the Project is a commercial related operation and no housing is proposed.

Other Public Facilities: As noted above, development of the proposed Project would not result in a direct increase in population. As such, the Project would not increase the demand for public services, including public health services and library services, which would require the construction of new or expanded public facilities.

Based on the above analysis, the proposed Project will not result in substantial adverse physical impacts associated with the provision of 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, including fire and police protection, schools, parks or other public facilities. Construction of the Project will increase property tax revenues to provide a source of funding that is sufficient to offset increases in the anticipated demands for public services generated by this project.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XV. RECREATION				
a) Will the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a, b) **No Impact.** The proposed Project is a camp and science related school facility that will not provide permanent housing. The school facility and operation will provide an indirect recreational element, but is not a recreational facility. As such, it does not generate the need for new jobs or housing which would induce population growth and ultimately increase the use of park facilities or other recreational facilities in the region. No impacts are anticipated.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XVI. TRANSPORTATION/TRAFFIC – Will the project:				
a) 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 greenways, pedestrian and bicycle paths, and mass transit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a, b) **Less Than Significant Impact.** The proposed Project will generate vehicle trips to and from the subject property for teachers, students, camp staff, and maintenance employees, along with trips for periodic deliveries for food and other services. It is estimated that vehicle trips would occur primarily at the beginning and the end of each week, as students, teachers, and staff arrive and depart from the site. 121 on-site parking spaces have been provided, based upon the projected use of buses for students and separate vehicles for staff and caretakers. If vehicle trips occur in the manner described, it is reasonable to assume approximately 121 trips would be generated during the peak periods of student arrival and departure times, but few trips at other times. Highway 38 is a two lane roadway that traverses the area between the Valley and mountain cities. Glass Road would be considered the primarily access to the property, since it extends from Highway 38 up to the Project area where it intersects with Seven Oaks Road and Patterson Road, all of which are paved. Patterson Road connects to Radford Camp Road

Roadways in the area have limited use due to the lack of residents or facilities in the area. As such, the number of vehicle trips is not projected to adversely affect roadway operations or substantially affect levels of service due to the limited number of current vehicle use. The proposed use would also not affect the existing or future use of non-motorized trips or pedestrian use. Mass transit does not currently serve the area.

The Project site is not located near a roadway identified on the applicable congestion management plan. Highway 38 is the closest major roadway to the Project site that is identified in the *San Bernardino County Congestion Management Program, 2016 Update*, prepared by the San Bernardino Association of Governments. The Level of Service (LOS) identified in the Plan is "A" or the least congested category. The proposed use is approximately one mile north of Highway 38 and is not expected to adversely affect highway operations due to the limited number of on-going vehicle trips. As such, the projected effect upon the use of the circulation system is less than significant.

- c) **No Impact.** The Big Bear City Airport is located approximately 6 miles northeast of the Project site. The proposed Project involves a camp and science school and does not include land uses that would adversely affect air traffic patterns at any airport or airstrip.
- d) **No Impact.** Access to the site will be provided by existing paved roadways that will not change due to the proposed Project. Therefore, the Project does not involve any road improvements or design features that could substantially increase hazards on public or private roads.
- e) **No Impact.** The proposed Project would not result in inadequate emergency access to the project area due to the availability of existing paved roadways around the property. During Project construction, public roads would remain open and available for use by emergency vehicles and other traffic. No impacts would result and no further analysis is warranted.
- f) **Less Than Significant Impact.** The proposed Project would not conflict with adopted policies, plans, or programs regarding public transit and alternative or non-motorized transportation (e.g., transit amenities), because limited access is necessary for the operation and maintenance of the facility. Less than significant impacts would result from implementation of the project.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XVII. TRIBAL CULTURAL RESOURCES - Will the project:				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is?				
I) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
II) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) i) **Less than Significant Impact.** The Project site is currently vacant and unimproved. No historic features or items are known to exist, based upon the completion of a *Cultural Resource Assessment for the High Trails Outdoor Science School Project*, dated August 2017 and updated on October 2017, that included an on-site field survey and records search. The *Assessment* noted that a records search was conducted through the California Historical Resources Information System (CHRIS) and "that 12 known cultural resources are present within a one-mile radius of the Project area. Of these resources, only the Seven Oaks Recreation Residence District (District) lies within the Project area; no features (i.e., historical refuse scatter and water conveyance features) or structures (i.e., historical cabins) associated with the District have been documented within the Project area." (p. iv) A Phase I pedestrian survey was conducted of the Project area on August 11, 2017. The *Assessments* referenced above noted that "No cultural resources were identified within the Project area. Furthermore, there is little to no potential for the Project area to contain intact buried cultural deposits. Based on these findings, no further cultural resource management of the Project area is recommended." (p. iv)

As noted in Section V, Cultural Resources, a meeting was held with a representative of the San Manuel Band of Mission Indians (Tribe) to discuss the proposed Project with County Staff and the Project applicant. Based upon this discussion, which focused upon the depth of ground excavation and the potential to uncover resources if the depth exceeded three feet, the Tribe recommended measures to ensure potential Impacts were reduced to less than significant. These measures did not include a recommendation for a Tribal monitor be present for this work, nor was it requested that an archaeological monitor meets SOI-standards (Secretary of Interior).

ii) Less than Significant with Mitigation Incorporated. Section 5024.1 (c) of the Public Resources Code provides that an historical resource can be listed in the California Register if it meets any of the following criteria:

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

Due to the Project site's undeveloped and unimproved condition, no historical resources are known to exist. However, as noted in Section V Cultural Resources, the potential for Tribal resources exists, but are currently unknown. As such, mitigation measures have been proposed in Section V Cultural Resources to address the potential of encountering cultural and Tribal resources during excavation/grading of the Project site. Since the previous identified measures in that section adequately respond to potential impacts identified in this section, no additional measures are required to reduce the potential impact to less than significant.

Upon incorporation of mitigation measures identified in Section V Cultural Resources of this document, potential impacts can be reduced to a level that is less than significant.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XVIII. UTILITIES AND SERVICE SYSTEMS - Will the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded, entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a, e) **No Impact.** The proposed Project will utilize an on-site septic system for subsurface wastewater discharge and would not require sewer collection or treatment services. Therefore, no off-site discharge of treated wastewater would occur. No impacts related to wastewater treatment are anticipated. An evaluation of soils on the property found conditions were adequate for subsurface disposal.
- b) **No Impact.** The proposed Project will not result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. As noted above, an on-site septic system will be used for wastewater disposal. Water will be obtained through the use of an existing water well. As such, no expansion of existing water or wastewater facilities will be necessary and no impacts would result.

- c) **Less Than Significant Impact.** The proposed Project will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities that cause significant environmental effects, because the improvement area is limited and infiltration trenches are proposed that will adequately retain the additional stormwater runoff generated by new impervious surfaces. The infiltration trenches are proposed adjacent to each proposed building, parking area, and entry drive aisle. In addition, Best Management Practices (BMPs) will be employed as a standard measure related to the issuance of grading and building permits to ensure there will not be any significant run-off during construction operations. As such, less than significant impacts would result.
- d) **Less Than Significant Impact.** The proposed Project will utilize water from an existing well and would not require water from a supplemental source that is already allocated or entitled to others. As such, impacts would be less than significant.
- f, g) **Less Than Significant Impact.** The proposed use would generate solid waste during its construction and operation. Construction waste would be hauled away and recycled, if applicable. The County of San Bernardino, Department of Public Works, Solid Waste Management Division reviews and approves all new construction projects required to submit a Construction and Demolition Solid Waste Management Plan (waste management plan). Effective January 1, 2011, the California Green Building Standards Code (CALGreen) will require all newly constructed buildings including most non-residential commercial projects to develop a waste management plan and divert a minimum of 50% of the construction waste.

The waste management plan consists of two parts which are incorporated into the Conditions of Approval (COA's) for County Planning and Building & Safety. Part I requires projects to estimate the amount of tonnage to be disposed and diverted during construction. Part II requires projects to show what tonnage was actually diverted and disposed of. Disposal/diversion receipts or certifications are required as a part of that summary.

The mandatory requirement to prepare a Construction and Demolition Solid Waste Management Plan will ensure that impacts related to construction waste will be less than significant. The amount of solid waste generated during operation is estimated to be 606,119 pounds (361 people x 4.6 pounds per day x 365 days) or approximately 0.83 tons per day or 303 tons per year, based upon data from the State CalRecycle Web Site for San Bernardino County. The County operates two transfer stations in the area, Heaps Peak and Big Bear. Solid waste could be taken to a number of stations, including the Victorville, Mid-Valley and San Timoteo Sanitary Landfills. It is probable the San Timoteo Sanitary Landfill would be used. That facility has a daily capacity of 2,000 tons per day and an estimated closure date of 2043. Based upon these factors adequate landfill capacity is available. Recycling is required to be conducted consistent with AB 939 and other applicable State and local laws. Based upon these circumstances the impact of the proposed Project would be less than significant.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XIV. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** The proposed Project would not significantly degrade the overall quality of the region's environment, or substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population or drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Subject to the proposed mitigation, impacts to rare or endangered species or other species of plants or animals or habitat identified by the California Natural Diversity Database (CNDDB) in the analysis of the proposed Project will be mitigated to a level less than significant. Potential impacts to cultural resources occurring during land disturbance will also be mitigated through the implementation of proposed mitigation measures prepared in consultation with local tribes.
- b) **Less than Significant Impact.** Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period.

The proposed Project would not have impacts that are individually limited, but cumulatively considerable. Special studies prepared to analyze impacts of the proposed Project considered and evaluated existing and planned conditions of the surrounding area and the region. Existing and planned infrastructure in the surrounding area will not be impacted and is sufficiently adequate to serve the use of the proposed telescope.

- c) **Less than Significant Impact.** The design of the project, with application of County policies, standards, and design guidelines ensure that there would be no substantial adverse effects on human beings, either directly or indirectly. Impacts of the proposed project would be less than significant.

Possible significant adverse impacts have been identified or anticipated and mitigation measures have been identified in each relevant section and are required as conditions of project approval to reduce these impacts to a level below significant. No additional measures are required.

XVIII. MITIGATION MEASURES:

(Any mitigation measures which are not "self-monitoring" will have a Mitigation Monitoring and Reporting Program prepared and adopted at time of project approval. Condition compliance will be verified by existing procedure [CCRF].)

AESTHETICS

AES-1

- Avoid damage during construction by erecting barriers around existing trees to be retained. Fencing should be placed one foot from the trunk for each inch of trunk diameter.
- Limit access to construction crews, allowing only one route in and out of the Project area.
- Intentions to protect the trees should be communicated and written into the construction specifications.

AIR QUALITY MITIGATION MEASURES:

AQ-1 Construction Mitigation. *The "developer" shall submit for review and obtain approval from County Planning of a signed letter agreeing to include as a condition of all construction contracts/subcontracts requirements to reduce vehicle and equipment emissions and other impacts to air quality by implementing the following measures and submitting documentation of compliance: The developer/construction contractors shall do the following:*

- a) Provide documentation prior to beginning construction demonstrating that the project will comply with all SCAQMD regulations including 402, 403, 431.1, 431.2, 1113 and 1403.*
- b) Each contractor shall certify to the developer prior to construction-use that all equipment engines are properly maintained and have been tuned-up within last 6 months.*
- c) Each contractor shall minimize the use of diesel-powered vehicles and equipment through the use of electric, gasoline or CNG-powered equipment. All diesel engines shall have aqueous diesel filters and diesel particulate filters.*
- d) All gasoline-powered equipment shall have catalytic converters.*
- e) Provide onsite electrical power to encourage use of electric tools.*
- f) Minimize concurrent use of equipment through equipment phasing.*
- g) Provide traffic control during construction to reduce wait times.*
- h) Provide on-site food service for construction workers to reduce offsite trips.*
- i) Implement the County approved Dust Control Plan (DCP)*
- j) Suspend use of all construction equipment operations during second stage smog alerts. NOTE: For daily forecast, call (800) 367-4710 (San Bernardino and Riverside counties).*

AQ-3 Operational Mitigation. The “developer” shall implement the following air quality mitigation measures, during operation of the approved land use: All on-site equipment and vehicles (off-road/ on-road), shall comply with the following:

- a) County Diesel Exhaust Control Measures [SBCC §83.01.040 (c)]
- b) Signs shall be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use.
- c) All engines shall not idle more than five minutes in any one-hour period on the project site. This includes all equipment and vehicles.
- d) Engines shall be maintained in good working order to reduce emissions.
- e) Ultra low-sulfur diesel fuel shall be utilized.
- f) Electric, CNG and gasoline-powered equipment shall be substituted for diesel-powered equipment, where feasible.
- g) On-site electrical power connections shall be made available, where feasible.
- h) All transportation refrigeration units (TRU's) shall be provided electric connections, when parked on-site.

AQ-4 Dust Control Plan. The “developer” shall prepare, submit for review and obtain approval from County Planning of both a Dust Control Plan (DCP) consistent with SCAQMD guidelines and a signed letter agreeing to include in any construction contracts/ subcontracts a requirement that project contractors adhere to the requirements of the DCP. The DCP shall include the following requirements:

- a) Exposed soil shall be kept continually moist to reduce fugitive dust during all grading and construction activities, through application of water sprayed a minimum of two times each day.
- b) During high wind conditions (i.e., wind speeds exceeding 25 mph), areas with disturbed soil shall be watered hourly and activities on unpaved surfaces shall cease until wind speeds no longer exceed 25 mph.
- c) Storage piles that are to be left in place for more than three working days shall be sprayed with a non-toxic soil binder, covered with plastic or revegetated.
- d) Storm water control systems shall be installed to prevent off-site mud deposition.
- e) All trucks hauling dirt away from the site shall be covered.
- f) Construction vehicle tires shall be washed, prior to leaving the project site.
- g) Rumble plates shall be installed at construction exits from dirt driveways.
- h) Paved access driveways and streets shall be washed and swept daily when there are visible signs of dirt track-out.
- i) Street sweeping shall be conducted daily when visible soil accumulations occur along site access roadways to remove dirt dropped or tracked-out by construction vehicles. Site access driveways and adjacent streets shall be washed daily, if there are visible signs of any dirt track-out at the conclusion of any workday and after street sweeping.

BIOLOGICAL MITIGATION MEASURES:

BIO-1: *Provide a biological monitor during construction in locations where suitable wildlife habitat is present.*

BIO-2: *Provide species-specific resource training for all construction personnel.*

BIO-3: Nesting Birds

If construction occurs during the nesting bird season (March 1-August 15), pre-construction surveys will likely be required. If identified nests may be adversely affected by construction activities, the qualified biologist will propose a no work, or limited buffer if appropriate.

BIO-4: Southern Rubber Boa

Due to the potential of this species to occur on site, it is recommended that a specialized monitor familiar with this species conduct a pre-construction clearance survey in locations within the Project impact area that has suitable habitat (i.e., boulders, logs, etc.). This survey should be conducted within 7-days of the start of construction. If SRB is encountered, it may be relocated by a permitted biologist that is recognized by the U.S. Fish and Wildlife Service for handling and translocating this species. If deemed necessary, exclusionary fencing is to be placed during construction activities to discourage animals from returning to the impact area.

BIO-5: Mixed Oak/Coniferous Forest

- *Avoid damage during construction by erecting barriers around existing trees to be retained. Fencing should be placed one foot from the trunk for each inch of trunk diameter.*
- *Limit access to construction crews, allowing only one route in and out of the Project area.*
- *Intentions to protect the trees should be communicated and written into the construction specifications.*

BIO-6: *Development of a Storm Water Pollution Prevention Plan and implementation of Best Management Practices (BMPs) will likely be required to avoid impacts to jurisdictional wetlands and waters.*

CULTURAL MITIGATION MEASURES:

CR-1: *All ground disturbing activity taking place below 3 feet of the current surface, in addition to any disturbance as a result of the clearing of trees (and other similarly large vegetation), will be monitored by a qualified archaeologist. In the event that Native American cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and the retained*

archaeologist shall assess the find. If the archaeologist cannot make an assessment, an archaeologist meeting Secretary of Interior standards will be contacted to assist. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, San Manuel Band of Mission Indians (SMBMI) will be contacted if any such find occurs and be provided information and permitted/invited to perform a site visit, if requested by SMBMI, when the archaeologist makes his/her assessment, so as to provide Tribal input.

CR-2: *If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the retained archaeologist, with assistance from an SOI-qualified archaeologist, shall develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, the drafts of which shall be provided to San Manuel Band of Mission Indians (SMBMI) for review and comment.*

- a. All in-field investigations, assessments, and/or data recovery enacted pursuant to the finalized Treatment Plan shall be monitored by a SMBMI Tribal Participant(s), if deemed necessary by SMBMI staff.*
- b. The Lead Agency and/or applicant shall, in good faith, consult with SMBMI on the disposition and treatment of any artifacts or other cultural materials encountered during the project.*

CR-3: *If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.*

GENERAL REFERENCES

Big Bear City Airport Master Plan, <http://www.bigbearcityairport.com/>

California Department of Conservation, Land Protection and Mineral Resources;
<http://www.conservation.ca.gov/dlrp>

California Department of Resources Recycling and Recovery (CalRecycle) website. Accessed April 10, 2017. <http://www.calrecycle.ca.gov/>

CEQA Guidelines, Appendix G.

County of San Bernardino. (2007, March 13). *County of San Bernardino 2007 Development Code*. Amended July 25, 2013. Available at <http://cms.sbcounty.gov/lus/Planning/DevelopmentCode.aspx>

County of San Bernardino. (2007, March 13). *County of San Bernardino 2007 General Plan*. Amended July 18, 2013. http://www.co.san-bernardino.ca.us/landuseservices/general_plan/Default.asp.

Greenhouse Gas Emissions Development Review Process, County of San Bernardino, March 2015

County of San Bernardino Geologic Hazards Overlays Map

County of San Bernardino Hazard Overlay Map

County of San Bernardino Identified Hazardous Materials Waste Sites List, April 1998.

County of San Bernardino, Countywide Integrated Waste Management Plan, March 1995.

County of San Bernardino, *San Bernardino County Storm Water Program, Model Water Quality Management Plan Guidance*.

Federal Emergency Management Agency Flood Insurance Rate Map and Flood Boundary Map.

Guidelines for Classification and Designation of Mineral Lands, Department of Conservation.

South Coast Air Quality Management District, CEQA Air Quality Handbook, November 1993.

U.S. Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey. Available at <http://websoilsurvey.nrcs.usda.gov/>.

PROJECT-SPECIFIC REFERENCES

Arborist Assessment for the High Trails Outdoor School Project in the Angelus Oaks area, San Bernardino County, California, June 17, 2017, FirstCarbon Solutions.

Biological California Environmental Quality Act Cumulative Analysis for the High Trails Outdoor Science School, San Bernardino County, California, August 29, 2017, FirstCarbon Solutions.

Biological Resources Assessment Report for High Trails Outdoor School Project in the Angelus Oaks area, San Bernardino County, California, December 13, 2016, FirstCarbon Solutions.

Cook Property Forest Assessment, December, 2015, prepared by Mathew Cocking, forester.

Cultural Resource Assessment for the High Trails Outdoor Science School Project, San Bernardino County, California, August 2017, prepared by Applied EarthWorks, Inc.

Cultural Resource Assessment for the High Trails Outdoor Science School Project, San Bernardino County, California, October 2017, prepared by Applied EarthWorks, Inc.

Cultural Resource Constrains Analysis for the High Trails Outdoor Science School, Community of Angelus Oaks, San Bernardino County California, October 11, 2016, prepared by Applied EarthWorks, Inc.

CalEEMod Air Quality Analysis, prepared October 16, 2017.

E-mail response to County Staff from Kimberly Boydston, Senior Biologist, FirstCarbon Solutions, November 15, 2017.

*Habitat Assessment for Mountain Yellow-legged Frog (*Rana mucosa*) and Southern Rubber Boa (*Carina umbratica*) at the High Trails Outdoor School Project in Angelus Oaks, San Bernardino County, California, May 30, 2016, FirstCarbon Solutions.*

*Letter Report for San Bernardino Flying Squirrel (*Glaucomys sabrinus californicus*) Habitat Assessment for the High Trails Outdoor School Project in Angelus Oaks, San Bernardino County, California, May 14, 2016, FirstCarbon Solutions.*

Paleontological Resources Assessment for the High Trails Outdoor Science School Project, September 23, 2015, prepared by Applied EarthWorks, Inc.

Results of the Southwestern Willow Flycatcher Habitat Assessment for the High Trails Outdoor School Project in the Angelus Oaks area, San Bernardino County, California, June 7, 2017, FirstCarbon Solutions.

Soils Investigation for On-Site Sewage Disposal Systems, High Trails Outdoor Science School, Radford Ranch Road, Angeles Oaks, California, December 21, 2016, prepared by John R. Byerly.

EXHIBIT D

Technical Studies (Biological and Cultural Resources)

Posted at:

<http://cms.sbcounty.gov/lus/Planning/Environmental/Mountain.aspx>

EXHIBIT E

Responses to Comments

RESPONSES TO COMMENTS

1. California Department of Fish and Wildlife, letter dated January 19, 2018

Comment

“Because the IS fails to include a detailed and enforceable mitigation plan to offset potential impacts to SRB [Southern Rubber Boa], the Department is unable to determine whether the impacts would be mitigated, and cannot, without further information from the County concur that impacts to SRB would in fact be mitigated to less than significant levels through the implementation of MM BIO-4. Given that the Habitat Assessment identifies areas of suitable habitat for SRB within the project impact area, the Department recommends that the County condition a new MM that details specific and enforceable compensatory mitigation strategies that will be implemented for impacts to SRB. Further, SRB is state listed as threatened pursuant to CESA (Fish & G. Code, § 2050 *et seq.*), therefore the Department will need to be consulted prior to handling/translocation of this species. Given the potential for the species to occur onsite, the Department recommends that the project proponent apply for a CESA Incidental Take Permit (ITP) to reduce the potential for project delays should SRB be discovered onsite.”

Response

A focused survey for the Southern Rubber Boa (SRB) was undertaken and the findings included within *The Habitat Assessment for Mountain Yellow-legged Frog (Rana mucosa) and Southern Rubber Boa (Carina umbratica) at the High Trails Outdoor School Project in Angelus Oaks, San Bernardino County, California, May 2016*. This species was not observed and the above listed *Assessment* stated “Limited suitable habitat for SRB occurs within the 40-acre site and marginal habitat for this species occurs within the project footprint.”

A follow-up report entitled *Biological California Environmental Quality Act Cumulative Analysis for High Trails Outdoor Science School, San Bernardino County, California, dated August 29, 2017*, which compiled previous environmental documents, recommended the following mitigation measure and it was incorporated into the Proposed Mitigated Negative Declaration reviewed by the California Department of Fish and Wildlife:

Due to the potential of this species to occur on site, it is recommended that a specialized monitor familiar with this species conduct a pre-construction clearance survey in locations within the Project impact area that has suitable habitat (i.e., boulders, logs, etc.). This survey should be conducted within 7-days of the start of construction. If SRB is encountered, it may be relocated by a permitted biologist that is recognized by the U.S. Fish and Wildlife Service for handling and translocating this species. If deemed necessary, exclusionary fencing is to be

placed during construction activities to discourage animals from returning to the impact area.

The Project Biologist also responded to the Department's comment by stating:

"Although the site was determined to support potential habitat for this species, our assessment specifically makes the distinction that potential for this species in the impact area is low due to the lack of microhabitat (e.g. rocks and other natural areas for cover) requirements necessary for this species. For this reason, the current mitigation measures presented in the MND [Mitigated Negative Declaration] are adequate to ensure no adverse effects to this species during construction."

Based upon the lack of potential habitat and the follow-up actions recommended in the Mitigation Measure, which would be consistent with U. S. Fish and Wildlife protocols if the species is encountered, the original mitigation measure as proposed is adequate and no change is necessary.

Comment

"The IS and Biological Resources CEQA Cumulative Analysis (FirstCarbon Solutions, August 29, 2017) states Converse Creek may be considered a non-jurisdictional swale because the surveyor was unable to detect a 'consistent bed and bank' or an ordinary high mark. The Department does not agree with the conclusion that Converse Creek is a non-jurisdictional swale. Due to the proximity of the proposed project to the Santa Ana River and Converse Creek, the Department strongly recommends the County condition the project to comply with Section 1602 of the Fish and Game Code. To ensure compliance, the Department recommends that prior to adoption of the MND the County include a new mitigation measure in the MND requiring that the project applicant submit a Notification of Lake or Streambed Alteration to the Department's Lake and Streambed Alteration Program at the Ontario office. Specifically, the Department requests that the County include the following new mitigation measure in the MND:

Mitigation Measure BIO-7: Prior to issuance of any grading permit Project Applicant shall provide to the County of San Bernardino either of the following:

Written correspondence from the California Department of Fish and Wildlife stating that notification under Section 1602 of the California Fish and Game Code is not required for the project; or a copy of a Department-executed Lake or Streambed Alteration Agreement, authorizing impacts to California Fish and Game Code, section 1602 resources associated with the project."

Response

The proposed Project has been designed to provide an estimated 100 foot setback from Converse Creek. The Santa Ana River is located off-site and is readily identifiable with a bridge over Radford Camp Road, southeast of the development area. County Land

Development Engineering typically includes, and has done so in this circumstance, the following standard condition of approval prior to Land Disturbance when a notable drainage course is located near a project site.

- Current Condition of Approval language:

Streambed Alteration Agreement. California Department of Fish and Wildlife (CDFW) must be notified per Fish and Game Code (FGC) §1602. A streambed alteration agreement shall be provided prior to Grading permit issuance. Link to CDFW website at <https://www.wildlife.ca.gov/Conservation/LSA>.

- A new condition of approval has been inserted under the Planning Division Section.

An additional condition of approval has been included that reflects the mitigation measure requested by California Department of Fish and Wildlife. This condition is listed under the Planning Division Section and is to occur prior to land disturbance.

Comment

“Given the information presented in the Habitat Assessment the Department contends that a fair argument can be made that San Bernardino flying squirrel may occur onsite, and therefore project-related impacts to San Bernardino flying squirrel could occur.”

Response

The applicant’s Biologists have provided several comments on the flying squirrels, one of which includes the attached letter of February 13, 2018, which in part states:

“Specifically, the species’ foraging habitat on the site is marginal and although the species may occur on the site, the loss of marginal foraging habitat is not likely to adversely affect the local population. This standard is specific to the Appendix G guidelines for CEQA and is appropriate for assessing potential adverse effects on non-listed sensitive species. For this reason, project effects on this species would be considered less than significant and no further study would be required.”

In addition, a prior e-mail provided by Biologist Kim Boydstun on November 15, 2017 contains similar language to that contained in the original focused *Assessment* letter, and states as follows:

“There is a low likelihood that the project site provides potential nesting habitat in the Northwest of the project site and low to moderate quality foraging habitat in the Southeast corner of the project site. The proposed project impacts (project footprint) are confined the Southeast quadrant of the project site, where habitat is low quality and likely only potential foraging habitat. Thus, development in the southeast corner of the project site is not likely to have substantial impact for San

Bernardino flying squirrels. Furthermore, because the southeast corner of the project site has a discontinuous canopy cover and does not directly connect to adjacent continuous canopy forest the proposed development is unlikely to cause habitat fragmentation. With the current project footprint and the location of development, the proposed project affect is unlikely to adversely affect San Bernardino flying squirrels.”

Based upon this information, the potential effect of the proposed Project upon species habitat would not be significant, because of the size and quality of the habitat area affected. In addition, no species were observed during the site visit. As such, no additional studies or measures are necessary to properly mitigate potential impacts.

Comment

“The Department appreciates that four (4) focused survey were completed in spring/summer, however we are concerned by the removal of an ‘unidentified milk-vetch’ from the species list that was detected during the fall reconnaissance survey, but not detected during the spring/summer surveys. This omission is a concern to the Department and we recommend that additional special status plant surveys be completed (during appropriate seasons) prior to adoption of the MND. Without additional survey information the Department is concerned that project-related impacts to special-status plant species may occur.”

Response

The milkvetch was not identified on the Project site. The *Biological Resources Assessment* prepared on December 13, 2016, included the following comment for this species: “Unable to identify without flowers, requires follow-up survey.” This survey occurred prior to the subsequent focused rare plant surveys conducted in May, June, July, and August of 2017, in which the species was not found. As such, it is reasonable to conclude the species’ did not exist, as confirmed by specific plant surveys. It is unreasonable to require additional follow-up surveys when five site visits/surveys concluded it was not present.

Comment

“Please note that the Department recommends that nesting bird surveys occur over the entirety of the project site, and not be limited to those areas with shrubs and trees, as not all bird species nest in vegetation; some species nest directly on the ground.”

Response

The modified mitigation measure from the Department is listed below and is acceptable. It is important to note that the limited time period between completion of the survey and actual construction could adversely affect scheduling arrangements.

Pre-construction nesting bird surveys shall be conducted by a qualified biologist within three (3) days prior to any ground disturbing activities within the project footprint and appropriate buffer. If active nests are detected, an appropriate buffer shall be established by the qualified biologist. The buffer area shall be avoided until the nest becomes inactive for reasons unrelated to project activities. The qualified biologist will monitor active nests to ensure established buffers are effective.

Comment

“The Department is concerned that the burden of providing appropriate defensible space around structures and/or roads may be placed on adjacent public/conservation lands and sensitive habitats surrounding the project site. The County, through their planning processes, should be ensuring that this requirement is provided and accounted for within the private lands or development areas themselves, and not transferred to adjacent open space, conservation lands, or sensitive habitats.”

Response

All Defensible Space land will be provided on the subject property. The San Bernardino County Development Code requires a minimum 100 foot setback, based upon Section 83.13.060(b)(6). The proposed setback, as shown on the site plan is 104 feet.

2. California Department of Transportation, letter dated December 21, 2017

Comment

Submit two hard copies and one electronic file of all Traffic Impact Analysis (TIA) documents for review.

Response

The applicant prepared a *Focused Traffic Analysis* that addressed the three specific issues listed below. Upon review of the *Focused Traffic Analysis* Caltrans issued a letter indicating no further items are required. Because of the findings of the report and follow-up telephone conversation with Caltrans Staff, as noted below under Corner Sight Visibility, two additional conditions of approval have been included.

a) Turning Lane

An evaluation was undertaken to determine the need for a turning lane. Based upon the type of use proposed the estimated number of turning movements would increase from five per hour to eight. The *Analysis* noted turning lanes are recommended in cases involving 100 vehicles per hour. As such, no turning lane would be required.

b) Corner Sight Visibility

The above listed *Analysis* found, based upon vehicle speed and associated stopping distance, that clear visibility would be necessary for a distance of 580 feet. Due in part to the design of the existing road east of Glass Road/Highway 38 intersection, corner visibility is adequate. However, visibility to the west is not adequate. The *Analysis* indicated the need to either trim the tree canopy or remove trees. Since at least some of this activity could affect highway right of way, Caltrans has recommended a conditions of approval. If addition tree trimming or removal is necessary, the adjacent property owner would also need to be contacted and coordination with Caltrans would need to occur as part of their encroachment permit.

- New Conditions of Approval:

- ✓ Encroachment Permits. Any proposed alterations to existing improvements within State right-of-way may only be performed upon issuance of a valid encroachment permit and must conform to current Caltrans design standards and construction practices. Review and approval of street, grading and drainage construction plans and related studies will be necessary prior to Caltrans permit issuance. More information regarding permit application and submittal requirements may be obtained by contacting:

Office of Encroachment Permits, California Department of Transportation, 464 West 4th Street, 6th Floor, MS 619, San Bernardino, CA 92401-1400, (909) 383-4526.

- ✓ Additional Tree Trimming or Tree Removal. If tree trimming or tree removal is necessary beyond the vegetation located within the State Highway right of way, the applicant would be responsible for contacting the adjoining property owner. This activity would also need to be coordinated with Caltrans as part of obtaining an Encroachment Permit.

c) Traffic Collisions

The *Analysis* found that between 2013 and 2017, three collisions occurred on Highway 38 within one mile of Glass Road. The latest Countywide average accident rate for California State Highways for the Year 2015 is 0.630 for fatal and injury accidents. The rate for this intersection is 0.391, which is below the Statewide average.

Memo

Date: February 28, 2018

To: Jim Morrissey, Planner, Land Use Services Department, County of San Bernardino

From: Brian Mayerle, Senior Biologist, FirstCarbon Solutions

Subject: High Trails Outdoor Science School—Responses to CDFW Comments in Letter Dated January 19, 2018

At your request, FirstCarbon Solutions has assembled a summary of response to comments/questions presented by the California Department of Fish and Wildlife (CDFW) in its letter dated January 19, 2018, wherein they reviewed the project's Mitigated Negative Declaration (MND) focusing on biological resources on the site. It should also be noted that the CDFW letter specifically mentions review of several focused species assessments that were prepared in the spring of 2017. The purpose of these studies was to more definitively determine the extent of any impacts on certain species, so that the MND may be updated to reflect more specific results if applicable. As outlined below, we also have reviewed and integrated comments received from the County of San Bernardino Land Use Services Division in light of the CDFW comments to ensure the MND comprehensively addresses the impacts of the project on biological resources.

Southern Rubber Boa

As outlined in the letter, CDFW is suggesting a new mitigation measure to deal with potential impacts to this species that would require compensatory mitigation. Although the site was determined to support potential habitat for this species, our assessment specifically makes the distinction that potential for this species in the impact area is low, due to the lack of microhabitat requirements (e.g., rocks and other natural areas for cover) necessary to support this species. For this reason, the current mitigation measures presented in the MND are adequate to ensure no adverse effects to this species during construction.

1602 Streambed Alteration Agreement

As outlined in the letter, CDFW is suggesting acquisition of a 1602 Lake and Streambed Alteration Agreement that is administered when a given project has an effect on a drainage course as defined by the Fish and Game Code. As outlined in the MND and comment letter, Converse Creek is a feature shown on the U.S. Geological Survey maps as a potential drainage that is hydrologically connected to the Santa Ana River. At the time of the survey conducted for MND, this feature did not exhibit a consistent bed and bank that is inherent in the definition of a drainage. Furthermore, the project as designed is several hundred

feet from this feature and as such is not expected to have any effect on Converse Creek. For this reason, the project is not expected to require a 1602 Agreement and no further studies are required.

San Bernardino Flying Squirrel

As outlined in the letter, CDFW is suggesting that this species may be a newly recognized species according to recent studies. Nonetheless, currently, this species is not listed and the assessment focused on the project's potential effects on the species, not necessarily whether it occurs on the site or not. Specifically, the species' foraging habitat on the site is marginal and, although the species may occur on the site, the loss of marginal foraging habitat is not likely to adversely affect the local population. This standard is specific to the Appendix G guidelines for CEQA and is appropriate for assessing potential adverse effects on non-listed sensitive species. For this reason, project effects on this species would be considered less than significant and no further study would be required.

Special-status Plant Species

We acknowledge that several special-status plant species could occur in the vicinity of the site as well as potentially occur on-site. However, the combined habitat assessment and focused survey effort constitutes an exhaustive search for special-status plants, especially in the project impact area. Again, as with other species, the impact area is not optimal habitat and none of these species were found. Reference was made to an unidentified milk vetch (*Astragalus* sp.) that has the potential to be a rare species. Nonetheless, this specimen was not found in the impact area and because of the lack of evidence, rare plants are not expected to be adversely affected by the project.

Nesting Birds

As outlined in the letter, CDFW is suggesting revisions to the mitigation measure regarding seasonal timing starting in February rather than March 1. We concur with this minor revision given that avian species can begin to nest this early in the season in Southern California. Because the site is above 5,000 feet in elevation, it is considerably less likely that this would be the case; however, the revision can be made. We also suggest that an increase be made to 30 days prior to construction for "pre-construction" surveys to allow sufficient flexibility at the onset of construction.

Please contact me at bmayerle@fcs-intl.com or 916.305.5823 if you have any questions or need additional information.

Sincerely,



Brian Mayerle, Senior Biologist
FirstCarbon Solutions
650 E. Hospitality Lane, Suite 125
San Bernardino, CA 92408

From: Brian Mayerle
To: [Morrissey, Jim](#)
Subject: RE: P201600633 F&W
Date: Tuesday, March 13, 2018 9:20:35 AM
Attachments: [image002.png](#)
[image003.png](#)

Yes, that is correct, prior to field work we identified those species with the potential to occur based on general conditions and then once conducted the assessment/field survey essentially assessed their specific occurrence based on actual field/habitat conditions.

Brian C. Mayerle
Senior Biologist/Regulatory Specialist

916 305 5823



From: Morrissey, Jim [mailto:Jim.Morrissey@lus.sbcounty.gov]
Sent: Tuesday, March 13, 2018 9:03 AM
To: Brian Mayerle
Subject: FW: P201600633 F&W

Good Morning;

You requested a copy of the e-mail I sent on February 28th. See the highlighted item below. I should have stated it was the item in yellow, rather than red.

Please take a moment to complete our 1 Minute Satisfaction survey

https://www.surveymonkey.com/r/LUS_Email

Jim Morrissey
Planner
Land Use Services Department
Phone: 909-387- 4234
Fax: 909-387-3223
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0187



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www.SBCounty.gov

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From: Morrissey , Jim
Sent: Thursday, March 08, 2018 5:42 PM
To: 'High Trails' <driz@dirtyclassroom.com>
Subject: FW: P201600633 F&W

This is one of the two e-mails I promised.

Please take a moment to complete our 1 Minute Satisfaction survey
https://www.surveymonkey.com/r/LUS_Email

Jim Morrissey
Planner
Land Use Services Department
Phone: 909-387- 4234
Fax: 909-387-3223
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From: Morrissey , Jim
Sent: Wednesday, February 28, 2018 4:45 PM
To: 'bmayerle@fcs-intl.com' <bmayerle@fcs-intl.com>
Cc: 'Frank Coyle' <fcoble@fcs-intl.com>
Subject: FW: P201600633 F&W

Good Evening;

I just left a message and appreciate your memo on the CDFW comment letter for the High Trails Science School. At this point your comments look appropriate. In addition, I have highlighted an issue I have raised and would appreciate your clarification (see red below). Thanks.

Please take a moment to complete our 1 Minute Satisfaction survey
https://www.surveymonkey.com/r/LUS_Email

Jim Morrissey
Planner
Land Use Services Department
Phone: 909-387- 4234
Fax: 909-387-3223
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From: Morrissey , Jim
Sent: Thursday, January 25, 2018 12:57 PM
To: 'High Trails' <driz@dirtyclassroom.com>
Subject: P201600633 F&W

Good Afternoon;

I had a chance to review the Fish and Wildlife letter, dated January 19, 2018. I would appreciate your consultant's response to the following items:

- Southern Rubber Boa: The Department is asking for a new mitigation measure. I would like some input from your consultant on any more specific details we could provide, along with their knowledge of "enforceable compensatory mitigation strategies" we could apply. It would be applicable for this new measure to reference their language for consultation with the Department prior to handling and an ITP.
- The reference to the Lake and Streambed Alteration program is acknowledged. We have a standard measure/condition for this and our Land Development Division requested this be applied when they originally commented on the project in March 2017. This is done anytime a drainage course is near a property, beyond any reference there may have been within a biological study or specific distance from the site. We can include an additional mitigation measure (BIO-7) as requested that reflects our condition.
- San Bernardino flying squirrel: The quote provided in the letter is accurate. However, the letter does not reference the additional e-mail information also contained in the Initial Study which does provide additional information. Can your consultant further elaborate on this issue?
- Special-status Plant Species: The potential of occurrence is noted in the applicable table for each plant species. The table listing for each individual plant under the heading Occurrence/Occurrence Potential states "Not expected to occur..." I believe the F & W Department is focused on the summary wording listed at the beginning of the section that indicates "have the potential to occur". I believe the biological consultant was conveying the potential to occur based upon general area characteristics, such as probable mountain soils and elevation, rather than actual conditions based upon the specific property and a field

survey. It would be appropriate for the biological consultant to clarify their word usage.

- “Unidentified milk-vetch”: I am unclear where this is referenced. Please have your consultant identify this reference.
- Special status plant surveys: The Department requested additional surveys during the appropriate season. This seems to have occurred during the referenced spring and summer periods. This item is related to the milk-vetch item mentioned above. Please have your consultant provide information on this item.
- Modified Mitigation Measure: The F & W Department modification to the language for the pre-construction surveys is acceptable.
- Defensible Space: The County Fire Department typically evaluates this matter. I will contact the department to ensure we can adequately address this item on-site and provide additional conditions of approval, if necessary.

Any further information your biological consultant can provide on this matter would be helpful.
Thanks for your assistance.

Please take a moment to complete our 1 Minute Satisfaction survey

https://www.surveymonkey.com/r/LUS_Email

Jim Morrissey

Planner

Land Use Services Department

Phone: 909-387- 4234

Fax: 909-387-3223

385 N. Arrowhead Avenue, 1st Floor
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KUNZMAN ASSOCIATES, INC.

HIGH TRAILS OUTDOOR SCIENCE SCHOOL

FOCUSED TRAFFIC ANALYSIS

February 26, 2018



HIGH TRAILS OUTDOOR SCIENCE SCHOOL

FOCUSED TRAFFIC ANALYSIS

February 26, 2018

Prepared by:

Perrie Ilercil, P.E. ■ Carl Ballard, LEED GA ■ William Kunzman, P.E.



KUNZMAN ASSOCIATES, INC.

1111 Town & Country Road, Suite 34 ■ Orange, California 92868
5005 La Mart Drive, Suite 201 ■ Riverside, California 92507
(714) 973-8383 ■ www.traffic-engineer.com
JN 7335



February 26, 2018

Mr. Driz Cook, Director
HIGH TRAILS OUTDOOR SCIENCE SCHOOL
P.O. Box 2640
Big Bear, CA 92314

Dear Mr. Cook:

INTRODUCTION

Kunzman Associates, Inc. is pleased to provide this focused traffic analysis for the High Trails Outdoor Science School project located in the Barton Flats area of the County of San Bernardino. The project location map is shown on Figure 1. The California Department of Transportation – District 8 provided a comment letter dated January 16, 2018 (see Appendix A).

PROJECT DESCRIPTION

The existing High Trails Outdoor Science School provides public schools with residential outdoor education for California elementary and middle school students. Students participate in the three to five week sessions. The School currently has operated at the existing residential campsites for approximately 18 years. The School proposes moving from the existing two leased sites located south of SR-38 to a new site located north of SR-38.

The existing two leased sites are currently located southwest of the SR-38 and Jenks Lake Road (East) intersection. The proposed site is located north of the SR-38 and Glass Road intersection and will be developed to serve up to 300 students with 50 instructional staff members. Access for the proposed relocated site is proposed to be provided via the SR-38 and Glass Road intersection. The School is currently in operation and generating vehicle trips onto SR-38 at the existing location to the east of the proposed relocated location, so there are not project to be any new trips generated outside the study area.

EXISTING TRAFFIC CONDITIONS

The access to the proposed site is onto SR-38 at Glass Road. SR-38 is currently an east-west two-lane undivided roadway that is classified as a State Highway on the County of San Bernardino General Plan Circulation Element and is also designated as a truck route. SR-38 currently has a “Crossroad Ahead” warning signs in both the east/west directions near Glass Road.

Existing intersection traffic conditions were established through peak hour intersection turning movement counts and 24-hour roadway volume counts obtained by Kunzman Associates, Inc. in February

2018 (see Appendix B). SR-38 near Glass Road currently carries approximately 810 to 2,400 vehicles per day in the study area.

The speed limit along SR-38 is currently posted at 55 miles per hour. However, a radar speed survey on SR-38 near Glass Road was also conducted in February 2018 (see Appendix C). Based upon the radar speed survey, the 85th percentile vehicle speed on SR-38 near Glass Road is currently 52 miles per hour in the eastbound direction and 59 miles per hour in the westbound direction for a combined 85th percentile vehicle speed of 58 miles per hour.

TRIP GENERATION

The School currently operates as a unique weekly residential school with students and non-residential staff staying at the School site from 11:00 AM on Mondays through 11:00 AM on Fridays. Students are bussed to the site from their elementary and middle schools arriving between 9:30 AM to 1:30 PM on Monday or Tuesday and depart 11:00 AM on Fridays. Teachers arrive with busses as accompanying vehicles. Non-residential staff commute daily to the School and arrive at 8:00 AM and depart at 5:00 PM each day. Residential staff and residential non-staff members (caretakers) live on-site.

Based on the proposed student enrollment of 300 students (6 busses), 3 teachers (3 cars), 7 non-residential staff, 40 residential staff and 2 residential non-staff, the project trip generation for the proposed School is shown in Table 1.

TRIP DISTRIBUTION

The directional distributions for the proposed development trips are anticipated to be 100% in the westerly direction for students, teachers, deliveries and visitors; as well as, 100% in the easterly direction for staff commuting from Big Bear to the east.

TURNING LANE WARRANT

Exclusive left turn lanes, on major-road approaches can reduce the potential for rear-end and broadside collisions involving left turning vehicles. Left turn lanes provide a dedicated lane for vehicles waiting to turn left outside of the through traffic stream, thus reducing the potential for rear-end collisions. Since a left turn lane allows a driver to wait outside the through traffic stream, a driver is more likely to be more selective in choosing a gap to complete the left turn maneuver; thus reducing the potential for broadside collisions between left turn and opposing through vehicles.

Generally, for signalized intersections, a left turn lane is recommended when the turning volume exceeds 100 vehicles per hour, and dual turn lanes are recommended when the turn volume exceeds 300 vehicles per hour¹. In general, right turn traffic delays are less critical than left turn delays; however, right turn storage lanes can be justified based on capacity analysis and accident records.

¹ Source: Highway Capacity Manual 2010 (HCM2010) by Transportation Research Board, 2010.

Left turn lane recommendations developed by the Transportation Research Board take into account roadway factors such as environment (Rural/Urban-Suburban), number of intersection approach legs, number of lanes, turning movement volume and roadway volume per lane². The table below summarizes the Transportation Research Board recommended left turn lane criteria:

Recommended Left Turn Treatment Warrants for Three and Four Legged Intersections								
Left Turn Peak Hour Volume	Rural Highway Two Lane Bypass Lane Peak Hour Volume		Rural Highway Two Lane Peak Hour Volume		Rural Highway Four Lane Peak Hour Volume		Urban-Suburban Arterial Peak Hour Volume	
	3-Leg	4-Leg	3-Leg	4-Leg	3-Leg	4-Leg	3-Leg	4-Leg
5	50	50	200	150	75	50	450	50
10	50	<50	100	50	75	25	300	50
15	<50	<50	100	50	50	25	250	50
20	<50	<50	50	<50	50	25	200	50
25	<50	<50	50	<50	50	<25	200	50
30	<50	<50	50	<50	50	<25	150	50
35	<50	<50	50	<50	50	<25	150	50
40	<50	<50	50	<50	50	<25	150	50
45	<50	<50	50	<50	50	<25	150	<50
50	<50	<50	50	<50	50	<25	100	<50

The left turn treatment was evaluated based on the two lane rural highway criteria for a 3-leg intersection shown above. The roadway volume includes the eastbound and westbound vehicles as the left turning driver must feel confident enough to select an acceptable a gap in the opposing traffic while a potential queue develops behind their vehicle (major approach volumes divided by the number of lanes).

Currently the turning movement during the weekday mid-day peak hour for the eastbound left turn volume is less than 5 vehicles per hour and the roadway volume is approximately 71 vehicles per hour per lane $[(3 + 63 + 76 + 2)/ 2]$. Under the current condition, an exclusive left turn lane or by-pass lane appears to not be warranted.

The projected eastbound left turn and arterial peak hour volumes were reviewed for left turn recommendations at the SR-38 and Glass Road intersection for the Existing Plus Project traffic conditions. The eastbound SR-38 left turn at the Glass Road intersection is projected to have the most significant increase in project trips because of the inbound student and teacher trips on Monday and Tuesday. During the mid-day peak hours, school busses were converted to passenger car equivalents to provide a more conservative evaluation of the vehicle count. With the project related trips the turning movement during the weekday mid-day peak hour for the eastbound left turn volume is forecast to be 8 vehicles per hour and the roadway volume is approximately 74 vehicles per hour per lane $[(3+5) + 63 + 76 + 2)/ 2]$. Given

² Source: National Cooperative Highway Research Program Report 745 Left Turn Accommodations at Unsignalized Intersections by Transportation Research Board, 2013.

the relatively small increase to the left turn volume for any particular hour, an exclusive left turn lane appears to not be warranted.

SIGHT DISTANCE

Sight distance at the project access roadway shall comply with California Department of Transportation Highway Design Manual standards. Sight distance is the continuous length of roadway visible to the driver traveling at a given speed. Two types of sight distance are considered for this roadway access: (1) stopping sight distance and (2) corner sight distance. Appendix D contains the sight distance standards.

The posted speed limit along SR-38 is currently 55 miles per hour. Radar speed surveys for SR-38 near Glass Road were obtained by Kunzman Associates, Inc. in February 2018 to confirm the existing vehicle travel speeds (see Appendix C). Based upon the radar speed surveys, the 85th percentile vehicle speed on SR-38 near Glass Road is currently 52 miles per hour in the eastbound direction and 59 miles per hour in the westbound direction for a combined 85th percentile vehicle speed of 58 miles per hour.

Stopping sight distance is the distance needed for a driver approaching on the major roadway to see a vehicle exiting from the minor roadway at the prevailing speed. According to Table 201.1 in the Highway Design Manual, the minimum stopping sight distance of 580 feet is required for vehicles traveling at a speed of 60 miles per hour.

Corner sight distance accounts the distance needed for crossroad traffic to detect an approaching vehicle and maneuver from a stopped position into the major highway for vehicles exiting the project. Based on the prevailing speed of SR-38 the corner sight distance per Table 405.1A in the Highway Design Manual is 660 feet for a speed of 60 miles per hour.

Section 405.1 also states the following concerning corner sight distance:

"(2)(a) In some cases the cost to obtain 7-1/2 seconds of corner sight distance 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.

(2)(b) Public Road Intersections 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 un-signalized 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.

Figure 2 shows an overhead plan view of the sight distance analysis, which consists of the stopping sight distance, corner sight distance, and the restricted use area. The area between the line of sight and the centerline of the nearest approaching lane is defined as the limited use area. The California Department of Transportation Highway Design Manual, Section 405.1 states, “at un-signalized intersections a substantially clear line of sight should be maintained”.

For SR-38, there appears to be adequate stopping sight distance for the westbound lanes but the eastbound lanes may require tree maintenance to provide adequate sight distance adjacent to Glass Road.

For Glass Road southbound right turn movements onto westbound SR-38, there currently appears to be adequate corner sight distance (to the east). The area between the line of sight and the nearest approaching lane (i.e., the limited use area may require tree maintenance to provide adequate sight distance on the north side of SR-38).

For Glass Road southbound left turn movements onto eastbound SR-38, there currently appears to not be adequate corner sight distance (to the west). The line of sight west of Glass Road will need to be improved on the inside of the horizontal curve on the north side of SR-38. This may be accomplished by tree trimming maintenance to increase the canopy clearance or selective tree removal to allow for a line of sight between the trees. With these improvements, adequate sight distance should be provided for the minimum distance based on Section 405.1(2) (b) which allows for the stopping sight distance of 580 feet to be used in lieu of the 660 feet of corner sight distance for the eastbound travel lanes.

TRAFFIC COLLISION ANALYSIS

A review of the number of traffic accidents reported on the study roadway segments over the last five years has been conducted. The accident record data has been obtained from the California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS) for January 01, 2013 to December 31, 2017. The accident reports are included in Appendix E. Table 2 shows the collision history from Year 2013 to Year 2017 at or near the SR-38 and Glass Road intersection. The collision history by year includes the time frame, location, whether the collision occurred in an intersection or the distance to the intersection, severity of the collision, and collision description (such as the collision type, primary collision factor, and what the motor vehicle collided with as cited in the accident report).

During the five-year period of 2013 to 2017, 3 collisions occurred on SR-38 within one mile in either direction of the Glass Road intersection. The most common types of collisions, on SR-38 near Glass Road, were hitting an object (60%) with primary factor for these collisions being improper turning.

The accident rates are per million vehicle miles traveled and calculated from the accident data based on length of roadway segment, average daily traffic volumes, and the number of accidents. The latest Countywide average accident rate for the California State Highways obtained from the California Office of Traffic Safety (OTS) for 2015 is 0.630 for fatal plus injury accidents (14,801 accidents per 61,740,240 daily vehicle miles traveled). The fatal plus injury accidents accident rates at or near the SR-38 and Glass Road intersection is 0.391 which is below the Statewide average.

Mr. Driz Cook, Director
HIGH TRAILS OUTDOOR SCIENCE SCHOOL
February 26, 2018

CONCLUSIONS

Based on the roadway geometrics and forecast traffic volumes, an eastbound exclusive left turn lane is not needed per the Transportation Research Board criteria at the SR-38 and Glass Road intersection.

Based on the roadway geometrics and posted speed limit, SR-38 (at Glass Road) appears to have adequate stopping sight distance in the eastbound and westbound directions. The Glass Road right turn movement onto SR-38 appears to have adequate corner sight distance in the westbound direction. However, the Glass Road left turn movement onto SR-38, this movement appears to not have adequate corner sight distance (to the west).

The line of sight on SR-38, west of Glass Road, appears to need improvements. With these improvements, adequate sight distance could be provided at the minimum distance from Section 405.1(2) (b) which allows for the stopping sight distance of 580 feet to be used in lieu of the 660 feet of corner sight distance for the eastbound travel lanes.

It has been a pleasure to service your needs on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 973-8383.

Sincerely,

KUNZMAN ASSOCIATES, INC.

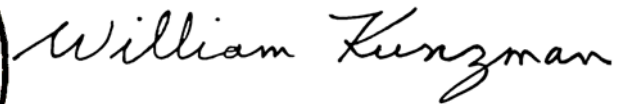


Perrie Ilercil, P.E.
Senior Associate

JN 7335



KUNZMAN ASSOCIATES, INC.



William Kunzman, P.E.
Principal

Table 1

Project Trip Generation

Mode of Transport	Land Use	Quantity ¹	Units ²	Monday Morning Peak Hour			Monday Mid-day Peak Hour			Friday Mid-Day Peak Hour			Friday Evening Peak Hour			Daily
				Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total	
Bus -Weekly commute	Students -50 per bus ³	6	BUS	-	-	0.00	1.00	-	1.00	-	6.00	6.00	-	-	0.00	2.40
Car -Weekly commute	Teachers	3	TCH	-	-	0.00	1.00	-	1.00	-	3.00	3.00	-	-	0.00	1.20
Car -Daily Commute	Non-Residential Staff	7	STF	7.00	-	7.00	-	-	0.00	-	-	0.00	-	7.00	7.00	14.00
Car -Small Truck	Residential Staff ⁴	40	STF	2.00	4.80	6.80	-	-	0.00	-	-	0.00	2.80	2.00	4.80	11.40
Car -Small Truck	Residential Non-Staff (Caretakers) ⁴	2	CT	0.10	0.24	0.34	-	-	0.00	-	-	0.00	0.14	0.10	0.24	2.00
Car -Small Truck	Delivery /Visitors	3	DV	1.00	1.00	2.00	1.50	1.50	3.00	1.50	1.50	3.00	0.50	0.50	1.00	6.00
Vehicle Trips				10	6	16	4	2	5	2	11	12	3	10	13	37
Passenger Car Equivalent Trips ⁵				10	6	16	5	2	6	2	17	18	3	10	13	39

¹ Source client information: The proposed school will be developed to serve up to 300 students with 50 instructional staff members. Forty (40) residential staff live on site. Seven (7) non-residential staff commute to the site daily from Big Bear.

² STU = Students ; TCH = Teachers; STF = Staff; CT = Caretakers; DV = Delivery and Visitors.

³ Students arrive via bus between 9:30 AM to 1:30 PM on Mondays and Tuesdays and depart at 11:00 AM on Fridays. Because of the distances traveled from schools at various locations, the arrival of the student buses and accompanying teachers are spread out the day and a conservative estimate of approximately one per hour during the mid-day peak hours of Monday and Tuesday. Daily trips for the students and teachers are calculated based on total weekday trips divided by 5 weekdays.

⁴ Residential staff, residential non-staff and visitor-delivery daily trips are from historical counts. The peak hour residential trips are based Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 220 multi-family dwelling units by resident.

⁵ Busses have been converted to passenger car equivalents for this trip generation.

Table 2

2013 - 2017 Traffic Collision History
County of San Bernardino - SR-38 Highway and Glass Road (1 mile section on either side of intersection)

Time Frame				Location		Intersection			Severity			Collision Description		
Year	Date	Time	Day of Week	Primary Roadway	Secondary Roadway	Distance	Direction (N S E W)	Located at (Y N)	Fatality	Injury	Towed Away (Y N)	Collision Type	Primary Collision Factor	Collided With
2017	20170102	1745	Monday	SR-38	GLASS ROAD	5280	E	N	-	-	Y	Hit Object	Improper Turning	Other Object
2017	20170422	1130	Saturday	GLASS ROAD	SR-38	5280	N	N	-	1	Y	Overturned	Unsafe Speed	Non-collision
2017	20170716	715	Sunday	SR-38	BARTON FLATS	422	W	N	-	1	N	Other	Vehicle Right-of-Way	Bicycle
2017	20170820	1145	Sunday	GLASS RD.	SR-38	5808	W	N	-	1	N	Overturned	Unsafe Speed	Non-collision
2016	20160620	1045	Monday	GLASS ROAD	SR-38	32	N	N	-	1	N	Overturned	Unsafe Speed	Non-collision
2016	20160817	1440	Wednesday	SR-38 W/B	GLASS RD	528	W	N	-	4	Y	Hit Object	Improper Turning	Fixed Object
2015	20150512	700	Tuesday	RT 38	GLASS RD	23232	E	N	-	1	Y	Hit Object	Improper Turning	Fixed Object
2015	20150806	1409	Thursday	GLASS RD	RT 38	682	N	N	-	2	Y	Hit Object	Improper Turning	Fixed Object
2014	20140404	915	Friday	RT 38	GLASS RD	22176	E	N	-	-	Y	Hit Object	Other than Driver or Ped	Animal
2014	20141019	1740	Sunday	GLASS RD	RT 38	10560	W	N	-	2	Y	Hit Object	Unknown	Fixed Object

Year	Accidents	Fatality	Injury
2013	0	0	0
2014	2	0	1
2015	2	0	2
2016	2	0	2
2017	4	0	3
Total	10	0	8

¹ Source: California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS), records for January 1, 2013 to December 31, 2017 (see Appendix D).

Figure 1
Project Location Map

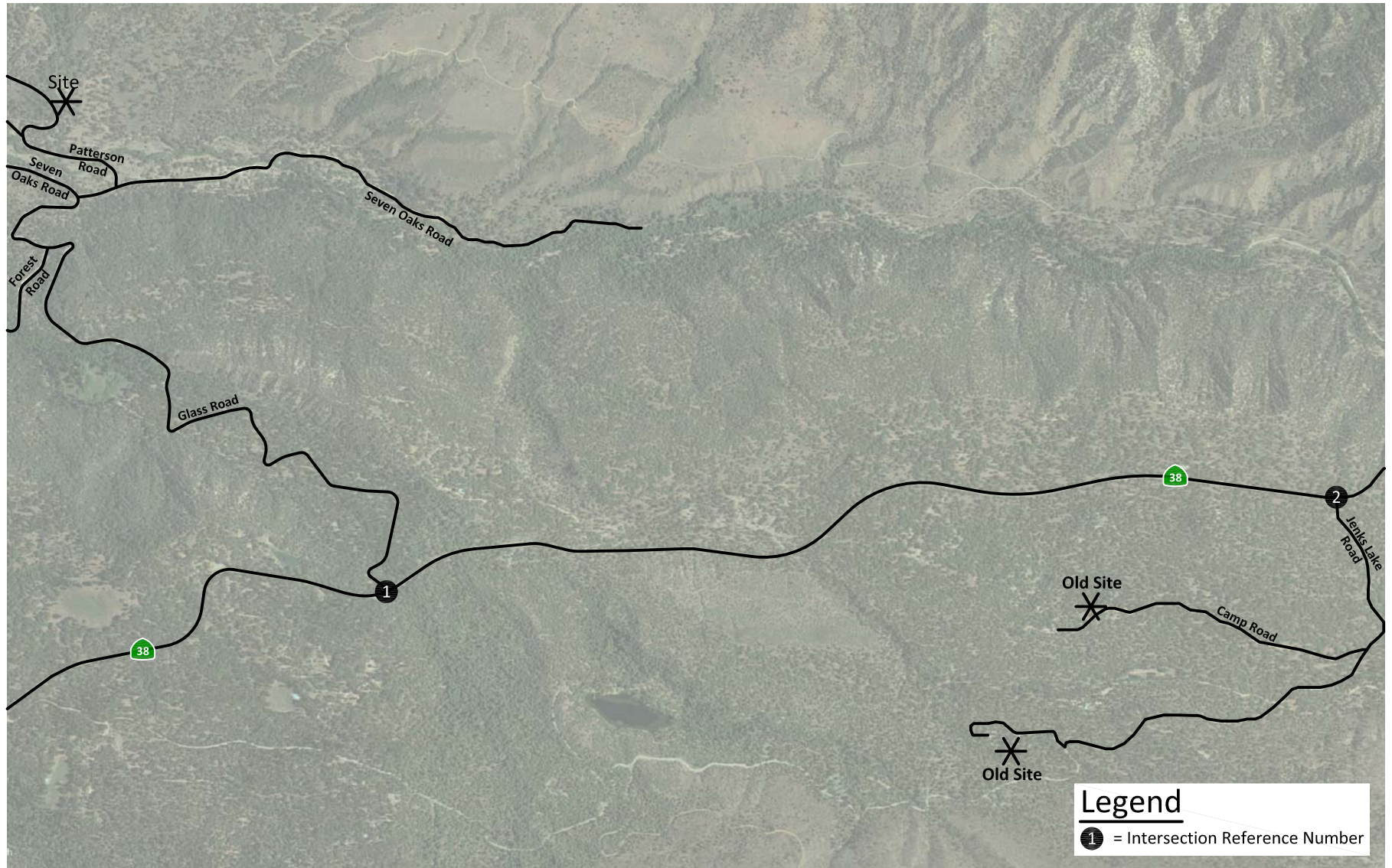


Figure 2
Sight Distance Analysis for Glass Road at SR-38 Highway



KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE



JN 7335

APPENDIX A

COMMENT MEMO

To: Jim Morrissey, San Bernardino County Planner
Re: CalTrans Comments on High Trails Initial Study, P201600633, APN: 0305-241-14
Date: 1/16/2018

HIGH TRAILS ROAD ACCESS REPORT

In their Initial Study, under section XVI. Transportation/Traffic Substantiation, the County of San Bernardino reports a Less than Significant Impact for the High Trails project. ¹ In a letter dated 12/21/2017, Caltrans offered the following comment on the High Trails project: *“Submit two hard copies and one electronic file of all Traffic Impact Analysis (TIA) documents for review. All state facilities within 5-mile radius of the Project should be analyzed in the TIA”.*

The County Planning Department has indicated that the Caltrans comment can be addressed by providing 1) a Traffic Impact Analysis for the state areas within a 5 mile radius of the project area, or 2) a letter addressing potential concerns and project needs. This report serves as 2) a letter addressing potential Caltrans Highway 38 concerns for the High Trails project.

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¹ See Addendum 1

Background

High Trails runs a residential outdoor science school and has been in operation in the general vicinity of the Project Area since 2000. Currently, High Trails leases two residential camp sites that are off Highway 38, accessed via Jenks Lake Road East. Students and teachers arrive in busses on a Monday or Tuesday, and leave on Friday. The vast majority of the staff live on site, while several non-residential staff commute from the Big Bear area. School principals/teachers occasionally visit during the school week, and there are normal business deliveries (gas, trash, food, etc.).

This project proposal would serve to replace one (with Phase 1) and the other (potentially with Phase 2) of these current residential camp sites with a company owned site 2.5 miles west on Highway 38, accessed via Glass Road.

Current Area Uses

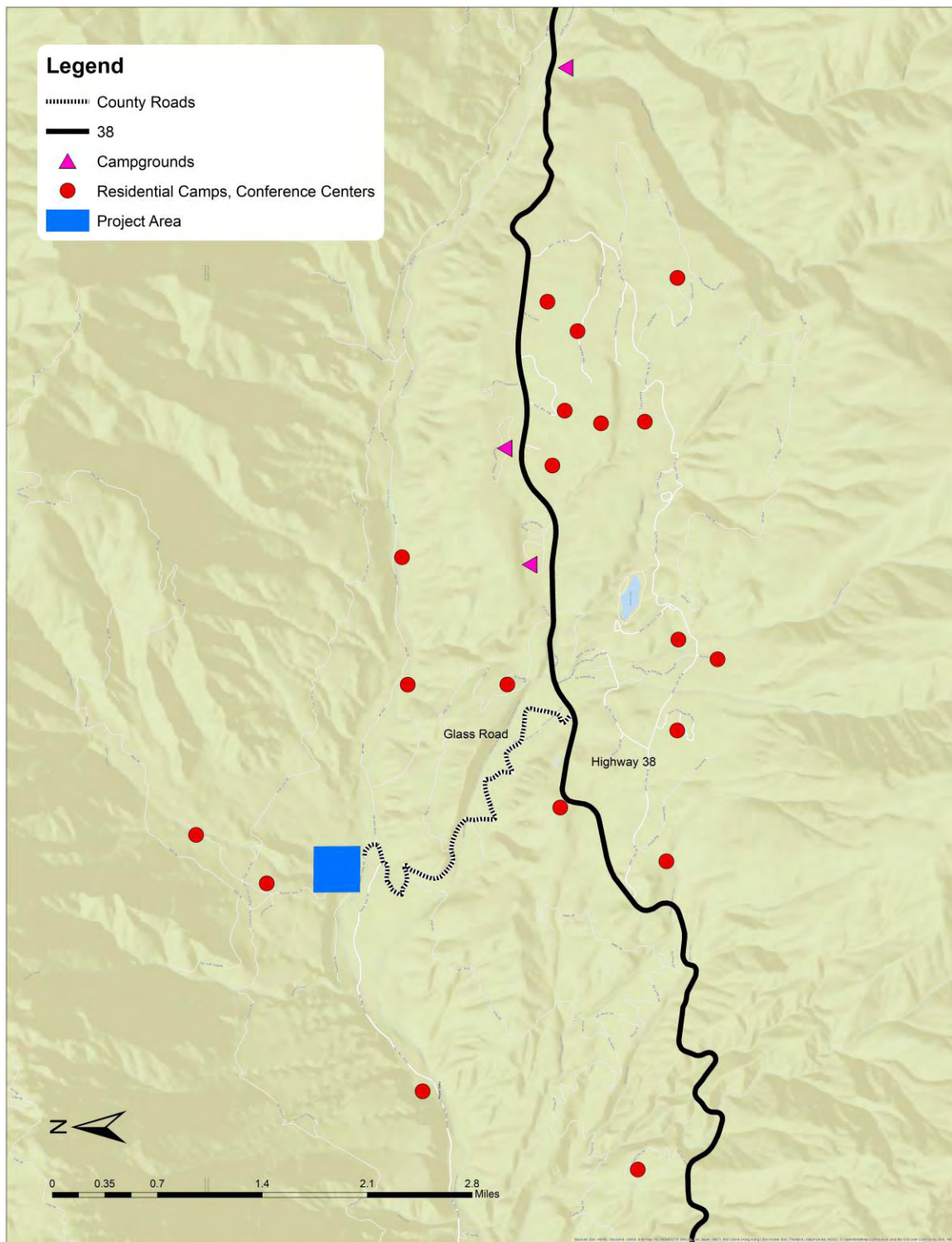
The project area is in the general Barton Flats area, which is known predominantly for the residential camp and US Forest Service campgrounds available. There are 19 Residential Camps and Conference Centers in the Barton Flats area and 3 US Forest Service public campgrounds.^{2 3}

Highway 38 is the main artery access road for all of these sites. Though this entire area, Highway 38 is a two lane state highway with zero acceleration/deceleration lanes, zero turn lanes, and three slow vehicle turnouts.

² <http://www.bfcacamps.org>

³ <https://www.fs.usda.gov/activity/sbnf/recreation/camping-cabins/?recid=26225&actid=29>.

Access Roads and Nearby Similar Uses Overview Map



Average Daily Trips Estimated

San Bernardino County Code requires 121 parking spaces at the project site. These 121 parking spaces and their estimated 121 daily trips are both well above what has been observed over the last 18 years of business at High Trails. High Trails' Nawakwa Site, located at 4650 Jenks Lake Road East, has similar lodging capacities as Phase 1 of the proposed project and is used as a comparison piece in the below tables:

TABLE 1: SITE LODGING CAPACITIES

	Nawakwa Site Capacity (Actual, 2000-2017)	Phase 1 Capacity Proposed Project	Phase 2 Capacity Proposed Project	Total Capacity Proposed Project
School Students	196	192	96	288
School Teachers	12	12	8	20
Non-Staff Residents	1	1	1	2
Residential Staff	28	24	16	40
Totals	237	230	121	350

TABLE 2: SITE PARKING NEEDS

	Nawakwa Site Parking Needs (Actual, 2000-2017)	Phase 1 Parking Needs Proposed Project	Phase 2 Parking Needs Proposed Project	Total Parking Needs Proposed Project
School Students via Bus	4	4	2	6
School Teachers via Bus	na	na	na	na
Visitors, Deliveries	4	4	2	6
Non-Residential Staff	3	7	2	9
Non-Staff Residents	1	1	1	2
Residential Staff	28	24	16	40
Facility Vehicle	1	1	0	1
Total Parking Spots Needed	37 Vehicle 4 Bus	37 Vehicle 4 Bus	20 Vehicle 2 Bus	57 Vehicle 4 Bus
Margin of Error At 50%	55.5 Vehicle	55.5 Vehicle	30 Vehicle	85.5 Vehicle

Table 2 is based upon historical parking needs at the Nawakwa Site from the period of 2000-2017. Notes: 1 bus per 50 students. Busses park short term to deliver/pickup students, and do not remain on site. School teachers arrive on the school bus along with students. Code requires 2 parking spots for every Residential Staff – this is far above the needs observed with residential camps – housing and employment for 1 person equates to 1 parking spot. There are two caretaker houses that may have families living in them; these potential additional parking needs are contained under the non-staff resident category.

TABLE 3: AVERAGE DAILY TRIPS

	Nawakwa Site Daily Trips (Estimated, 2000- 2017)	Phase 1 Daily Trips Proposed Project	Phase 2 Daily Trips Proposed Project	Total Daily Trips Proposed Project
School Students	1.15	1.15	.57	1.72
School Teachers	0	0	0	0
Visitors, Deliveries	4	4	2	6
Non-Residential Staff	3	7	2	9
Non-Staff Residents	1	1	1	2
Residential Staff	8	6.8	4.6	11.4
Facility Vehicle	1	1	0	1
Totals	18.2	20.9	10.2	31.1
Margin of Error: 50%	27.3	31.35	15.3	46.7

Table 3 is based upon historical parking needs at our Nawakwa Site from the period of 2000-2017. Notes: One daily trip is traveling to the site, and another daily trip is traveling from the site, both on the same roadway. The daily trips of school students and teachers (on busses) and residential staff are calculated by taking the number of trips in 1 week (which is 2) and dividing by 7. Daily trips of all others are estimated based upon historical observations and account for time when the site is non-operational.

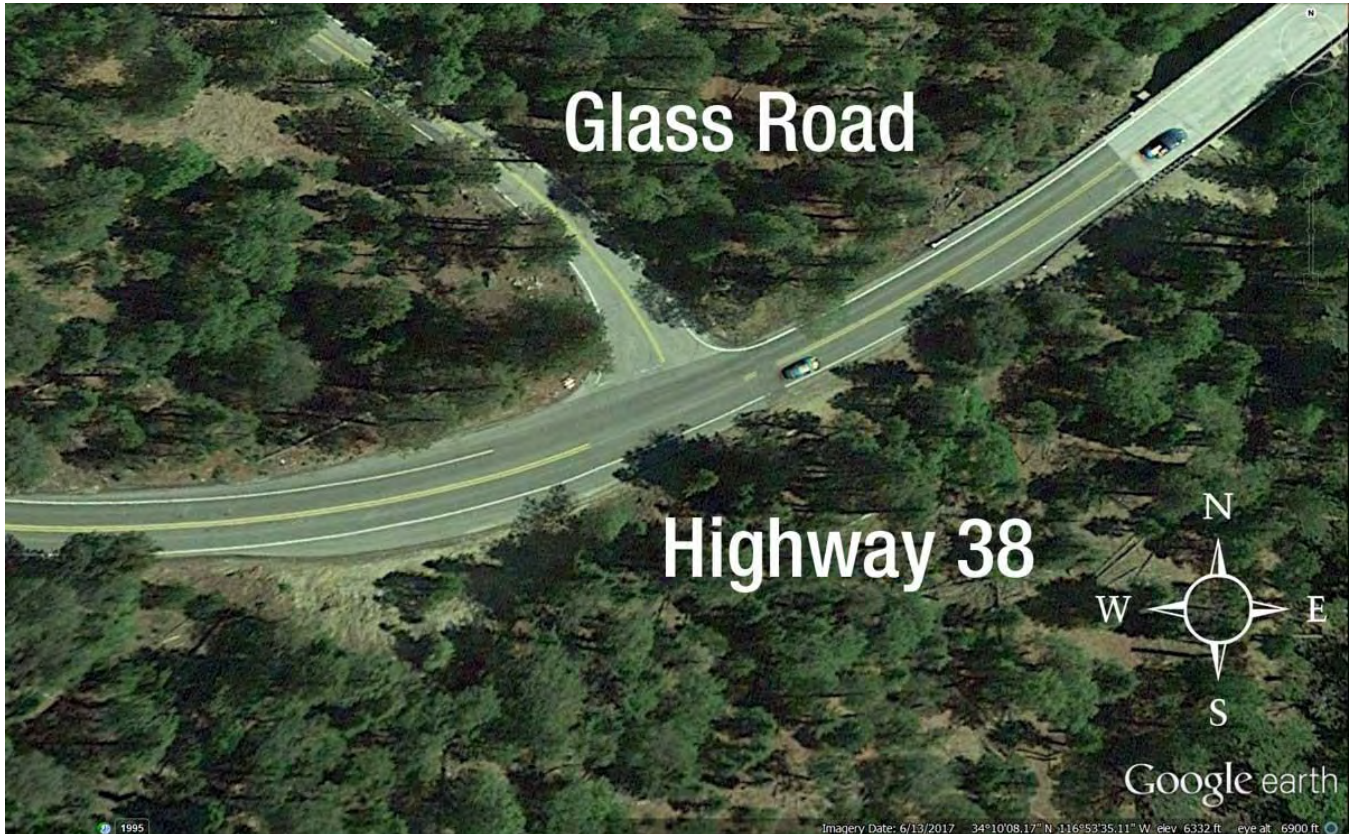
AVERAGE DAILY TRIP SUMMARY

Based upon the above experience and calculations, the average daily trips for the project site at full capacity and with the completion of both Phase 1 and Phase 1 would be 31.1.

Roadway and Access Analysis

PROPOSED ACCESS ROUTE

The intersection of Highway 38 and Glass Road is controlled by a 1-way stop. The westward approach on Highway 38 has a large unsigned pullout, and the westward departure on Highway 38 has an unsigned acceleration lane. The majority of school traffic travels in this direction, arriving and departing from the western side of Highway 38.



Intersection of Highway 38 and Glass Road

SIGNAGE IMPROVEMENTS

Of the 19 residential camps/conference centers and 3 public campgrounds, only the sites that sit directly off Highway 38 have any directional or informational signage. The exception to this is Camp Radford, which has been closed since 1992 yet still has a prominent sign. ⁴ The remaining sites that are accessed off secondary roads do not have signage. Glass Road, the turnoff for the High Trails site, is prominently signed in both directions. Based upon current similar sites, the High Trails project does not require any signage improvements.



Approaching from the west.

⁴ <https://www.nbclosangeles.com/news/local/audit-City-Controller-Wendy-Greuel-Department-of-Recreation-and-Parks-168017046.html>



Glass Road Signage 2

Approaching from the west. The RV and Lodging signs are for the Seven Oaks Retreat / Conference Center.

ACCELERATION/DECELERATION LANE/TURN LANE OFF HIGHWAY 38

Of the 19 residential camps/conference centers and 3 public campgrounds that are accessed via Highway 38, none of them have signed acceleration/deceleration lanes or turn lanes available to them. The High Trails project site is accessed via Glass Road, which is already used by four residential camps/conference centers as well as a USFS Fire Station. The additional use of this access point by the High Trails project, based upon the average daily trips, would not create a substantial increase in the use of this area of highway.

The intersection of Highway 38 and Glass Road has both a large unsigned pullout and a westbound unsigned acceleration lane. Due to these features, the lack of any acceleration/deceleration/turn lanes for nearby similar facilities, and the topographical difficulty in engineering and constructing these lanes, a signed acceleration/deceleration/turn lane to this intersection is not necessary.

High Trails has been in operation since 2000, and has consistently used the intersection of Highway 38 and Jenks Lake Road East, which has no acceleration/deceleration/turn lanes. During this time there have been zero noted accidents involving traffic generated from the High Trails program. See Addendum 3 for aerial views and pictures of four heavily used access points along Highway 38, none of which have an acceleration/deceleration/turn lanes.



Highway 38 approaching Glass Road from the western side, pullout on right hand side.



Highway 38 departing Glass Road traveling westbound, unsigned acceleration lane on right hand side.

ADEQUACY OF EXISTING ROADWAY CAPACITY

Highway 38 is part of the National Highway System and is designated as a MAP 21 NHS Principal Artery.⁵ It is the only highway designated as such that accesses the mountain cities of Big Bear Lake, Big Bear City, and Fawnskin. A large portion of commercial supply vehicles travel this route to reach the Big Bear Valley.

As discussed above, Highway 38 is the primary route used to access 19 organized camps / conference centers and 3 USFS public campgrounds in the Barton Flats area. This section of the highway does not have accommodations such as turn lanes or acceleration/deceleration lanes available. Due to the steep mountain slope on which this section of Highway 38 is built, considerable earth excavation would have to take place to widen the roadway to provide these opportunities.

In addition to accessing the Barton Flats camping area, Highway 38 is also one of the main access routes to the Big Bear Valley.^{6 7} The Big Bear Valley Master Plan reports that the valley is a two to three hour drive from the Los Angeles and San Diego metro areas, making it a recreational destination for 22.68 million people. There are approximately 12,000 full time residents in the valley, with the population growing to between 20,000 and 40,000 on a typical weekend due to tourists and second home owners.⁸ The Big Bear Valley Community Wildfire Plan estimates that the daily visitor population to the valley is 16,384, which equates to approximately 5,943,660 visitors annually.⁹ The valley has a large number of homes that are used for short-term visitors and seasonal residents. In the City of Big Bear Lake, 64.1% of vacant housing is used for seasonal, recreational, or occasional use. To compare, the County of San Bernardino average is 4.9%.¹⁰ Peak daily trips for Highway 38 are on Friday afternoon, Saturday, Sunday, and holidays.

High Trails serves public elementary schools, so their schedule does not conflict with the traditional vacation and recreation high use times. The largest portion of the projected average daily trips to High Trails occur during non-peak traffic periods; schools arrive on a Monday or Tuesday and depart on Friday morning. Highway 38 has adequate capacity to serve as both part of the National Highway System and a primary tourist artery to the mountains. Compared with this weekend traffic, the addition of an estimated 44 average daily trips (88 with a 100% margin of error), is marginal and would produce a less than significant impact on Highway 38.

Note: High Trails has leased a nearby residential camp site for 18 years, and is seeking to move their business to a new location. Due to this, the load on Highway 38 is not projected to increase. It is unlikely that the vacated camp site will fill this opening with their own outdoor science program, largely due to the challenges of starting and running this type of specialized business.

⁵ www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/southern_california/ca_californiasouth.pdf

⁶ https://en.wikipedia.org/wiki/Big_Bear_Lake

⁷ <https://www.bigbear.com/travel-tools/directions-and-maps/>

⁸ <http://trailsfoundation.org/big-bear-valley-pedestrian-bicycle-and-equestrian-master-plan/>

⁹ http://www.sbcounty.gov/calmast/pdf/cwpp/CWPP_Big_Bear_Valley.pdf

¹⁰ <http://trailsfoundation.org/big-bear-valley-pedestrian-bicycle-and-equestrian-master-plan/>

Recommendations

Using the information contained in this report, it is my recommendation to support the Transportation/Traffic Substantiation section of the County's Initial Study, which finds that the High Trails project will have a less than significant impact.

Please let me know as you have questions. Thank you.

Addendum 1: County Initial Study

INITIAL STUDY, HIGH TRAILS OUTDOOR SCIENCE SCHOOL, DECEMBER 2017

P201600633, APN: 0305-241-14, Page 50,51.

<http://www.sbcounty.gov/uploads/lus/environmental/SignedInitialStudyp201600633.pdf>

XVI. Transportation/Traffic Substantiation:

Less than Significant Impact. The proposed project will generate vehicle trips to and from the subject property for teachers, students, camp staff, and maintenance employees along with trips for periodic deliveries for food and other services. It is estimated that vehicle trips would occur primarily at the beginning and the end of each week, as students, teachers, and staff arrive and depart from the site. 121 on-site parking spaces have been provided, based upon the projected use of buses for students in separate vehicles for staff and caretakers. If vehicle trips occur in the manner described, it is reasonable to assume approximately 121 trips would be generated during periods of student arrival and departure times but few trips at other times. Highway 38 is a two-lane roadway that traverses the area between the Valley and mountain cities. Glass Road would be considered the prime access to the property, since it extends from Highway 38 up to the project area where it intersects with Seven Oaks Road and Patterson Road, all of which are paved. Patterson Road connects to Radford Camp Road.

Roadways in the area have limited use due to the lack of residents or facilities in the area. As such the number of vehicle trips is not projected to adversely affect roadway operations or substantially affect levels of service due to the limited number of current vehicle use. The proposed use would also not affect the existing or future use of non-motorized or pedestrian use. Mass transit does not currently serve the area.

The project site is not located near a roadway identified on the applicable congestion management plan. Highway 38 is the closest major roadway to the project site that is identified in the *San Bernardino County Congestion Management Program 2016 Update* prepared by the San Bernardino Association of Governments. The Level of Service (LOS) identified in the plan is "A", or the least congested category. The proposed use is approximately one mile North of Highway 38 and is not expected to adversely affect highway operations due to the limited number of on-going vehicle trips. As such the projected effect upon the use of the circulation system is less than significant.

Addendum 2: Parking Space Code

PARKING REQUIREMENTS: COUNTY OF SAN BERNARDINO 2007 DEVELOPMENT CODE

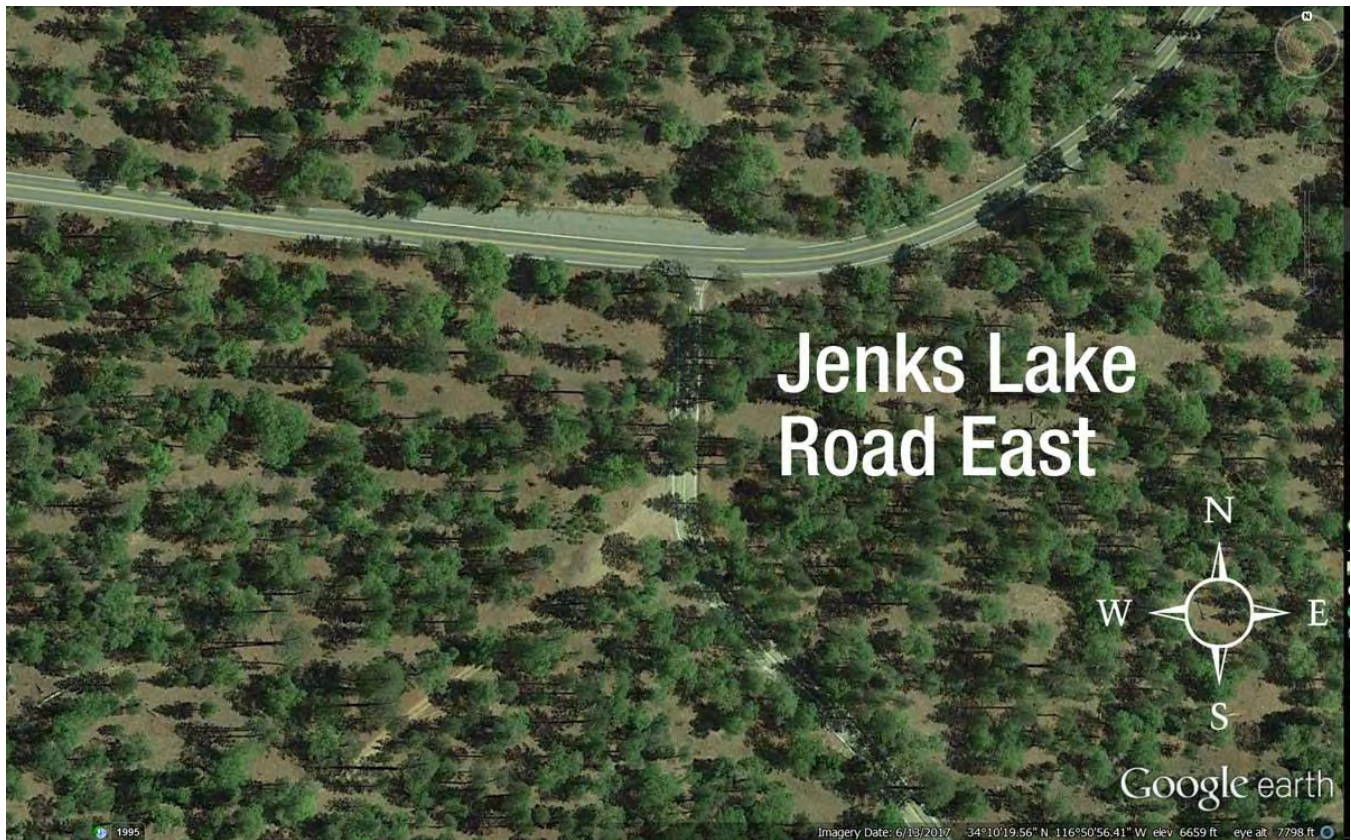
http://www.sbcounty.gov/uploads/lus/DevelopmentCode/2007_Development_Code_14-04-24.pdf

Parking and Loading Standards

83.11

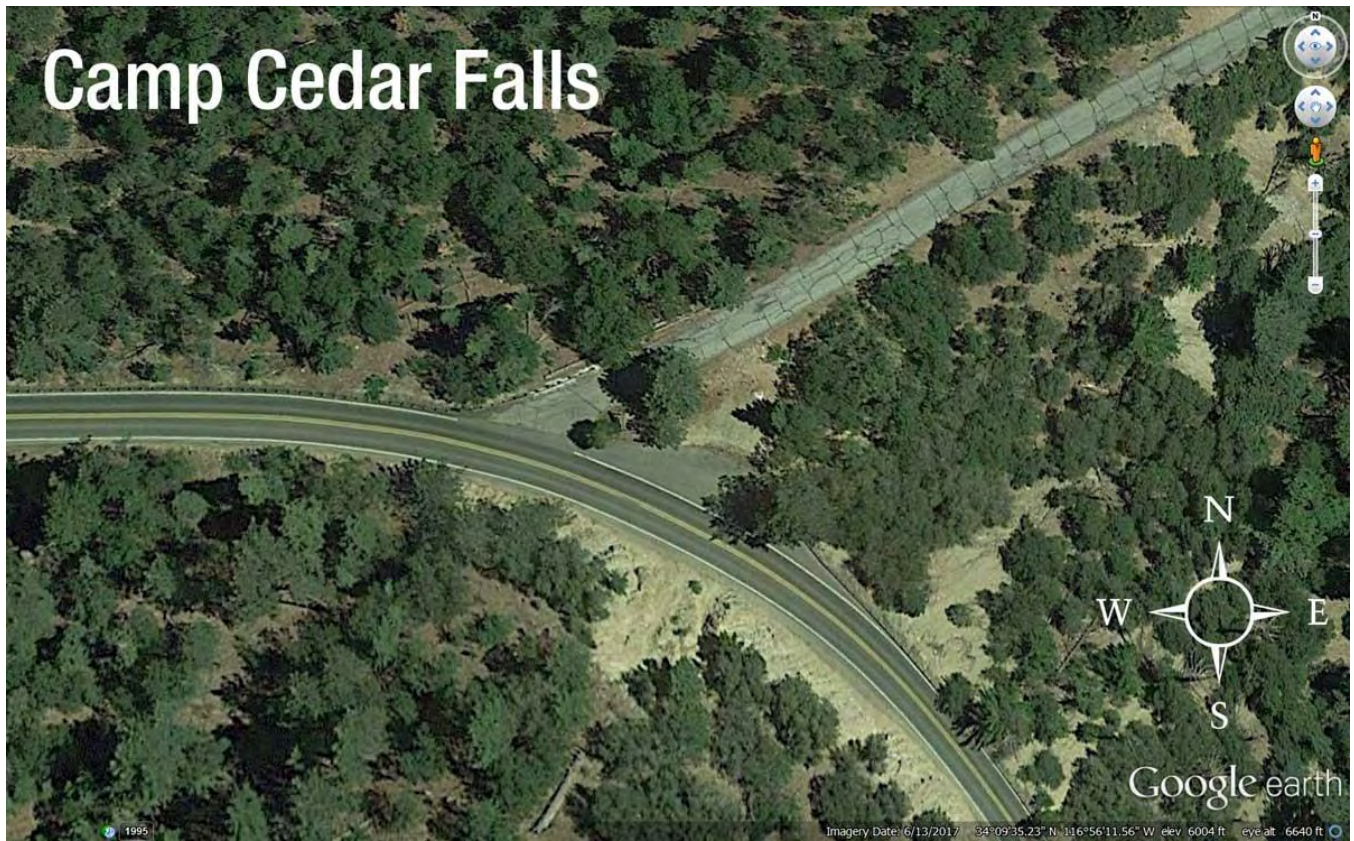
Table 83-15	
Parking Requirements by Land Use	
Uses	Number of Spaces Required
Golf courses and driving ranges, but not to include miniature golf courses	<ul style="list-style-type: none">▪ 4 for each hole on all golf courses; and▪ 1 for each tee for driving ranges
Organizational camps	<ul style="list-style-type: none">▪ 1 bus parking space per 20 campers▪ 2 for each resident staff▪ 1 for each nonresident staff on the largest shift▪ 1 for each facility vehicle
Meeting facilities - Theaters, auditoriums, stadiums, sport arenas, gymnasiums and similar places of public assembly	<ul style="list-style-type: none">▪ 1 for each 3 fixed seats or for every 25 s.f. of seating area within the main auditorium where there are no fixed seats ⁽¹⁾
Schools general curriculum Kindergarten through Grade 9	<ul style="list-style-type: none">▪ 1 for each staff member, faculty member, and employee▪ 1 for each facility vehicle

Addendum 3: Area Similar Sites Road Access









APPENDIX B

TRAFFIC COUNT WORKSHEETS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

<div>DATE: 2/14/18 WEDNESDAY</div>	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Glass SR-38	PROJECT #: LOCATION #: CONTROL:	SC1604 1 STOP S					
<div>PCE Adjusted</div>	NOTES:							<div>AM PM MD OTHER OTHER</div>	<div>◀ W S ▶ E N V</div>
	Class	1	2	3	4	5	6		
	Factor	1	1.5	2	3	2	2		

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Glass			Glass			SR-38			SR-38			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 0	TOTAL

AM	10:00 AM	0	0	0	0	0	1	0	15	0	0	17	0	33
	10:15 AM	0	0	0	0	0	0	0	20	0	0	14	0	34
	10:30 AM	0	0	0	4	0	0	0	17	0	0	19	0	40
	10:45 AM	0	0	0	0	0	1	1	14	0	0	25	2	43
	11:00 AM	0	0	0	0	0	0	2	13	0	0	14	0	29
	11:15 AM	0	0	0	0	0	2	0	19	0	0	18	0	39
	11:30 AM	0	0	0	2	0	1	0	17	0	0	15	0	34
	11:45 AM	0	0	0	0	0	2	1	18	0	0	21	3	45
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	5	0	7	4	133	0	0	142	5	294
	APPROACH %	0%	0%	0%	43%	0%	57%	3%	97%	0%	0%	97%	3%	
	APP/DEPART	0	/	8	12	/	0	136	/	138	147	/	149	0
PM	BEGIN PEAK HR	10:30 AM			4	0	3	3	63	0	0	76	2	149
	VOLUMES	0	0	0	4	0	3	3	63	0	0	76	2	149
	APPROACH %	0%	0%	0%	58%	0%	42%	4%	96%	0%	0%	98%	2%	
	PEAK HR FACTOR	0.000			0.429			0.862			0.731			0.876
	APP/DEPART	0	/	4	6	/	0	66	/	67	78	/	79	0
	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	1	17	0	0	10	0	28
	4:15 PM	0	0	0	0	0	0	1	17	0	0	15	0	33
	4:30 PM	0	0	0	0	0	0	1	14	0	0	12	3	29
	4:45 PM	0	0	0	0	0	1	0	12	0	0	6	0	19
	5:00 PM	0	0	0	2	0	0	0	19	0	0	17	0	38
	5:15 PM	0	0	0	0	0	0	1	22	0	0	18	0	40
	5:30 PM	0	0	0	0	0	1	0	15	0	0	10	0	26
	5:45 PM	0	0	0	0	0	0	0	8	0	0	19	0	27
	VOLUMES	0	0	0	2	0	2	4	123	0	0	106	3	239
	APPROACH %	0%	0%	0%	50%	0%	50%	3%	97%	0%	0%	98%	2%	
	APP/DEPART	0	/	7	4	/	0	127	/	125	109	/	108	0
	BEGIN PEAK HR	5:00 PM			2	0	1	1	64	0	0	64	0	131
	VOLUMES	0	0	0	2	0	1	1	64	0	0	64	0	131
	APPROACH %	0%	0%	0%	67%	0%	33%	2%	98%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.375			0.717			0.836			0.819
	APP/DEPART	0	/	1	3	/	0	65	/	66	64	/	65	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

<div>DATE: 2/14/18 WEDNESDAY</div>	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Jenks Lake SR-38	PROJECT #: LOCATION #: CONTROL:	SC1604 2 STOP N							
<div>PCE Adjusted</div>	<div>NOTES:</div>							<div>AM PM MD OTHER OTHER</div>	<div>◀ W S ▶ E</div>	<div>▲ N ▼ S</div>	
	Class	1	2	3	4	5	6				
	Factor	1	1.5	2	3	2	2				

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Jenks Lake			Jenks Lake			SR-38			SR-38			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	X	0	X	X	X	X	1	0	0	1	X	

AM	10:00 AM	0	0	0	0	0	0	0	12	4	1	19	0	36
	10:15 AM	1	0	0	0	0	0	0	15	2	0	14	0	32
	10:30 AM	0	0	2	0	0	0	0	19	4	0	15	0	40
	10:45 AM	5	0	0	0	0	0	0	14	0	2	26	0	47
	11:00 AM	0	0	0	0	0	0	0	13	0	0	14	0	27
	11:15 AM	0	0	3	0	0	0	0	21	2	0	22	0	48
	11:30 AM	0	0	2	0	0	0	0	14	0	0	12	0	27
	11:45 AM	0	0	0	0	0	0	0	16	2	0	22	0	39
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	6	0	7	0	0	0	0	123	13	3	143	0	295
	APPROACH %	46%	0%	54%	0%	0%	0%	0%	90%	10%	2%	98%	0%	
	APP/DEPART	13	/	0	0	/	16	136	/	130	146	/	149	0
BEGIN PEAK HR	10:30 AM													
VOLUMES	5	0	5	0	0	0	0	67	6	2	77	0	161	
APPROACH %	50%	0%	50%	0%	0%	0%	0%	92%	8%	3%	97%	0%		
PEAK HR FACTOR	0.500			0.000			0.788			0.714			0.839	
APP/DEPART	10	/	0	0	/	8	73	/	72	79	/	82	0	
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	24	0	1	10	0	35
	4:15 PM	1	0	3	0	0	0	0	17	0	1	12	0	34
	4:30 PM	0	0	0	0	0	0	0	14	0	1	13	0	28
	4:45 PM	0	0	1	0	0	0	0	14	0	1	7	0	23
	5:00 PM	0	0	0	0	0	0	0	12	0	0	21	0	33
	5:15 PM	0	0	1	0	0	0	0	25	0	0	13	0	38
	5:30 PM	0	0	2	0	0	0	0	23	0	0	8	0	33
	5:45 PM	0	0	0	0	0	0	0	7	0	0	22	0	29
	VOLUMES	1	0	6	0	0	0	0	135	0	4	106	0	251
	APPROACH %	14%	0%	86%	0%	0%	0%	0%	100%	0%	4%	96%	0%	
	APP/DEPART	7	/	0	0	/	4	135	/	141	110	/	107	0
BEGIN PEAK HR	5:00 PM													
VOLUMES	0	0	3	0	0	0	0	67	0	0	64	0	133	
APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.417			0.000			0.679			0.722			0.872	
APP/DEPART	3	/	0	0	/	0	67	/	69	64	/	64	0	



APPENDIX C

RADAR SPEED SURVEY WORKSHEETS

**SPEED SR 38 east of Glass.
Combined**

Project# SC1604

Wednesday, February 14, 2018

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	1 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	70+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	1	2	1	0	0	0	0	0	4	0.25%
12:15:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0.12%
12:30:00 AM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3	0.19%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	2	0	1	1	0	0	0	0	4	0.25%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
1:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.06%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.06%
2:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.06%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.06%
3:00:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.06%
3:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
3:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.06%
4:00:00 AM	0	0	0	0	0	0	0	1	1	1	1	0	0	0	4	0.25%
4:15:00 AM	0	0	0	0	0	1	1	0	1	0	1	0	0	0	4	0.25%
4:30:00 AM	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	0.25%
4:45:00 AM	0	0	0	0	0	0	0	0	1	3	2	0	1	0	7	0.43%
5:00:00 AM	0	0	0	0	0	0	1	0	1	2	1	0	0	0	5	0.31%
5:15:00 AM	0	0	0	0	0	0	0	0	1	3	4	1	0	0	9	0.56%
5:30:00 AM	0	0	0	0	0	0	2	1	0	1	2	1	0	1	8	0.49%
5:45:00 AM	0	0	0	0	0	0	0	4	0	0	3	1	1	0	9	0.56%
6:00:00 AM	0	0	0	0	0	0	3	2	4	2	1	0	0	0	12	0.74%
6:15:00 AM	0	0	0	1	0	0	0	2	2	3	1	1	0	0	10	0.62%
6:30:00 AM	0	0	0	0	0	0	0	2	3	2	4	0	1	0	12	0.74%
6:45:00 AM	0	0	2	1	0	0	3	6	2	6	9	0	0	0	29	1.79%
7:00:00 AM	0	0	0	1	0	1	1	5	5	7	6	1	0	1	28	1.73%
7:15:00 AM	0	0	0	0	0	1	3	2	4	5	2	1	1	0	19	1.18%
7:30:00 AM	0	0	0	0	0	1	2	2	2	6	5	2	0	0	20	1.24%
7:45:00 AM	0	0	0	0	1	0	3	3	4	6	3	1	1	0	22	1.36%
8:00:00 AM	0	0	0	0	0	1	0	4	5	6	6	2	0	0	24	1.48%
8:15:00 AM	0	0	0	0	0	0	1	3	9	5	6	3	1	1	29	1.79%
8:30:00 AM	0	0	0	0	0	0	0	2	4	5	7	1	0	0	19	1.18%
8:45:00 AM	0	0	1	1	0	1	0	4	5	10	6	1	0	0	29	1.79%
9:00:00 AM	0	0	0	0	0	0	1	6	13	5	3	4	0	0	32	1.98%
9:15:00 AM	0	0	0	0	0	0	1	6	6	9	6	3	0	0	31	1.92%
9:30:00 AM	0	0	0	0	0	0	2	5	1	4	5	2	0	0	19	1.18%
9:45:00 AM	0	0	0	0	0	0	0	4	7	8	7	2	0	0	28	1.73%
10:00:00 AM	0	0	0	0	0	0	4	4	8	5	5	2	0	0	28	1.73%
10:15:00 AM	0	0	0	0	0	0	2	6	9	7	3	4	0	0	31	1.92%
10:30:00 AM	0	0	1	1	0	0	3	5	9	7	5	4	0	0	35	2.16%
10:45:00 AM	0	0	0	0	0	0	3	4	9	11	3	1	0	1	32	1.98%
11:00:00 AM	0	0	0	0	0	1	2	7	10	4	4	0	0	0	28	1.73%
11:15:00 AM	0	0	0	0	0	0	3	8	13	5	4	1	0	0	34	2.10%
11:30:00 AM	0	0	0	0	0	0	2	8	8	5	3	2	0	0	28	1.73%
11:45:00 AM	0	0	0	1	1	1	5	5	13	10	1	1	0	0	38	2.35%
AM TOTAL	0	0	6	7	3	8	53	116	165	156	123	42	6	4	689	42.61%
PERCENTAGE	0.0%	0.0%	0.9%	1.0%	0.4%	1.2%	7.7%	16.8%	23.9%	22.6%	17.9%	6.1%	0.9%	0.6%		
CUMULATIVE	0	0	6	13	16	24	77	193	358	514	637	679	685	689		
PERCENTAGE	0.0%	0.0%	0.9%	1.9%	2.3%	3.5%	11.2%	28.0%	52.0%	74.6%	92.5%	98.5%	99.4%	100.0%		

15th Percentile	42	Mean Speed Average	50
50th Percentile	50	10 MPH Pace Speed	50-59
85th Percentile	58	Number in Pace	277
95th Percentile	61	Percent in Pace	40%

**SPEED SR 38 east of Glass.
Combined**

Project# SC1604

Wednesday, February 14, 2018

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	1 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	70+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	1	0	1	6	11	3	9	1	0	0	32	1.98%
12:15:00 PM	0	0	0	2	0	4	3	6	12	7	0	1	1	0	36	2.23%
12:30:00 PM	0	0	0	1	1	0	1	8	8	1	2	0	0	0	22	1.36%
12:45:00 PM	0	0	1	1	1	1	3	5	4	5	0	1	0	0	22	1.36%
1:00:00 PM	0	0	0	0	0	0	3	6	9	14	3	1	0	0	36	2.23%
1:15:00 PM	0	0	0	3	0	1	2	7	9	5	3	1	0	0	31	1.92%
1:30:00 PM	0	0	0	1	0	1	2	5	3	9	4	0	1	0	26	1.61%
1:45:00 PM	0	0	0	0	0	0	0	2	9	7	3	2	0	0	23	1.42%
2:00:00 PM	0	0	0	0	0	0	4	9	8	7	8	1	0	0	37	2.29%
2:15:00 PM	0	0	0	0	0	0	2	3	12	10	1	2	0	0	30	1.86%
2:30:00 PM	0	0	0	1	0	1	0	9	10	12	0	1	0	0	34	2.10%
2:45:00 PM	0	0	0	0	0	0	1	8	9	8	6	4	2	0	38	2.35%
3:00:00 PM	0	0	0	0	0	0	4	4	4	4	6	0	0	0	22	1.36%
3:15:00 PM	0	0	0	1	0	0	1	5	8	12	4	0	0	0	31	1.92%
3:30:00 PM	0	0	1	0	1	1	2	8	4	3	4	3	1	0	28	1.73%
3:45:00 PM	0	0	0	0	0	1	0	8	14	10	2	3	1	0	39	2.41%
4:00:00 PM	0	0	0	0	0	0	0	4	13	8	2	0	0	0	27	1.67%
4:15:00 PM	0	0	0	1	0	0	2	6	7	5	8	1	0	0	30	1.86%
4:30:00 PM	0	0	0	0	0	2	3	2	7	8	3	1	0	0	26	1.61%
4:45:00 PM	0	0	0	0	0	0	0	2	8	7	4	0	0	0	21	1.30%
5:00:00 PM	0	0	0	1	0	0	1	0	17	7	5	2	0	0	33	2.04%
5:15:00 PM	0	0	0	0	0	1	0	5	16	8	5	1	1	0	37	2.29%
5:30:00 PM	0	0	0	0	0	0	2	5	4	10	3	0	0	0	24	1.48%
5:45:00 PM	0	0	0	0	0	0	2	6	4	4	3	0	0	0	19	1.18%
6:00:00 PM	0	0	0	0	0	1	2	2	4	4	2	1	1	0	17	1.05%
6:15:00 PM	0	0	0	0	0	0	2	5	4	1	2	0	0	0	14	0.87%
6:30:00 PM	0	0	1	0	0	3	2	2	2	1	2	1	0	0	14	0.87%
6:45:00 PM	0	0	0	0	0	1	1	4	6	1	5	0	0	0	18	1.11%
7:00:00 PM	0	0	0	0	0	0	1	7	2	1	1	0	0	0	12	0.74%
7:15:00 PM	0	0	0	0	0	0	0	1	4	0	1	0	0	0	6	0.37%
7:30:00 PM	0	0	0	0	0	0	2	2	8	2	1	0	0	0	15	0.93%
7:45:00 PM	0	0	0	0	0	0	4	0	2	3	1	0	0	0	10	0.62%
8:00:00 PM	0	0	0	0	0	0	0	4	0	5	1	0	0	0	10	0.62%
8:15:00 PM	0	0	0	0	0	0	1	5	0	0	0	0	0	0	6	0.37%
8:30:00 PM	0	0	0	0	1	1	2	0	5	6	1	0	0	0	16	0.99%
8:45:00 PM	0	0	0	0	0	0	1	1	6	1	1	0	0	0	10	0.62%
9:00:00 PM	0	0	0	0	0	0	2	2	3	0	0	0	0	0	7	0.43%
9:15:00 PM	0	0	0	0	0	0	1	3	3	1	1	0	0	0	9	0.56%
9:30:00 PM	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3	0.19%
9:45:00 PM	0	0	0	0	0	1	0	4	2	3	1	0	0	0	11	0.68%
10:00:00 PM	0	0	0	0	0	0	0	3	2	2	0	0	0	0	7	0.43%
10:15:00 PM	0	0	0	0	1	1	1	1	2	1	0	0	0	0	7	0.43%
10:30:00 PM	0	0	0	0	1	0	2	2	2	0	0	0	0	0	7	0.43%
10:45:00 PM	0	0	0	0	0	0	2	6	2	0	0	0	0	0	10	0.62%
11:00:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.12%
11:15:00 PM	0	0	0	0	1	0	0	2	2	0	0	0	0	0	5	0.31%
11:30:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.06%
11:45:00 PM	0	0	0	0	0	1	1	1	2	1	0	1	0	0	7	0.43%
PM TOTAL	0	0	3	12	8	22	66	190	275	207	108	29	8	0	928	57.39%
PERCENTAGE	0.0%	0.0%	0.3%	1.3%	0.9%	2.4%	7.1%	20.5%	29.6%	22.3%	11.6%	3.1%	0.9%	0.0%		
CUMULATIVE	0	0	3	15	23	45	111	301	576	783	891	920	928	928		
PERCENTAGE	0.0%	0.0%	0.3%	1.6%	2.5%	4.8%	12.0%	32.4%	62.1%	84.4%	96.0%	99.1%	100.0%	100.0%		

15th Percentile	40	Mean Speed Average	48
50th Percentile	49	10 MPH Pace Speed	50-59
85th Percentile	57	Number in Pace	251
95th Percentile	61	Percent in Pace	27%

DAY TOTAL	0	0	9	19	11	30	119	306	440	363	231	71	14	4	1,617	
PERCENTAGE	0.0%	0.0%	0.6%	1.2%	0.7%	1.9%	7.4%	18.9%	27.2%	22.4%	14.3%	4.4%	0.9%	0.2%	1,617	100.00%
	0.0%	0.0%	0.6%	1.7%	2.4%	4.3%	11.6%	30.6%	57.8%	80.2%	94.5%	98.9%	99.8%	100.0%		
85th Percentile	57															

APPENDIX D

**CALIFORNIA HIGHWAY DESIGN MANUAL
SIGHT DISTANCE**

CHAPTER 200 GEOMETRIC DESIGN AND STRUCTURE STANDARDS

Topic 201 - Sight Distance

Index 201.1 - General

Sight distance is the continuous length of highway ahead, visible to the highway user. Four types of sight distance are considered herein: passing, stopping, decision, and corner. Passing sight distance is used where use of an opposing lane can provide passing opportunities (see Index 201.2). Stopping sight distance is the minimum sight distance for a given design speed to be provided on multilane highways and on 2-lane roads when passing sight distance is not economically obtainable. Stopping sight distance also is to be provided for all users, including motorists and bicyclists, at all elements of interchanges and intersections at grade, including private road connections (see Topic 504, Index 405.1, & Figure 405.7). Decision sight distance is used at major decision points (see Indexes 201.7 and 504.2). Corner sight distance is used at intersections (see Index 405.1, Figure 405.7, and Figure 504.3I).

Table 201.1 shows the minimum standards for stopping sight distance related to design speed for motorists. Stopping sight distances given in the table are suitable for Class II and Class III bikeways. The stopping sight distances are also applicable to roundabout design on the approach roadway, within the circulatory roadway, and on the exits prior to the pedestrian crossings. Also shown in Table 201.1 are the values for use in providing passing sight distance.

See Chapter 1000 for Class I bikeway sight distance guidance.

Chapter 3 of "A Policy on Geometric Design of Highways and Streets," AASHTO, contains a thorough discussion of the derivation of stopping sight distance.

201.2 Passing Sight Distance

Passing sight distance is the minimum sight distance required for the driver of one vehicle to pass another vehicle safely and comfortably. Passing must be

accomplished assuming an oncoming vehicle comes into view and maintains the design speed, without reduction, after the overtaking maneuver is started.

**Table 201.1
Sight Distance Standards**

Design Speed ⁽¹⁾ (mph)	Stopping ⁽²⁾ (ft)	Passing (ft)
10	50	---
15	100	---
20	125	800
25	150	950
30	200	1,100
35	250	1,300
40	300	1,500
45	360	1,650
50	430	1,800
55	500	1,950
60	580	2,100
65	660	2,300
70	750	2,500
75	840	2,600
80	930	2,700

(1) See Topic 101 for selection of design speed.

(2) For sustained downgrades, refer to advisory standard in Index 201.3

The sight distance available for passing at any place is the longest distance at which a driver whose eyes are 3 ½ feet above the pavement surface can see the top of an object 4 ¼ feet high on the road. See Table 201.1 for the calculated values that are associated with various design speeds.

In general, 2-lane highways should be designed to provide for passing where possible, especially those routes with high volumes of trucks or recreational vehicles. Passing should be done on tangent horizontal alignments with constant grades or a slight sag vertical curve. Not only are drivers reluctant to pass on a long crest vertical curve, but it is impracticable to design crest vertical curves to provide for passing sight distance because of high cost where crest cuts are involved. Passing sight

distance for crest vertical curves is 7 to 17 times longer than the stopping sight distance.

Ordinarily, passing sight distance is provided at locations where combinations of alignment and profile do not require the use of crest vertical curves.

Passing sight distance is considered only on 2-lane roads. At critical locations, a stretch of 3- or 4-lane passing section with stopping sight distance is sometimes more economical than two lanes with passing sight distance.

Passing on sag vertical curves can be accomplished both day and night because headlights can be seen through the entire curve.

See Part 3 of the California Manual on Uniform Traffic Control Devices (California MUTCD) for criteria relating to the placement of barrier striping for no-passing zones. Note, that the passing sight distances shown in the California MUTCD are based on traffic operational criteria. Traffic operational criteria are different from the design characteristics used to develop the values provided in Table 201.1 and Chapter 3 of AASHTO, A Policy on Geometric Design of Highways and Streets. The aforementioned table and AASHTO reference are also used to design the vertical profile and horizontal alignment of the highway. Consult the Headquarters (HQ) Traffic Liaison when using the California MUTCD criteria for traffic operating-control needs.

Other means for providing passing opportunities, such as climbing lanes or turnouts, are discussed in Index 204.5. Chapter 3 of AASHTO, A Policy on Geometric Design of Highways and Streets, contains a thorough discussion of the derivation of passing sight distance.

201.3 Stopping Sight Distance

The minimum stopping sight distance is the distance required by the user, traveling at a given speed, to bring the vehicle or bicycle to a stop after an object ½-foot high on the road becomes visible. Stopping sight distance for motorists is measured from the driver's eyes, which are assumed to be 3 ½ feet above the pavement surface, to an object ½-foot high on the road. See Index 1003.1(10) for Class I bikeway stopping sight distance guidance.

The stopping sight distances in Table 201.1 should be increased by 20 percent on sustained downgrades steeper than 3 percent and longer than one mile.

201.4 Stopping Sight Distance at Grade Crests

Figure 201.4 shows graphically the relationships between length of highway crest vertical curve, design speed, and algebraic difference in grades. Any one factor can be determined when the other two are known.

201.5 Stopping Sight Distance at Grade Sags

From the curves in Figure 201.5, the minimum length of vertical curve which provides headlight sight distance in grade sags for a given design speed can be obtained.

If headlight sight distance is not obtainable at grade sags, lighting may be considered. The District approval authority or Project Delivery Coordinator, depending upon the current District Design Delegation Agreement, and the HQ Traffic Liaison shall be contacted to review proposed grade sag lighting to determine if such use is appropriate.

201.6 Stopping Sight Distance on Horizontal Curves

Where an object off the pavement such as a bridge pier, building, cut slope, or natural growth restricts sight distance, the minimum radius of curvature is determined by the stopping sight distance.

Available stopping sight distance on horizontal curves is obtained from Figure 201.6. It is assumed that the driver's eye is 3 ½ feet above the center of the inside lane (inside with respect to curve) and the object is ½-foot high. The line of sight is assumed to intercept the view obstruction at the midpoint of the sight line and 2 feet above the center of the inside lane when the road profile is flat (i.e. no vertical curve). Crest vertical curves can cause additional reductions in sight distance. The clear distance (*m*) is measured from the center of the inside lane to the obstruction.

The design objective is to determine the required clear distance from centerline of inside lane to a retaining wall, bridge pier, abutment, cut slope, or other obstruction for a given design speed. Using

radius of curvature and minimum sight distance for that design speed, Figure 201.6 gives the clear distance (m) from centerline of inside lane to the obstruction.

See Index 1003.1(12) for bikeway stopping sight distance on horizontal curve guidance.

When the radius of curvature and the clear distance to a fixed obstruction are known, Figure 201.6 also gives the sight distance for these conditions.

See Index 101.1 for technical reductions in design speed caused by partial or momentary horizontal sight distance restrictions. See Index 203.2 for additional comments on glare screens.

Cuts may be widened where vegetation restricting horizontal sight distance is expected to grow on finished slopes. Widening is an economic trade-off that must be evaluated along with other options. See Index 902.2 for sight distance requirements on landscape projects.

201.7 Decision Sight Distance

At certain locations, sight distance greater than stopping sight distance is desirable to allow drivers time for decisions without making last minute erratic maneuvers (see Chapter III of AASHTO, A Policy on Geometric Design of Highways and Streets, for a thorough discussion of the derivation of decision sight distance.)

On freeways and expressways the decision sight distance values in Table 201.7 should be used at lane drops and at off-ramp noses to interchanges, branch connections, roadside rests, vista points, and inspection stations. When determining decision sight distance on horizontal and vertical curves, Figures 201.4, 201.5, and 201.6 can be used. Figure 201.7 is an expanded version of Figure 201.4 and gives the relationship among length of crest vertical curve, design speed, and algebraic difference in grades for much longer vertical curves than Figure 201.4.

Decision sight distance is measured using the 3 ½-foot eye height and ½-foot object height. See Index 504.2 for sight distance at secondary exits on a collector-distributor road.

Table 201.7
Decision Sight Distance

Design Speed (mph)	Decision Sight Distance (ft)
30	450
35	525
40	600
45	675
50	750
55	865
60	990
65	1,050
70	1,105
75	1,180
80	1,260

Topic 202 - Superelevation

202.1 Basic Criteria

When a vehicle moves in a circular path, it undergoes a centripetal acceleration that acts toward the center of curvature. This force is countered by the perceived centrifugal force experienced by the motorist.

On a superelevated highway, this force is resisted by the vehicle weight component parallel to the superelevated surface and by the side friction developed between the tires and pavement. It is impractical to balance centrifugal force by superelevation alone, because for any given curve radius a certain superelevation rate is exactly correct for only one driving speed. At all other speeds there will be a side thrust either outward or inward, relative to the curve center, which must be offset by side friction.

If the vehicle is not skidding, these forces are in equilibrium as represented by the following simplified curve equation, which is used to design a curve for a comfortable operation at a particular speed:

- (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 3 and 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 504.3I. 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 inmitigable 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)--At unsignalized public road intersections (see Index 405.7) corner sight distance values given in Table 405.1A should be provided.

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

APPENDIX E

ACCIDENT DATA

ACCIDENT _YEAR	COLLISION _DATE	COLLISIO N_TIME	Day of Wee	PRIMARY_RD	SECONDARY_RD	POSTMIL E	SIDE_OF _HWY	DISTANC E	DIRECTIO N	INTERSECTIO N	NUMBE R_KILLE	NUMBER _INJURE	TOW_ AWAY	Collision Type	Primary Collision Factor	Object it
2017	20170102	1745	Monday	SR-38	GLASS ROAD	-		5280	E	N	-	-	Y	Hit Object	Improper Turning	Other Object
2017	20170217	748	Friday	SR-38	JENKS LAKE RD E	-		5808	E	N	-	-	Y	Hit Object	Improper Turning	Fixed Object
2017	20170226	740	Sunday	SR-38	JENKS LAKE RD E	-		5280	E	N	-	-	Y	Hit Object	Improper Turning	Fixed Object
2017	20170303	115	Friday	SR-38	JENKS LAKE ROAD EAST	-		2112	E	N	-	-	Y	Hit Object	Unsafe Speed	Fixed Object
2017	20170302	815	Thursday	SR-38	JENKS LAKE RD E	-		5808	E	N	-	-	Y	Hit Object	Unsafe Speed	Fixed Object
2017	20170302	1000	Thursday	SR-38	JENKS LAKE RD E	-		5808	E	N	-	-	N	Hit Object	Unsafe Speed	Fixed Object
2017	20170422	1130	Saturday	GLASS ROAD	SR-38	-		5280	N	N	-	1	Y	Overturned	Unsafe Speed	Non-collision
2017	20170512	610	Friday	SR-38	JENKS LAKE EAST	-		300	W	N	-	-	Y	Hit Object	Improper Turning	Fixed Object
2017	20170708	850	Saturday	SR-38	JENKS LAKE RD. EAST	-		3168	E	N	-	-	Y	Hit Object	Improper Turning	Fixed Object
2017	20170706	1810	Thursday	SR-38	JENKS LAKE ROAD (EAST)	-		271	E	N	-	1	Y	Hit Object	Unsafe Speed	Fixed Object
2017	20170716	715	Sunday	SR-38	BARTON FLATS RD	-		422	W	N	-	1	N	Other	Vehicle Right-of-Way	Bicycle
2017	20170820	1145	Sunday	GLASS RD.	SR-38	-		5808	W	N	-	1	N	Overturned	Unsafe Speed	Non-collision
2017	20170823	1330	Wednesday	SR-38	JENKS LAKE RD. EAST	-		1056	E	N	-	1	Y	Sideswipe	Wrong Side of Road	Vehicle
2017	20171120	1413	Monday	SR-38	JENKS LAKE RD EAST	-		7392	W	N	-	-	N	Other	Other than Driver or Pedestria	Animal
2017	20171013	1227	Friday	STATE ROUTE 38	JENKS LAKE ROAD EAST	-		1056	E	N	1	-	Y	Overturned	Unsafe Speed	Non-collision
2016	20160325	615	Friday	SR-38	JENKS LAKE ROAD (EAST)	-		510	E	N	-	1	Y	Hit Object	Other than Driver or Pedestria	Animal
2016	20160425	1325	Monday	STATE HIGHWAY 38	JENKS LAKE RD E	-		5491	E	N	-	1	Y	Overturned	Unsafe Speed	Non-collision
2016	20160620	1045	Monday	GLASS ROAD	SR-38	-		32	N	N	-	1	N	Overturned	Unsafe Speed	Non-collision
2016	20160728	1100	Thursday	STATE ROUTE 38	JENKS LAKE RD E	-		-	-	N	-	1	N	Overturned	Improper Turning	Non-collision
2016	20160817	1440	Wednesday	SR-38 W/B	GLASS RD	-		528	W	N	-	4	Y	Hit Object	Improper Turning	Fixed Object
2016	20160901	1254	Thursday	SR-38	JENKS LAKE ROAD (EAST)	-		5280	E	N	-	-	Y	Hit Object	Improper Turning	Fixed Object
2016	20160903	1210	Saturday	STATE ROUTE 38	JENKS LAKE RD E	-		3168	E	N	-	1	Y	Overturned	Unsafe Speed	Non-collision
2016	20160914	1855	Wednesday	SR-38	JENKS LAKE RD EAST	-		234	E	N	-	1	Y	Hit Object	Unsafe Speed	Fixed Object
2016	20161119	1400	Saturday	SR-38	JENKS LAKE RD E	-		5280	E	N	-	1	Y	Overturned	Unsafe Speed	Non-collision
2016	20161126	2045	Saturday	SR-38	JENKS LAKE ROAD EAST	-		5280	E	N	-	-	Y	Rear-end	Other than Driver or Pedestria	Vehicle
2016	20161229	1215	Thursday	STATE HIGHWAY 38	JENKS LAKE RD E	-		343	E	N	-	-	N	Head-on	Unsafe Speed	Vehicle
2015	20150112	935	Monday	RT 38	JENKS LAKE RD	30.71		6758	E	N	-	2	Y	Hit Object	Unsafe Speed	Fixed Object
2015	20150512	700	Tuesday	RT 38	GLASS RD	30.94		23232	E	N	-	1	Y	Hit Object	Improper Turning	Fixed Object
2015	20150323	930	Monday	RT 38	JENKS LAKE RD	29.5		180	E	N	-	1	Y	Hit Object	Under Influence	Fixed Object
2015	20150524	225	Sunday	RT 38	JENKS LAKE RD	29.64		1056	E	N	-	1	Y	Hit Object	Improper Turning	Fixed Object
2015	20150806	1409	Thursday	GLASS RD	RT 38	-		682	N	N	-	2	Y	Hit Object	Improper Turning	Fixed Object
2015	20151115	1517	Sunday	SR-38	JENKS LAKE ROAD (EAST)	-		6336	W	N	-	2	Y	Hit Object	Unsafe Speed	Fixed Object
2015	20151123	925	Monday	SR-38	JENKS LAKE RD E	-		-	-	N	-	-	Y	Hit Object	Unsafe Speed	Fixed Object
2015	20151122	1344	Sunday	SR-38	JENKS LAKE ROAD (EAST)	-		5280	E	N	-	1	Y	Hit Object	Unsafe Speed	Fixed Object
2015	20151115	1430	Sunday	SR-38	JENKS LAKE RD E	-		2640	E	N	-	5	Y	Hit Object	Unsafe Speed	Fixed Object
2015	20151208	1200	Tuesday	STATE ROUTE 38	JENKS LAKE ROAD E	-		7392	E	N	-	-	Y	Hit Object	Improper Turning	Fixed Object
2014	20140310	1035	Monday	RT 38	JENKS LAKE RD	29.47		19	E	N	-	1	Y	Sideswipe	Wrong Side of Road	Vehicle
2014	20140404	915	Friday	RT 38	GLASS RD	30.72		22176	E	N	-	-	Y	Hit Object	Other than Driver or Pedestria	Animal
2014	20141015	138	Wednesday	RT 38	JENKS LAKE RD EAST	-		25344	E	N	-	-	Y	Sideswipe	Wrong Side of Road	Vehicle
2014	20141019	1740	Sunday	GLASS RD	RT 38	-		10560	W	N	-	2	Y	Hit Object	Unknown	Fixed Object
2014	20141115	1545	Saturday	RT 38	JENKS LAKE RD	-		105	E	N	-	1	N	Overturned	Unsafe Speed	Non-collision
2014	20141220	1220	Saturday	RT 38	JENKS LAKE RD E	-		5280	E	N	-	1	Y	Head-on	Unsafe Speed	Vehicle
2013	20130403	1429	Wednesday	RT 38	JENKS LAKE RD EAST	29.49		155	E	N	-	1	N	Overturned	Improper Turning	Non-collision
2013	20130406	1710	Saturday	RT 38	JENKS LAKE RD	29.54		1056	E	N	-	2	Y	Sideswipe	Wrong Side of Road	Vehicle
2013	20130727	1530	Saturday	RT 38	JENKS LAKE RD EAST	30.55		5280	E	N	-	1	Y	Overturned	Unsafe Speed	Non-collision
2013	20130818	1315	Sunday	RT 38	JENKS LAKE RD E	30.72		6336	E	N	-	1	Y	Rear-end	Unsafe Speed	Vehicle
2013	20130504	1456	Saturday	RT 38	JENKS LAKE RD	30.02		2746	W	N	-	-	N	Hit Object	Unsafe Speed	Fixed Object
2013	20131117	935	Sunday	RT 38	JENKS LAKE RD	29.462	-	-	-	Y	-	-	N	Sideswipe	Improper Passing	Vehicle
2013	20131215	1630	Sunday	RT 38	JENKS LAKE RD EAST	30.63		5280	E	N	-	-	Y	Hit Object	Other than Driver or Pedestria	Other Object



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EXHIBIT F

Caltrans Correspondence

DEPARTMENT OF TRANSPORTATION

DISTRICT 8

PLANNING (MS 725)

464 WEST 4th STREET, 6th FLOOR

SAN BERNARDINO, CA 92401-1400

PHONE (909) 388-7017

FAX (909) 383-5936

TTY 711

www.dot.ca.gov/dist8

FISCAL ADMIN

2017 DEC 29 PM 3: 37

*Making Conservation
a California Way of Life.*

December 21, 2017

File: 08-SBd-38-PM 26.2

Jim Morrissey, Planner
County of San Bernardino, Land Use Services Department
385 N. Arrowhead Avenue
San Bernardino, CA 92415

Subject: High Trails Outdoor Science School – Notice of Intent to Adopt an Initial Study

Dear Mr. Morrissey:

Thank you for providing the California Department of Transportation (Caltrans) the opportunity to review and comment on the Notice of Intent to Adopt an Initial Study for the High Trails Outdoor Science School (Project), located east of the intersection of Patterson Road and Radford Camp Road, north of State Route 38 in the unincorporated community of Angelus Oaks, San Bernardino County. The project proposes for the establishment of a camp/outdoor science school, with separate buildings for dining and sleeping on the southeast portion of the 40 acre parcel.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. As the responsible agency under the California Environmental Quality Act, it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the County of San Bernardino, due to the project's potential impact to the State facilities, it is also subject to the policies and regulations that govern the SHS. We offer the following comments:

- 1) **Submit two hard copies and one electronic file of all Traffic Impact Analysis (TIA) documents for review.** All State facilities within 5-mile radius of the Project should be analyzed in the TIA. The data used in the TIA should not be more than 2 years old, and shall be based on the Southern California Association of Governments 2012 or 2016 Regional Transportation Plan Model. Use the Highway Capacity Manual 6 methodology for all traffic analyses. (See *Caltrans Guide for the Preparation of Traffic Impact Studies* at http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf)

Mr. Morrissey
December 21, 2017
Page 2

These recommendations are preliminary and summarize our review of materials provided for our evaluation. If this project is later modified in any way, please forward copies of revised plans as necessary so that we may evaluate all proposed changes for potential impacts to the SHS. If you have any questions regarding this letter, please contact Ricky Rivers (909) 806-3298 or myself at (909) 383-4557.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Roberts", with a stylized flourish at the end.

MARK ROBERTS
Office Chief, AICP
Intergovernmental Review, Community and Regional Planning

DEPARTMENT OF TRANSPORTATION

DISTRICT 8

PLANNING (MS 725)

464 WEST 4th STREET, 6th FLOOR

SAN BERNARDINO, CA 92401-1400

PHONE (909) 388-7017

FAX (909) 383-5936

TTY 711

www.dot.ca.gov/dist8

FISCAL ADMIN

2018 APR -5 AM 11:21

*Making Conservation
a California Way of Life.*

March 29, 2018

File: 08-SBd-38-PM 26.2

Jim Morrissey, Planner
County of San Bernardino, Land Use Services Department
385 N. Arrowhead Avenue
San Bernardino, CA 92415

Subject: High Trails Outdoor Science School – Traffic Impact Analysis

Dear Mr. Morrissey:

Thank you for providing the California Department of Transportation (Caltrans) the opportunity to review and comment on the Traffic Impact Analysis for the High Trails Outdoor Science School (Project), located east of the intersection of Patterson Road and Radford Camp Road, north of State Route 38 in the unincorporated community of Angelus Oaks, San Bernardino County. The project proposes for the establishment of a camp/outdoor science school, with separate buildings for dining and sleeping on the southeast portion of the 40 acre parcel.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. As the responsible agency under the California Environmental Quality Act, it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the County of San Bernardino, due to the project's potential impact to the State facilities, it is also subject to the policies and regulations that govern the SHS.

We have reviewed the TIA and at this time, we have no further comments.

If this project is later modified in any way, please forward copies of revised plans as necessary so that we may evaluate all proposed changes for potential impacts to the SHS. If you have any questions regarding this letter, please contact Ricky Rivers (909) 806-3298 or myself at (909) 383-4557.

Mr. Morrissey
March 29, 2018
Page 2

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Roberts". The signature is fluid and cursive, with the first name "Mark" being more prominent than the last name "Roberts".

MARK ROBERTS
Office Chief, AICP
Intergovernmental Review, Community and Regional Planning

From: [Morrissey, Jim](#)
To: ["Roberts, Mark B@DOT"](#)
Subject: RE: High Trails Outdoor Science School SBd 38 PM 26.2 -Tree Trimming/Removal work
Date: Tuesday, April 10, 2018 11:38:00 AM
Attachments: [image001.png](#)

Great. Thanks.

Please take a moment to complete our 1 Minute Satisfaction survey

https://www.surveymonkey.com/r/LUS_Email

Jim Morrissey

Planner
Land Use Services Department
Phone: 909-387- 4234
Fax: 909-387-3223
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0187



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From: Roberts, Mark B@DOT [mailto:mark.roberts@dot.ca.gov]
Sent: Tuesday, April 10, 2018 11:37 AM
To: Morrissey, Jim <Jim.Morrissey@lus.sbcounty.gov>
Subject: High Trails Outdoor Science School SBd 38 PM 26.2 -Tree Trimming/Removal work

Hello

Here's the language we use for Encroachment Permits in our letters. We evaluate the need for tree trimming and removal on a case by case basis.

Encroachment Permits

Any proposed alterations to existing improvements within State right-of-way may only be performed upon issuance of a valid encroachment permit and must conform to current Caltrans design standards and construction practices. Review and approval of street, grading and drainage construction plans and related studies will be

necessary prior to Caltrans permit issuance.

More information regarding permit application and submittal requirements may be obtained by contacting:

Office of Encroachment Permits
California Department of Transportation
464 West 4th Street, 6th Floor, MS 619
San Bernardino, CA 92401-1400
(909) 383-4526

Or you may visit our web page at <http://www.dot.ca.gov/trafficops/ep/index.html>

Caltrans
District 8 (San Bernardino and Riverside Counties)
Mark Roberts
Office of Intergovernmental Review, Community and Regional Planning
Senior Transportation Planner, AICP
464 West 4th Street, 6th Floor, MS 725
San Bernardino, CA 92401-1400
(909) 383-4557

EXHIBIT G

California Department of Fish and Wildlife Correspondence



State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
(909) 484-0167
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director



January 19, 2018
Sent via email

Mr. Jim Morrissey
Planner
Land Use Services Department
County of San Bernardino
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182
Jim.Morrissey@lus.sbcounty.gov

Subject: Initial Study and Mitigated Negative Declaration
High Trails Outdoor Science School CUP P201600633 Project
State Clearinghouse No. 2017121041

Dear Mr. Morrissey:

The Department of Fish and Wildlife (Department) appreciates the opportunity to comment on the Initial Study and proposed Mitigated Negative Declaration (IS/MND) for the High Trails Outdoor Science School CUP P201600633 Project (project; State Clearinghouse No. 2017121041). Thank you for agreeing to our extension of time request to submit comments by December 19, 2018.

The Department is responding to the IS/MND as a Trustee Agency for fish and wildlife resources (California Fish and Game Code sections 711.7 and 1802, and the California Environmental Quality Act [CEQA] Guidelines Section 15386), and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines Section 15381), such as the issuance of a Lake or Streambed Alteration Agreement (California Fish and Game Code sections 1600 et seq.) and/or a California Endangered Species Act (CESA) Permit for Incidental Take of Endangered, Threatened, and/or Candidate species (California Fish and Game Code sections 2080 and 2080.1).

The project proposes the construction and operation of a camp/outdoor science school on the southeastern portion of an undeveloped 40-acre parcel. The construction is planned in two phases. Phase 1 includes a dining hall (6,611 sq. ft.), three 6-bed cabins (each 1,227 sq. ft.), three 8-bed cabins (each 1,173 sq. ft.), six 32-bed cabins (each 1,253 sq. ft.), a caretaker's cabin (1,173 sq. ft.) and all access roads and parking areas. Phase 2 includes one 6-bed cabin (1,227 sq. ft.), one 8-bed cabin (1,173 sq. ft.), three 32-bed cabins (each 1,253 sq. ft.), and one caretaker's cabin (1,173 sq. ft.). The project site is located at the intersection

of Radford Camp Road and Patterson Road near the community of Seven Oaks in San Bernardino County; within assessor parcel number 0305-241-14.

COMMENTS AND RECOMMENDATIONS

The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species (i.e., biological resources); and administers the Natural Community Conservation Planning Program (NCCP Program). The Department offers the comments and recommendations presented below to assist the County of San Bernardino (County; the CEQA lead agency) in adequately identifying and/or mitigating the project's significant, or potentially significant, impacts on biological resources.

Following review of the IS/MND the Department has concerns related to potential project-related impacts to southern rubber boa (SRB), special-status plants, San Bernardino flying squirrel, nesting birds, Fish and Game Code 1602 resources, and the adequacy and enforceability of mitigation measures proposed by the County.

The Department's comments and recommendations on the IS/MND include:

Southern Rubber Boa

The Habitat Assessment for Mountain Yellow-legged Frog and Southern Rubber Boa (FirstCarbon Solutions, May 30, 2017) states suitable habitat occurs onsite and marginal habitat occurs within the project footprint for SRB. Mitigation measure (MM) BIO-4 of the IS states,

Due to the potential of this species to occur on site, it is recommended that a specialized monitor familiar with this species conduct a pre-construction clearance survey in locations within the Project impact area that has suitable habitat (i.e., boulders, logs, etc.). This survey should be conducted within 7 days of the start of construction. If SRB is encountered, it may be relocated by a permitted biologist that is recognized by the U.S. Fish and Wildlife Service for handling and translocating this species. If deemed necessary, exclusionary fencing is to be placed during construction activities to discourage animals from returning to the impact area.

Because the IS fails to include a detailed and enforceable mitigation plan to offset potential impacts to SRB, the Department is unable to determine whether the impacts would be mitigated, and cannot, without further information from the County concur that impacts to SRB would in fact be mitigated to less than significant levels through the implementation of MM BIO-4. Given that the Habitat

Assessment identifies areas of suitable habitat for SRB within the project impact area, the Department recommends that the County condition a new MM that details specific and enforceable compensatory mitigation strategies that will be implemented for impacts to SRB. Further, SRB is state listed as threatened pursuant to CESA (Fish & G. Code, § 2050 *et seq.*), therefore the Department will need to be consulted prior to any handling/translocation of this species. Given the potential for the species to occur onsite, the Department recommends that the project proponent apply for a CESA Incidental Take Permit (ITP) to reduce the potential for project delays should SRB be discovered onsite.

Areas subject to Section 1602 of the Fish and Game Code

The Department requires notification for work undertaken in or near any river, stream, or lake that flows at least episodically, including ephemeral streams, desert washes, and watercourses with a subsurface flow. Fish and Game Code section 1602 states, "An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, unless all of the following occur...." Upon receipt of a complete notification, the Department determines if the activities may substantially adversely affect existing fish and wildlife resources.

The inference that the Department and the Department's Lake and Streambed Alteration program have adopted the definition of a stream defined in CCR, Title 14, Section 1.72 is incorrect; e.g., Page 6 of the Biological California Environmental Quality Act Cumulative Analysis for High Trails Outdoor Science School, San Bernardino County, California, states that CDFW defines "stream" as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." The Department recommends that the County cite the Fish and Game Code section 1600 *et seq.* when describing the Department's regulatory authority, which is inclusive of any river, stream, and lake.

The IS and Biological Resources CEQA Cumulative Analysis (FirstCarbon Solutions, August 29, 2017) states Converse Creek may be considered a non-jurisdictional swale because the surveyor was unable to detect a 'consistent bed and bank' or an ordinary high mark. The Department does not agree with the conclusion that Converse Creek is a non-jurisdictional swale. Due to the proximity of the proposed project to the Santa Ana River and Converse Creek, the Department strongly recommends the County condition the project to comply with Section 1602 of the Fish and Game Code. To ensure compliance, the Department recommends that prior to adoption of the MND the County include a new mitigation measure in the MND requiring that the project applicant submit a

Notification of Lake or Streambed Alteration to the Department's Lake and Streambed Alteration Program at the Ontario office. Specifically, the Department requests that the County condition the inclusion of the following new mitigation measure in the MND:

Mitigation Measure BIO-7: Prior to issuance of any grading permit Project Applicant shall provide to the County of San Bernardino either of the following:

Written correspondence from the California Department of Fish and Wildlife stating that notification under Section 1602 of the California Fish and Game Code is not required for the project; or a copy of a Department-executed Lake or Streambed Alteration Agreement, authorizing impacts to California Fish and Game Code, section 1602 resources associated with the project.

San Bernardino flying squirrel (*Glaucomys oregonensis californicus*)

The San Bernardino flying squirrel has been identified as belonging to the newly recognized species *Glaucomys oregonensis* and is genetically differentiated from the northern flying squirrel (*G. sabrinus*) and southern flying squirrel (*G. volans*; Arbogast et al. 2017). More importantly, it was found that San Bernardino flying squirrels have unique genetic variation not found in any other North American flying squirrel population. The Habitat Assessment for San Bernardino flying squirrel (FirstCarbon Solutions, May 14, 2017) was completed prior to the publication of the Arbogast et al. 2017 study and uses what is known about flying squirrel habitat use in the Pacific Northwest to inform its assessment of potential habitat for the San Bernardino flying squirrel on the project site. The Habitat Assessment states 'low and moderate foraging habitat' exists on the project site with the closest confirmed observations occurring within 2 miles. The Habitat Assessment also states the onsite visit was not intended to confirm occupancy of the site, that very little information has been reported on the habitat needs of San Bernardino flying squirrel, and camera- or live-trapping would be necessary to determine whether flying squirrels are onsite. Despite the Habitat Assessment's acknowledgement that additional surveys would be necessary to confirm occupancy of flying squirrels onsite, the IS concludes that, "there is no indication that the species was currently on site, nor is it expected to be" and further asserts that the proposed project is unlikely to adversely affect San Bernardino flying squirrels. No information is provided to support this conclusion beyond that flying squirrels were not observed during the habitat assessment, which was not intended to determine occupancy. Given the information presented in the Habitat Assessment the Department contends that a fair argument can be made that San Bernardino flying squirrel may occur onsite, and therefore project-related impacts to San Bernardino flying squirrel could occur. The County's conclusion that impacts to flying squirrel will be less than significant is not supported and may be

erroneous. The Department recommends the County fully analyze potential impacts to San Bernardino flying squirrel and include a new mitigation measure(s) to ensure impacts to San Bernardino flying squirrel are avoided and minimized.

Special-status Plant Species

The Department is concerned with the special status plant species information presented in the IS, and recommends that this information be thoroughly reviewed by the County prior to adoption of the MND. For example, multiple occurrences of special-status plant species are documented within 0.5 mile of the site (e.g. *Astragalus lentiginosus* var. *sierra* upstream in Converse Creek) in the Department's California Natural Diversity database (CNDDDB, accessed January 2018). Furthermore, page 10 of the Biological Resources CEQA Cumulative Analysis (FirstCarbon Solutions, August 29, 2017) states that "several species, including federally listed, have the potential of occur within the project site." Despite this conclusion the MND does not include a mitigation measure that details specific and enforceable avoidance, minimization, and mitigation measures that will be implemented to ensure that impacts to special-status plants do not occur.

The Department appreciates that four (4) focused survey were completed in spring/summer, however we are concerned by the removal of an "unidentified milk-vetch" from the species list that was detected during the fall reconnaissance survey, but not detected during the spring/summer surveys. This omission is a concern to the Department and we recommend that additional special status plant surveys be completed (during appropriate seasons) prior to adoption of the MND. Without additional survey information the Department is concerned that project-related impacts to special-status plant species may occur.

Nesting Birds

It is the project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 *et seq.*). In addition, sections 3503, 3503.5, and 3513 of the Fish and Game Code afford the following protective measures: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto; section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto; and section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any

part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Mitigation measure BIO-3 provides mitigation measures for impacts to nesting birds. Please note that the Department recommends that nesting bird surveys occur over the entirety of the project site, and not be limited to those areas with shrubs and trees, as not all bird species nest in vegetation; some species nest directly on the ground. In addition, recent data, either collected or reviewed by the Department for western Riverside and southwestern San Bernardino counties, has documented nesting in early February through mid-October for non-raptor species and recommends nesting bird surveys occur regardless of time of year to avoid impacts to nesting birds. The Department recommends that the County revise MM BIO-3 and condition the measure to include the following (edits are in **bold** and ~~striketrough~~):

~~If construction occurs during the nesting bird season (March 1 – August 15),~~
~~p~~**Pre-construction nesting bird surveys shall will likely be required conducted by a qualified biologist within three (3) days prior to any ground disturbing activities within the project footprint and appropriate buffer. If identified active nests are detected, an appropriate buffer shall be established by the qualified biologist. The buffer area shall be avoided until the nest becomes inactive for reasons unrelated to project activities. The qualified biologist will monitor active nests to ensure established buffers are effective.**~~may be adversely affected by construction activities, the qualified biologist will propose a no work, or limited buffer if appropriate.~~

Additional Comments and Recommendations

Defensible Space, Conservation Lands, and Sensitive Habitats

The IS/MND does not provide sufficient detail regarding the required defensible space for fire abatement for the proposed development. The Department is concerned that the burden of providing appropriate defensible space around structures and/or roads may be placed on adjacent public/conservation lands and sensitive habitats surrounding the project site. The County, through their planning processes, should be ensuring that this requirement is provided and accounted for *within* the private lands or development areas themselves, and not transferred to adjacent open space, conservations lands, or sensitive habitats. If adequate defensible space cannot be provided within the footprint of a development, planning applications should not be approved.

Department Conclusions and Further Coordination

The Department appreciates the opportunity to comment on the IS/MND for the High Trails Outdoor Science School Project (SCH No. 2017121041). We

recommend that the County address the Department's comments and concerns prior to adoption of the MND.

If you should have any questions pertaining to the comments provided in this letter, and to schedule a meeting, please contact Edith Martinez at (909) 944-0187 or at Edith.Martinez@wildlife.ca.gov.

Sincerely,


Fa Leslie MacNair
Regional Manager

Literature Cited

Arbogast, B. S., Schumacher, K. I., Kerhoulas, N. J., Bidlack, A. L., Cook, J. A., & Kenagy, G. J. (2017). Genetic data reveal a cryptic species of New World flying squirrel: *Glaucomys oregonensis*. *Journal of Mammalogy*.