University of La Verne Facilities and Technology Master Plan Update

Environmental Impact Report
SCH#2016071053

prepared by

City of La Verne
Community Development Department
3660 "D" Street
La Verne, California 91750

prepared with the assistance of

Rincon Consultants
180 North Ashwood Avenue
Ventura, California 93001

December 2016

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

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Appendix A Notice of Preparation and Comments

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Appendix D Noise Modeling Results

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Appendix F University of La Verne Facilities and Technology Master Plan

Acronyms and Abbreviations

°C	Degrees celcius
°F	Degrees Fahrenheit
ACM	Asbestos-containing material
ACSP	Arrow Corridor Specific Plan
ADT	Average daily trips
ALUC	Airport Land Use Committee
ALUCP	Airport Land Use Compatibility Plan
APCD	Air Pollution Control District
BMP	Best Management Practices
Cal OSHA	State of California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCCC	California Climate Change Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbons
CH_4	methane
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	carbon dioxide

CO_2	Carbon Dioxide
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dBA	A-weighted decibles
DOF	United States Department of Finance
DPW	Los Angeles County Department of Public Works
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FC	Federally Candidate
FD	Federally Delisted
FE	Federally Endangered
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FTA	Federal Transit Administration
FTE	Full Time Equivalent
GHG	Greenhouse gas
HCFC	hydrochlorofluorocarbons
HFC	hydrofluorocarbons ses
HHMD	Health Hazardous Materials Division
LA RWQCB	Los Angeles Regional Water Control Board
LACFD	County of Los Angeles Fire Department
LACM	Los Angeles County Natural History Museum
LAFCC	Los Angeles County Local Agency Formation Commission
LAFCD	Los Angeles County Flood Control District
LBP	Lead-based paint
LSAT	Land-Surface Air Temperature
LSP	Lordsburg Specific Plan
LST	Local significance thresholds
LUST	Leaking Underground Storage Tank

MCL	Maximum Contaminant Levels
MLD	Most likely descendant
Mph	Miles per hour
MSDS	Material Safety Data Sheet
MT	megatons
MW	Megawatt, Moment magnitude scale
MWD	Metropolitan Wastewater District
N_2O	nitrous oxides
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO_2	Nitrous Oxide
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
OHP	Office of Historical Preservation (California)
OTLVSP	Old Town La Verne Specific Plan
PFC	perfluorocarbons
PM_{10}	Particulate Matter (10 microns)
$PM_{2.5}$	Particulate Matter (2.5 microns)
ppm	Parts per million
PQS	Professional Qualifications Standards
PV	photovoltaic
QSD	Qualified SWPP Developer
RCP	Regional Comprehensive Plan
ROG	Reactive organic gas
ROW	Right of Way
RTP/SCS	Regional Transportation Plan/Sustainable Community Strategy
RWQCB	Regional Water Quality Control Board
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District

SDWA	Safe Drinking Water Act
SF_6	sulfur hexafluoride
SLF	Sacred Lands File
SMMNRA	Santa Monica Mountain National Recreation Area
SMMZ	Santa Monica Mountains Zone
SO_2	Sulfur Dioxide
sq. ft.	square feet
SQMP	Storm water Quality Management Program
Stu-Han	Studebaker-Hanawalt Residence Hall
SUSMP	Standard Urban Storm water Mitigation Plan
SVP	Society for Vertebrate Paleontology
SWPPP	Storm water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TIA	Traffic Intersection Analysis
TMDL	Total Maximum Daily Loads
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Service
USGS	United States Geology Survey
V/C	Volume to Capacity ratio
VHFHSZ	Very High Fire Hazard Severity Zones
VOC	Volatile Organic Compound
WDR	Waste Discharge Requirements
WMO	World Meterological Organization
WQS	Water Quality Standards

Executive Summary

The section summarizes the characteristics of the University of La Verne (University) Facilities and Technology Master Plan (Master Plan). It provides a discussion of the project alternatives assessed in this environmental impact report (EIR), and the environmental impacts, mitigation measures, and cumulative impacts associated with the implementation of the proposed Master Plan combined with other development in adjacent areas.

Project Synopsis

Project Applicant

University of La Verne
1950 Third Street
La Verne, California 91750

Project Location

The project area (Plan Area) encompasses the entire University of La Verne complex, which is approximately 97 acres comprising three campuses: La Verne Campus, Park Campus, and Campus West. La Verne Campus, which is the primary University campus, consists of approximately 38 acres and is roughly bounded by Arrow Highway to the south, B Street to the west, Bonita Avenue on the North, and E Street on the east. Park Campus consists of approximately four acres and is bounded by the Metrolink Rail Line on the south, Park Avenue on the west, Arrow Highway on the north, and A Street on the east. Campus West consists of approximately 54.8 acres and is roughly bounded by the Metrolink rail line on the north, Wheeler Avenue on the east, Puddingstone Drive on the south, and a Puddingstone Reservoir storm water channel on the west. The regional and local locations of the Plan Area are shown in Figure 2 and Figure 3.

Project Description

The Master Plan establishes the vision of the University for the planning and development of their lands over a period of approximately 20 years. The Master Plan is consistent with the University's 2020 Strategic Vision, and would result in a physical development plan that extends to the year 2035 in three, six-year phases. It also forms a policy plan that would guide the University in its facility and technology strategic investments. The Master Plan would give priority attention to academic and co-curricular learning spaces, as well as technology improvements that enhance and support the educational process.

La Verne Campus

La Verne Campus currently has 40 educational buildings. Ten of these building would be demolished and replaced with newly-configured buildings over the course of the three phases of proposed in the Master Plan. Upon completion of the improvements, there would be a net increase of approximately 403,577 square feet of La Verne Campus building area, which would bring the total campus square footage to approximately 1,030,000 square feet. The student residence hall capacity would be increased from 874 beds to a maximum of 1,542 beds. Parking capacity would increase by 373 spaces from the existing 2,319 spaces to 2,692.

Park Campus

No changes are proposed to the use or capacity of existing facilities or parking on Park Campus. The campus may be improved through new pavement, striping, and landscaping.

Campus West

In Phase I, Campus West would be expanded by 20 acres, onto the adjacent vacant land and would add up to 170 multi-family residential units on the southeast portion of the site. Phase II would involve the construction of the new 5,000 square foot University House and associated 60-space parking lot at the terminus of a new east-west access route. The structure would serve as the residence of current president of the University, and would include modest conference facilities. Phase III would include the construction of a new 67,000 square foot administrative facility northwest of the University House. This building would allow administrative functions to be housed in a central facility. Phase III also envisions additional parking areas and a maintenance yard. The final stages of Campus West buildout would include an access road to the new facilities that would also provide emergency vehicle access from Carrion Road north to Arrow Highway and a new connection south to Puddingstone Drive.

Project Objectives

The overarching objective of the proposed Master Plan is to serve as a guide for a 20-year program of campus development in support of the University's 2020 Strategic Vision. Under this overarching framework, the Master Plan intends to achieve the following objectives**:**

- Create a plan that enables and supports the Initiatives of the 2020 Strategic Vision
- Create a plan that maximizes the academic and educational experience and provides for appropriate, flexible classrooms and laboratories technologically capable of supporting increasing technology in the learning experience
- Utilize a planning process that includes and engages campus and community stakeholders, is guided by data, and helps fulfill the promise of the University of La Verne
- Design a plan that demonstrates a commitment to sustainability and environmental conservation and engages and tests new ideas

- Create a plan that defines physical and technological connections between and among the University's regional campuses, the online community and the main campus
- Identify a plan for the utilization and development of Campus West, including a convenient and attractive linkage that integrates Campus West as a part of the core campus
- Create a coherent campus that emphasizes an intimate sense of place and a safe pedestrian scale that promotes personal interaction, fosters community identity, and provides a welcoming experience for a diverse student body.
- Provide vehicle parking and circulation that meets the needs of the campus community and is compatible with the residential and business community adjacent to the main campus
- Create a vital campus that encourages co-curricular activities such as recreation, arts, clubs, and athletics and offers quiet locations for conversation and reflection
- Develop a campus plan that creates a positive interface between the University and the greater La Verne community, in support of a vibrant downtown and the extension of the Metro light rail Gold Line
- Create a plan that strategically integrates the role of technology into the University's teaching and learning experience and in the administrative operational processes

Required Discretionary Approvals

Implementation of the Master Plan and any associated development would require the following discretionary approvals from the City of La Verne:

- Approval of the Master Plan
- Amendment of the Arrow Corridor Specific Plan and the Old Town La Verne Specific Plan
- Design review and approval of all new construction, building relocations, and other site changes
- Permit issuance for removal of protected trees on streets or on campus by the Director of Community Services
- Issuance of a Special Use and Development Permit for any temporary construction trailers or other temporary construction-related uses, as applicable
- Issuance of ministerial and ancillary permits required to carry out individual projects under the Master Plan, such as landscape permits, demolition permits, buildings permits, and occupancy permit
- Approval of lot mergers and/or lot line adjustments, as necessary

Alternatives

This EIR includes a discussion of three alternatives to the proposed Master Plan. They are as follows:

- Alternative 1: No Project
- Alternative 2: Increased Specific Plan Consistency
- Alternative 3: Preservation, Reuse, or Relocation of Historic Structures

The California Environmental Quality Act (CEQA) requires that an environmentally superior alternative be identified among those analyzed. It further states that if the No Project Alternative is identified as environmentally superior, the next most environmentally superior alternative must also be identified. For this project, Alternative 1, No Project, is considered environmentally superior because it would have the fewest impacts compared of the three possible alternatives. The next most environmentally superior alternative is Alternative 3.

Summary of Impacts and Mitigation Measures

Table 1 lists the environmental impacts of the proposed Master Plan, the proposed mitigation measures, and residual impacts or significance after mitigation. Impacts are categorized by class: Class I impacts are defined as significant, unavoidable adverse impacts that require a statement of overriding consideration, pursuant to Section 15093 of the *CEQA Guidelines* if the proposed Master Plan is approved; Class II impacts are significant, adverse impacts that can be feasibly mitigated to less than significant levels and that require findings to be made under Section 15091 of the *CEQA Guidelines*; Class III impacts are adverse, but less than those allowed by adopted significance thresholds; and Class IV impacts are those where there is no impact or the effect would be beneficial.

Table 1 Summary of Environmental Impacts and Mitigation Measures

Impact	Mitigation Measures	Significance After Mitigation
Aesthetics		
Impact AES-1: View Corridors. The scale of development proposed in the Master Plan is designed to preserve and enhance the existing view corridors. Thus, implementation of the proposed Master Plan would not significantly block or impede views of scenic vistas. Impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact AES-2: Scenic Resources. The Plan Area contains scenic resources including buildings, open space, and trees. If implementation of the proposed Master Plan adversely affected these resources, it could have a potentially significant impact. The proposed	Compliance with specified guidelines and regulations, including the La Verne Municipal Code tree preservation standards, would mitigate any impacts to scenic resources to a less than significant level; therefore, no further mitigation is necessary.	Less than significant with mitigation incorporated

Impact	Mitigation Measures	Significance After Mitigation
Master Plan is designed to avoid impacts to such resources, Implementation of design guidelines in the Master Plan, applicable Specific Plans, the City of La Verne Design Review Process, and mitigation measures contained in this EIR would further protect these potentially scenic resources. Impacts would be Class III, less than significant.		
Impact AES-3: Visual Character and Quality of Plan Area. Development under the proposed master plan would include physical changes to the Plan Area that could degrade its visual character and quality. Future development carried out under the Master Plan would be required to adhere to the guiding principles laid out in the Master Plan, the City's General Plan design principles, and any development or joint use agreements between the University of La Verne and the City. It would also be required to undergo development review as required by the City's Municipal Code. Adherence to these policies and requirements, and implementation of Mitigation Measure AES-1 would reduce impacts related to visual character and quality to a Class II, less than significant with mitigation incorporated.	**Mitigation Measure AES-1: Precise Plan Review of Visual Impacts of Construction.** Prior to issuance of grading permits for any construction project carried out under the Master Plan, the City's Development Review Committee, during its review of the project (as already required under Chapter 18.16, Development Review Committee, of the La Verne Municipal Code), shall review the temporary construction-related impacts of the project on the visual character and quality of the Plan Area and its surroundings, including its potential cumulative impacts with other concurrent construction projects. If the Committee determines that measures are required during construction to avoid significant impacts in this regard, it shall impose conditions of approval on the project in order to protect the visual character and quality of the area. Examples of such measures include the following: Location of Materials. Materials and equipment should be minimally visible to the public; the preferred location for materials is onsite or in a construction staging area, with a minimum amount of materials in the public right-of-way of other publicly-accessible areas. Temporary Fencing. Install opaque temporary fencing at construction sites and staging areas during construction activities, and ensure that the placement and design of such fencing is sufficient to obstruct views of ground-level construction activities and equipment from the perspective of surrounding streets and publicly-accessible open spaces. Such fencing shall be subject to review by the City's Development Review Committee for visual character and quality.	Less than significant with mitigation incorporated

Impact	Mitigation Measures	Significance After Mitigation
	Restoration of Disturbed Areas. Restore and revegetate any areas disturbed by construction activities outside of fenced construction areas as quickly as possible.	
Impact AES-4: Light and Glare. Implementation of the proposed Master Plan would lead to development in the Plan Area with the potential to create new sources of light and glare. Any future development within the Plan Area would be required to comply with principles and standards contained in the City's General Plan and Municipal Code and the proposed Master Plan specifically designed to reduce lighting impacts. Adherence to these policies and standards would reduce light and glare impacts, but mitigation measures are required to reduce these impacts to Class II, less than significant with mitigation incorporated.	**Mitigation Measure AES-2: Lighting Plan**. The site plan development of any project carried out under the Master Plan that abuts offsite residential neighborhoods and that would include outdoor lighting or produce light spillover, will produce a lighting plan that minimizes light spillover and conforms to all applicable regulations, including all applicable standards of the La Verne Municipal Code. **Mitigation Measure AES-3: Glare.** Prior to issuance of building permits, any structure proposed under the Master Plan shall be reviewed during the City of La Verne's standard review process to ensure that proposed building materials do not impact roadways, affect pilots in nearby airspace, or otherwise create a nuisance for surrounding areas. That is to say, lighting will not create glare in a manner that could endanger motorists on adjacent roadways or otherwise impact the community. Use of reflective materials such as polished metal or glass shall be prohibited unless the applicant can provide substantial evidence prepared by a qualified professional to the City's Community Development Director that use of such materials will not cause glare impacts on surrounding properties or roadways.	Less than significant with mitigation incorporated
Air Quality		
Impact AQ-1: Construction Emissions. Individual construction projects in the proposed Master Plan would be staggered over the life of the Plan. Average construction emissions over the life span of the Master Plan would not exceed South Coast Air Quality Management District (SCAQMD) thresholds for any criteria pollutants. However, construction of multiple project phases concurrently could exceed SCAQMD thresholds for construction emissions.	**Mitigation Measure AQ-1: Construction Scheduling.** Construction scheduling for any construction projects carried out under the proposed Master Plan shall be established such that buildout Phase I occurs over the period of 2016-2021, Phase II buildout occurs over the period of 2022-2028, and Phase III buildout occurs over the period of 2029 to 2035 to ensure that the SCAQMD daily thresholds for emissions of reactive organic gases (ROG) are not exceeded. Prior to issuance of grading permits, the University of La Verne shall submit a construction schedule to the City of La Verne Community Development Director to verify that scheduling of construction activities conforms to this mitigation measure. If more than one phase of development is to be undertaken concurrently, and the City of La Verne determines that an air quality study completed by University of La Verne demonstrates that construction emissions for those activities will	Less than significant with mitigation incorporated

Impact	Mitigation Measures	Significance After Mitigation
Therefore, impacts would be Class II, less than significant with mitigation incorporated.	not exceed applicable thresholds, then those activities may be carried out concurrently. **Mitigation Measure AQ-2: Maximum Vehicle Speed.** All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). **Mitigation Measure AQ-3: High Wind Construction Suspension.** All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. **Mitigation Measure AQ-4: Idling Times.** Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. **Mitigation Measure AQ-5: Equipment Maintenance.** All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. **Mitigation Measure AQ-6: NO_x and PM Reduction.** All construction equipment, diesel trucks, and generators must be equipped with Best Available Control Technology for emission reductions of mono-nitrogen oxides (NO_x) and particulate matter (PM).	
Impact AQ-2: Operational Emissions. Operation of the buildings and facilities called for under the Master Plan would generate air pollutant emissions, but not in excess of SCAQMD operational significance thresholds for any criteria pollutant. Therefore, operational air quality impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact AQ-3: Traffic Emissions. Vehicle trips generated by development called for under the proposed Master Plan and relative to other cumulative traffic in the	See Mitigation Measure T-1	Less than significant with mitigation incorporated

Impact	Mitigation Measures	Significance After Mitigation
area, would incrementally increase carbon monoxide (CO) levels in and near the Plan Area, and would potentially contribute to the creation of a CO hotspot at the intersections of A Street/Arrow Highway, D Street/Bonita Avenue, and E Street-Fairplex Drive/Arrow Highway. However, with implementation of mitigation measures required to improve the level of service (LOS) at the intersection of A Street/Arrow Highway and E Street-Fairplex Drive/Arrow Highway, CO levels would remain within state and federal standards. Further, average daily trips at the intersection of D Street/Bonita Avenue would not generate CO levels that would exceed state or federal standards. This impact would be Class II, less than significant with mitigation incorporated.		
Impact AQ-4: Population Growth. Implementation of the proposed Master Plan could generate population growth as it would potentially increase the campus population by 782 full-time equivalent students and 132 staff. However, such growth would be within the population projections upon which the SCAQMD Air Quality Management Plan (AQMP) is based. Therefore, impacts associated with AQMP	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
consistency would be Class III, less than significant.		
Cultural Resources		
Impact CR-1: Archaeological Resources. Implementation of the proposed Master Plan could cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measures are required to reduce impacts to a Class II, less than significant with mitigation incorporated.	**Mitigation Measure CR-1: Archaeological Resources Assessment.** To determine the archaeological sensitivity of a proposed project in the Plan Area, archaeological resources assessments shall be performed under the supervision of an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) in either prehistoric or historic archaeology. Assessments shall include a California Historical Research Information System (CHRIS) records search at the South Central Coastal Information Center (SCCIC) and of the Sacred Lands File (SLF) maintained by the Native American Heritage Commission (NAHC). The records searches will determine if the proposed project area was previously surveyed for archaeological resources, identify and characterize the results of previous cultural resource surveys, and disclose any cultural resources that have been recorded and/or evaluated. A Phase I pedestrian survey shall be undertaken in proposed project areas that are undeveloped or in areas where previously identified cultural resources exist to locate any surface cultural materials. By performing a records search, consultation with the NAHC, and a Phase I survey, a qualified archaeologist will be able to classify the project area as having high, medium, or low sensitivity for archaeological resources. **Mitigation Measure CR-2: Phase II Testing and Evaluation.** If potentially significant archaeological resources are identified through an archaeological resources assessment, and impacts to these resources cannot be avoided, a Phase II Testing and Evaluation investigation shall be performed by an archaeologist meeting the PQS prior to any construction-related ground-disturbing activities to determine significance. If resources are determined significant or unique through Phase II testing, and site avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. Mitigation measures might include a Phase III data recovery program that would be implemented by a qualified archaeologist and shall be performed in accordance with the Office of Historic Preservation's (OHP) Archaeological Resource Management Reports: Recommended	Less than significant with mitigation incorporated

Impact	Mitigation Measures	Significance After Mitigation
	Contents and Format (1990) and Guidelines for Archaeological Research Designs (1991). **Mitigation Measure CR-3: Monitoring.** If the archaeological assessment does not identify potentially significant archaeological resources in the Plan Area but indicates the area to be highly sensitive for archaeological resources, a qualified archaeologist shall monitor all ground-disturbing construction and pre-construction activities in areas with previously undisturbed soil. Native American monitoring may also be required. The archaeologist shall inform all construction personnel prior to construction activities of the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial onsite safety meeting, and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the resources are evaluated for significance by an archaeologist who meets the PQS. If the discovery proves to be significant, it shall be curated with a recognized scientific or educational repository. **Mitigation Measure CR-4: Training and On-Call Monitoring.** If the archaeological assessment does not identify potentially significant archaeological resources in the Plan Area, but indicates the area to be of medium sensitivity for archaeological resources, an archaeologist who meets the PQS shall be retained on an on-call basis. The archaeologist shall inform all construction personnel prior to construction activities about the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial onsite safety meeting, and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the on-call archaeologist is contacted. If the discovery proves to be significant, it shall be curated with a recognized scientific or educational repository. **Mitigation Measure CR-5: Human Remains Discovery.** If human remains are exposed during ground-disturbing activities, State of California	

Impact	Mitigation Measures	Significance After Mitigation
	Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In accordance with this code, in the event of an unanticipated discovery of human remains, the county coroner would be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD would complete the inspection of the discovery within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	
Impact CR-2: Historic Resources. Implementation of the proposed Master Plan could cause a substantial adverse change in the significance of historic resources both directly and indirectly through demolition, alteration of buildings and streetscapes and new construction that result in changes in land use and setting. Impacts resulting from these changes would be Class I, significant and unavoidable.	**Mitigation Measure CR-6: Construction Activities in Historic Districts.** Prior to any construction activities that may affect buildings over 50 years of age or a previously identified historic district, a historical resources assessment shall be performed by an architectural historian or historian who meets the National Parks Service PQS in architectural history or history. The assessment shall include a records search at the SCCIC to determine if any resources that may be affected by the project have been previously recorded, evaluated, and/or designated on the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR). Following the records search, the qualified architectural historian or historian shall conduct a reconnaissance-level and/or intensive-level survey in accordance with the California Office of Historic Preservation guidelines to identify any previously unrecorded potential historical resources within the project site or vicinity that may be potentially affected by the proposed project. California of Department of Parks and Recreation 523 forms shall be prepared for all surveyed properties. Pursuant to the definition of a historical resource under CEQA, potential historical resources shall be evaluated under a developed historic context. **Mitigation Measure CR-7: Relocation, Rehabilitation, or Alteration of Historic Resources.** To ensure that projects requiring the relocation, rehabilitation, or alteration of a historical resource not impair its significance, the Secretary of the Interior's Standards shall be used to the maximum extent possible. The application of the Standards shall be overseen by a qualified architectural	Significant and unavoidable

Impact	Mitigation Measures	Significance After Mitigation
	historian or historic architect meeting the PQS. Prior to any construction activities that may affect the historical resource, a report identifying and specifying the treatment of character-defining features, the extent of adaptive reuse, and construction activities shall be provided to the City for review and approval. **Mitigation Measure CR-8: Demolition or Significant Alterations of Historic Resources.** If a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level and impacts would be significant and unavoidable. However, recordation of the resource prior to construction activities will reduce adverse impacts to the resource to the greatest extent possible. Recordation shall take the form of Historic American Buildings Survey, Historic American Engineering Record, or Historic American Landscape Survey documentation, and shall be performed by an architectural historian or historian who meets the PQS. Documentation shall include an architectural and historical narrative; medium- or large-format black and white photographs, negatives, and prints; and supplementary information such as building plans and elevations, and/or historic photographs. Documentation shall be reproduced on archival paper and copies of this documentation, photographs, and negatives, along with architectural and historical narrative shall be submitted to the City of La Verne, the Los Angeles County Museum of Natural History, the Los Angeles County Library, the University of La Verne Library, the La Verne Historical Society, and any other appropriate local, state, or federal institutions. The documentation reports shall be completed for each phase of development and shall be approved by the City prior to issuance of demolition permits. **Mitigation Measure CR-9: Interpretive Plan.** A qualified architectural historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History shall be selected by the City of La Verne to prepare an onsite interpretive plan, which shall consist of a public display, plaque, or other suitable interpretive approach, as approved by the City of La Verne. It shall focus on the significant historic themes associated with the historic properties to be demolished and shall include any collected research pertaining to the historic property, and images and	

Impact	Mitigation Measures	Significance After Mitigation
	details from the HABS/HAER/HALS documentation. The interpretive display shall be installed in an appropriate public location in the project area within one year of the date of completion of the proposed project for which the respective historic resource was demolished. If no appropriate public location is available, an appropriate offsite public location for the display shall be identified by the applicant and presented to the City for approval. The interpretive display shall remain in public view for a minimum of five years, and if removed, appropriately archived.	
Impact CR-3: Surface Excavation. Implementation of the proposed Master Plan could involve surface excavation. Although unlikely, these activities have the potential to unearth and/or impact paleontological resources. Impacts would be Class II, less than significant with mitigation incorporated.	**Mitigation Measure CR-10: Mitigation and Monitoring Program.** The Paleontological Mitigation and Monitoring Program shall be supervised by a qualified paleontologist. A qualified paleontologist (Principal Paleontologist) is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as a paleontological mitigation project supervisor for a least one year. Monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources. Prior to the start of construction, construction personnel shall be informed on the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. **Mitigation Measure CR-11: Resource Recovery and Management Plan.** Ground disturbing activity that does not exceed five feet in depth in areas of low paleontological sensitivity shall not require paleontological monitoring. Any excavations within undisturbed bedrock in areas of high paleontological sensitivity (i.e., Pleistocene-aged deposits), and excavations that exceed five feet in depth in those areas potentially underlain by Pleistocene-aged deposits (i.e., Holocene-aged alluvial sediments) that exceed five feet in depth shall be monitored on a full-time basis by a qualified paleontological monitor. If no fossils are observed during the first 50 percent of excavations in Holocene-aged sediments exceeding five feet in depth, or if the qualified paleontologists can determine that excavations below five feet are not disturbing Pleistocene-aged (or other potentially fossil-containing) sediments, then paleontological monitoring can be discontinued	Less than significant with mitigation incorporated

Impact	Mitigation Measures	Significance After Mitigation
	or reduced to spot-checking under the discretion of the Principal Paleontologist, subject to approval from Los Angeles County. If fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. Typically fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the University of California Museum of Paleontology or the Los Angeles County Museum of Natural History), along with all pertinent field notes, photos, data, and maps. Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist should prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.	
Geology and Soils		
Impact GEO-1: Exposure to Seismic Hazards. Implementation of the proposed Master Plan would lead to an increase in the amount of built facilities within the Plan Area that could expose people and structures to both localized and regional seismic hazards, including strong ground shaking and secondary seismic effects such as liquefaction and landslides. However, with modern construction techniques and adherence	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
to applicable California Building Code (CBC) provisions, impacts would be Class III, less than significant.		
Impact GEO-2: Expansive Soils. Implementation of the proposed Master Plan would include development on potentially expansive soils. Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils. Impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Greenhouse Gas Emissions		
Impact GHG-1: Total Emissions. Development under the proposed Specific Plan would generate additional greenhouse gas (GHG) emissions beyond existing conditions due to construction activity and long-term operations. Total estimated GHG emissions would exceed the efficiency threshold. Impacts related to GHG emissions would Class II, less than significant with mitigation incorporated.	**Mitigation Measure GHG-1: Reduction Plan.** Prior to grading permit issuance for each phase of development, projects in the Plan Area shall develop a GHG Reduction Plan to reduce emissions by 2,479 MT CO2e per year to ensure that project-related emissions are below the 3,000 MT CO2e per year threshold over the operational life of the project. The plan shall be implemented on site by the project applicant and may include, but is not be limited to, the following components: Energy Use - Onsite GHG reduction measures shall be implemented during each phase of development and shall be reflected on and incorporated into all applications for development within La Verne Campus, Park Campus, and Campus West. Onsite GHG reduction measures may include, but are not be limited to, the following components: ▪ Exceed adopted 2013 Title 24 energy requirements by a minimum of 10 percent through implementation of energy reduction measures (or meet current CBC if it provides more energy savings), including the following: ▫ Use locally made building materials for construction of the Project and associated infrastructure when such materials are available ▫ Use materials that are resource efficient, recyclable, with long life cycles	Less than significant with mitigation incorporated

Impact	Mitigation Measures	Significance After Mitigation
	▫ Install energy-reducing shading mechanisms for windows, porches, patios, walkways, etc. ▫ Install energy reducing day lighting systems (e.g., skylights, light shelves, transom windows) ▫ Use water efficient landscapes ▫ Use tankless water heaters or solar water heaters ▫ Use low-energy interior lighting ▫ Use low-energy street lights and parking lot lights (e.g., sodium) ▫ Use light colored water-based paint and roofing materials ▪ Onsite renewable energy production, including wind-generated energy or installation of solar photovoltaic (PV) panels or other types that generate a minimum of 30 percent of the project's total energy demand (based on the individual project being developed, not entire the Master Plan) ▪ Vehicle Trip Reduction (based on SCAQMD Transportation Demand Management measures), including the following: ▫ Provide preferential carpool/vanpool parking spaces ▫ Add a location for tour and shuttle buses to pick up passengers near the amenity center and assisted living facility (e.g., bus duck out for residents living on the project site), or other shuttle/mini bus service ▫ Provide bicycle storage/parking facilities for onsite employees ▫ Provide shower/locker facilities for onsite employees ▫ Provide child care centers for onsite employees ▫ Provide an onsite park-and-ride lot ▫ Employ a transportation/rideshare coordinator ▫ Implement a rideshare program for onsite residents and employees ▫ Provide incentives to employees to rideshare or take public transportation ▫ Implement compressed work schedules The Project applicant shall be responsible for ensuring that the GHG Reduction Plan quantifies emissions reductions achieved by all GHG reduction	

Impact	Mitigation Measures	Significance After Mitigation
	measures included in the GHG Reduction Plan. The GHG Reduction Plan shall include all necessary evidence to facilitate review and approval of the emissions reductions by the City of La Verne Community Development Department. **Mitigation Measure GHG-2: Carbon Offsets.** The GHG emissions reduction achieved through implementation of onsite GHG reduction measures would depend on the specific mix of measures available for each development application in the Plan Area. Because it is not yet possible to know with certainty which onsite GHG reduction measures would be feasibly incorporated into each future development project, or to quantify the reduction in GHG emissions that these measures would achieve, onsite GHG reduction measures may not be sufficient to reduce Project GHG emissions by the required 2,479 MT CO2e per year. If GHG emissions cannot be reduced below threshold levels through compliance with the Project GHG Reduction Plan described in Mitigation Measure GHG-1, the University of La Verne shall purchase a fair share of carbon offsets that meet approved offset protocols through the California Cap-and-Trade Program to reduce GHG emissions below threshold levels. Carbon offsets reduce GHG emissions globally through funding offsite projects that eliminate new GHG emissions and/or sequester existing GHGs in the atmosphere. The GHG Reduction Plan shall be approved by the City of La Verne prior to the issuance of initial grading permits. Applicable elements of the GHG Reduction Plan shall be reflected on development plans prior to permit approval. If GHG emissions cannot be reduced through compliance with such a plan, purchased carbon offsets shall be approved by Planning and Building staff prior to building permit approval.	
Impact GHG-2: GHG Reduction Measures. The Master Plan would be consistent with the Climate Action Team GHG reduction strategies, the 2008 Attorney General Greenhouse Gas Reduction Measures, and the University of La Verne Climate Action Plan. As a	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
result, the proposed Specific Plan would not conflict with an applicable plan, policy, or regulation adopted for reducing GHG emissions. Impacts would be Class III, less than significant.		
Hazards and Hazardous Materials		
Impact HAZ-1: Potential for Upset Conditions during Construction. Implementation of the Master Plan may create the potential for upset conditions involving the release of hazardous materials into the environment. However, compliance with existing regulations and on-campus programs would ensure potential impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact HAZ-2: Potential for Upset Conditions during Implementation. Implementation of the proposed Master Plan would not 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. Compliance with existing regulations would ensure potential impacts would be Class III, less than significant	None Required	Less than significant without mitigation
Impact HAZ-3: Hazardous Materials within 0.25 miles of an Education Facility. Implementation of the proposed Master Plan	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Compliance with existing regulations would ensure potential impacts would be Class III, less than significant.		
Impact HAZ-4: Airport Uses Compatibility. Implementation of the proposed Master Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Compliance with existing regulations would ensure potential impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact HAZ-5: Development Near Hazardous Materials Sites. Implementation of the proposed Master Plan would potentially locate development near hazardous materials sites. Therefore, future development as envisioned in the Master Plan could create a hazard to the public and the environment. Impacts would be Class II, less than significant with mitigation incorporated.	**Mitigation Measure HAZ-1: Phase I Environmental Site Assessment(ESA) and Agency Review.** Prior to development of Campus West, Park Campus or La Verne Campus, a Phase I environmental site assessment (ESA) shall be completed related to the portion of the campus being developed. The Phase I ESA shall be performed per the ASTM International (ASTM) 1527E Standard Practice for Environmental Site Assessments: Phase I ESA Process (ASTM 2013) guidelines and shall include a review of all environmental release case agency records, unless a more stringent standard applies at the time of the assessment. **Mitigation Measure HAZ-2: Lead-based Paint and Asbestos Containing Material Surveys.** A lead-based paint (LBP) and asbestos containing material (ACM) survey shall be completed for structures planned for renovation or demotion. Based on the results of the LBP and ACM surveys, abatement may be required prior to demolition or renovation. All recommendations of the survey shall be followed.	Less than significant with mitigation incorporated

Impact	Mitigation Measures	Significance After Mitigation
	Mitigation Measure HAZ-3: Soil, Groundwater, and Soil Vapor Remediation. Additional soil, groundwater, or soil vapor sampling shall be conducted if a release of hazardous materials is suspected on a site. Samples shall be collected under the supervision of a professional geologist or environmental professional to determine the presence or absence of contaminated soil, soil vapor, and/or groundwater. The goal of the sampling investigation would be to identify and possibly delineate potential onsite releases of hazardous materials prior to development. If sampling indicates the presence of contaminants exceeding applicable environmental screening levels, a Remediation Action Plan or Soil and Groundwater Management Plan shall be prepared prior to development. Cleanup may include excavation, disposal, bio-remediation, or any other treatment of conditions subject to regulatory action. The contaminated materials shall be remediated under the supervision of an environmental consultant licensed to oversee such remediation and under the direction of the lead oversight agency. The remediation program shall also be approved by a regulatory oversight agency, such as the Los Angeles County Department of Public Works (DPW), the Regional Water Quality Control Board (RWQCB), or Department of Toxic Substances Control (DTSC). Alternatively, engineering controls may be utilized in some situations to limit the public and environmental exposure to a hazard. This shall be determined on a case by case basis with oversight of an environmental regulatory agency. All recommended remediation shall be followed. **Mitigation Measure HAZ-4: Receipt of "No Further Action" Letter.** Prior to issuance of grading permits, in those locations where environmental regulatory agencies have identified the need for remediation of a known release, the applicant shall obtain a letter of "no further action" from the RWQCB and any other agency with regulatory authority over the cleanup and the letter(s) shall be submitted to the City. Additionally, the applicant shall contact the regulatory agencies prior to issuance of building permits to confirm no further action is required, as some residual contaminants may remain onsite and the release case may be reopened if there is a change in the proposed land use. Written confirmation of this consultation and determination of no further action shall be submitted to the City.	

Impact	Mitigation Measures	Significance After Mitigation
Impact HAZ-6: Consistency with Airport Land Use Compatibility Plan. The Proposed Master Plan is located within the Brackett Field Airport Influence Area. Therefore, if future development is inconsistent with the land use policies and development standards contained in the Airport Land Use Compatibility Plan, then full buildout of the Master Plan would not create significant safety hazards for people residing or working in the project area. Therefore, impacts would be Class III, less than significant.	None required	Less than significant without mitigation
Impact HAZ-7: Emergency Response and Evacuation Plan. Implementation of the proposed Master Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact HAZ-8: Exposure to Risk Involving Wildland Fires. Implementation of the proposed Master Plan would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, impacts would be Class III, less than significant.	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
Hydrology and Water Quality		
Impact HWQ-1: Construction and Operation-Create Runoff. Implementation of the Master Plan would involve construction activities and operation of new facilities that would have the potential to create polluted runoff and violate water quality standards. However, existing regulations would reduce potential adverse effects and impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact HWQ-2: Erosion from Runoff. New development carried out under the proposed Master Plan could lead to or increase erosion by altering existing drainage patterns or increasing the rate or amount of surface runoff that could potentially result in flooding on or offsite. However, erosion and surface runoff from construction of individual projects carried out under the Master Plan would be governed by existing regulations designed to reduce such adverse impacts. Impacts would therefore be Class III, less than significant.	None Required	Less than significant without mitigation
Impact HWQ-3: Dam Inundation. Development facilitated by the proposed master plan would place housing, structures, or people within the predicted dam inundation zone of the Live Oak Reservoir, the Live Oak	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
Dam, and the Weymouth Memorial Reservoir, but with implementation of Federal Emergency Management Agency (FEMA) requirements, impacts related to dam inundation would be Class III, less than significant.		
Land Use and Planning		
Impact LU-1: Compatibility with Existing Land Uses. With incorporation of mitigation measures included in the aesthetics, air quality, cultural resources, noise, and transportation sections of this EIR, the Master Plan would be generally compatible with existing adjacent institutional, commercial, and residential land uses. However, the demolition or significant alteration of historical structures, temporary construction noise impacts, and increased traffic congestion at the intersection of D Street and Bonita Avenue would result in significant and unavoidable impacts to the surrounding area. Therefore, land use impacts relating to the compatibility with existing land uses would be Class I, significant and unavoidable.	See Mitigation Measures in Sections 4.1, 4.2, 4.3, 4.9, and 4.13 of this EIR.	Less than significant with mitigation incorporated, with the exception of construction noise, the demolition of significant alteration of historical structures, and traffic impacts at the Bonita/"D" Street intersection which would be significant and unavoidable.
Impact LU-2: Consistency with General Plan. With implementation of existing regulations and incorporation of the mitigation measures identified throughout this	See Mitigation Measures in Sections 4.1, 4.2, 4.3, 4.9, and 4.13 of this EIR.	Less than significant with mitigation incorporated. with the exception of construction noise, the demolition of significant alteration

Impact	Mitigation Measures	Significance After Mitigation
EIR, the proposed Master Plan would mostly be consistent with the City's adopted General Plan. However, the demolition or significant alteration of historical structures, construction noise impacts, and increased traffic congestion at the intersection of D Street and Bonita Avenue would remain significant and unavoidable and therefore, be inconsistent with the area Specific Plans. Therefore, land use impacts relating to Specific Plan consistency would be Class I, significant and unavoidable.		of historical structures, and traffic impacts at the Bonita/"D" Street intersection which would be significant and unavoidable.
Impact LU-3: Consistency with the Old Town La Verne Specific Plan, Arrow Corridor Specific Plan, and the Brackett Field Airport Land Use Compatibility Plan. With implementation of existing regulations and incorporation of the mitigation measures identified throughout this EIR, as well as those below, the proposed Master Plan would be consistent with relevant the Old Town La Verne Specific Plan and Arrow Corridor Specific Plan, as well as the Brackett Field Airport Land Use Compatibility Plan (ALUCP). However, the demolition or significant alteration of historical structures, construction noise impacts, and increased traffic congestion at the intersection of D Street and Bonita Avenue would	**Mitigation Measure LU-1:** All development projects proposed through implementation of the Master Plan shall be reviewed through the City's development review process, and CEQA process where warranted, for consistency with applicable adopted Specific Plan. If any proposed development is shown to be inconsistent with the applicable adopted Specific Plan, the applicant shall be required to file for necessary permits and/or a Specific Plan Amendment. **Mitigation Measure LU-2:** Until such time that the Airport Land Use Committee finds that the City of La Verne General Plan, the Old Town La Verne Specific Plan, and the Arrow Corridor Specific Plan are consistent with the Brackett Field Airport Land Use Compatibility Plan, the following actions shall be referred to the Airport Land Use Committee for review: ▪ Adoption or approval of any new general or specific plan or any amendment thereto that affects lands within the Brackett Field Airport influence area. If it is determined by the Airport Land Use Committee (ALUC) Administrative Officer that such amendment or plan does not involve in any way the types of airport impact concerns listed in Section 1.3.1 of the ALUCP, then the Administrative Officer can make the consistency determination. Otherwise, the	Less than significant with mitigation incorporated, with the exception of construction noise, the demolition of significant alteration of historical structures, and traffic impacts at the Bonita/"D" Street intersection which would be significant and unavoidable.

Impact	Mitigation Measures	Significance After Mitigation
remain significant and unavoidable and therefore, be inconsistent with the area Specific Plans. Therefore, land use impacts relating to Specific Plan consistency would be Class I, significant and unavoidable.	amendment or plan must be referred to the ALUC for its determination. ▪ Adoption or approval of a zoning ordinance or building regulation, including any proposed change or variance to any such ordinance or regulations that affects land with the Brackett Field Airport influence area. ▪ Projects having the potential to create electrical or visual hazards to aircraft in flight, including electrical interference with radio communications or navigational signals; lighting that could be mistaken for airport lighting; glare in the eyes of pilots or aircraft using the airport; and impaired visibility near the airport. When structures are part of a proposed land use action, evidence that proposed structures will be designed to comply with the criteria in Section 2.2.2 (a) of the ALUCP shall be submitted to the involved local agency as part of the building permit process.	
Noise		
Impact N-1: Construction Noise. Development called for under the proposed Master Plan would generate intermittent noise during construction. Although construction in the Plan Area would be limited to daytime hours and regulated pursuant to provisions of the City's Municipal Code, maximum noise levels would exceed City standards. Mitigation Measure N-1 would reduce noise impacts, but noise impacts during construction to certain sensitive receptors would remain Class I, significant and unavoidable.	**Mitigation Measure N-1: Construction-Related Nosie Reduction Measures.** The following measures shall be followed during construction of all phases of the Master Plan: a. Mufflers. During all project site excavation and grading, all construction equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards. b. Mobile and Stationary Equipment. All stationary construction equipment shall be placed so that emitted noise is directed away from the nearest sensitive receptors. All mobile and stationary internal-combustion-powered equipment and machinery are also required to be equipped with suitable exhaust and air-intake silencers in proper working order. c. Equipment Staging Areas. Equipment staging shall be located in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receptors. d. Electrically-Powered Tools and Facilities. Electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities. e. Smart Back-up Alarms. Mobile construction equipment shall have smart back-up alarms that	Significant and unavoidable

Impact	Mitigation Measures	Significance After Mitigation
	automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms shall be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction. f. Additional Noise Attenuation Techniques. During the clearing, earth moving, grading, and foundation/conditioning phases of construction for Phases I-III near sensitive residential, institutional, and park receptors, temporary sound barriers shall be installed and maintained between the construction site and the sensitive receptors. Temporary sound barriers shall consist of sound blankets affixed to construction fencing along all sides of the construction site boundary facing potentially sensitive receptors. g. City Enforcement - Noise. The Building Official of the City of La Verne shall enforce noise-attenuating construction requirements. Excavation, grading, and other construction activities related to construction projects carried out under the proposed Master Plan shall comply with City restrictions on hours of construction activity. All construction vehicles, such as bulldozers and haul trucks, shall be prohibited from idling in excess of 15 minutes. The contractor shall inspect construction equipment to ensure that such equipment is in proper operating condition and fitted with standard factory silencing features. Construction equipment shall utilize all standard factory silencing features, such as equipment mufflers, enclosures, and barriers.	
Impact N-2: Vibration Levels During Construction. Development called for under the Master Plan would generate intermittent vibration levels during individual construction activities. However, vibration levels would not exceed standards during construction or operation of projects carried out under the proposed Master Plan. This impact	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
would be a Class III, less than significant.		
Impact N-3: Traffic In and Around the Plan Area. Development called for under the Master Plan would incrementally increase traffic along roadways in and around the Plan Area, thus exposing existing and future land uses to increased noise. However, increases in traffic would not expose sensitive receptors to noise levels exceeding applicable standards. Impacts related to operational traffic noise would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact N-4: Operational Noise Levels. Development called for under the Master Plan would increase onsite operational noise levels in and around the Plan Area, thus exposing existing and future land uses to increased noise. The operation of an increased number of University Facilities, including dormitories, student centers, and other stationary sources, could generate noise in excess of applicable local standards at residential receptors. Impacts would be Class II, less than significant with mitigation incorporated.	**Mitigation Measure N-2: Operation-Related Noise Reduction.** The following measure shall be implemented during operation of all phases of the Master Plan to mitigate operational noise impacts of new university facilities. Rooftop Mechanical Equipment Shielding. A noise-attenuating barrier shall be installed around any new rooftop mechanical equipment installed within the new or renovated buildings sufficient to reduce operational noise at the nearest offsite noise-sensitive receptor to less than 55 dBA.	Less than significant with mitigation incorporated
Impact N-5: Exposure of Sensitive Receptors to Airport Noise. Development called for under the Master Plan would expose a sensitive residential receptor to	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
noise from Brackett Field Airport, located approximately 200 feet south. However, noise from operational activity of the airport would not generate noise levels exceeding applicable standards. Impacts would be Class III, less than significant.		
Population and Housing		
Impact PH-1: Increases in Population as a Result of Development. Development associated with the Master Plan, including enrollment and employment growth associated with the Master Plan, may directly and indirectly increase the City's population over time. However, this population growth would be expected to fall within and be consistent with the La Verne General Plan Housing Element, Southern California Association of Governments (SCAG), and Department of Finance (DOF) population forecasts. Therefore, the proposed project would not induce population growth beyond that already planned. Impacts related to inducement of substantial population growth would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact PH-2: Displacement of People or Elimination of Existing Housing. Development associated with the Master Plan would not result in the displacement of a	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
substantial number of people or the elimination of existing housing, necessitating the construction of replacement housing elsewhere. The development associated with the proposed project would facilitate the development of new campus housing for the University. Impacts related to displacement of people or housing would be considered Class III, less than significant.		
Public Services		
Impact PS-1: Demands on Fire Protection Services. Implementation of the Master Plan would incrementally increase demands on fire protection services, but would not create the need for new or expanded fire protection facilities. Impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact PS-2: Demands on Police Protection Services. Implementation of the Master Plan would incrementally increase demands on police protection services, but would not create the need for new or expanded Police protection facilities. Impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact PS-3: Demand on Public Schools. Implementation of the Master Plan would incrementally increase demand on public schools, but due to the nature of	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
the development and the number of new residents it could bring to the area, impacts would be Class III, less than significant.		
Impact PS-4: Increased Demand for Public Library Facilities. Implementation of the Master Plan would incrementally increase demand for public library facilities due to an increase in student enrollment at the University of La Verne. However, demand for public library facilities would be offset by the provision of such facilities at the University, and City library facilities would remain at current ratios. This would be a Class III, less than significant impact.	None Required	Less than significant without mitigation
Recreation		
Impact REC-1: Demand on Park Facilities. Implementation of the Master Plan would incrementally increase the demand for park facilities due to an increase in student enrollment at the University. However, City parkland is expected to remain above the City's goal of 4.0 acres per 1,000 residents, substantial deterioration of existing recreational facilities would not occur and the proposed on-campus recreational facilities would not adversely affect the environment. This would be a Class III, less than significant impact.	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
Transportation and Circulation		
Impact T-1: Circulation System Performance. Full implementation of the Master Plan would increase traffic on the surrounding street network, contributing to increased delay at certain intersections that are projected to operate at unacceptable level of service. These impacts could be mitigated to a less than significant level for all intersections under all scenarios except the intersection of D Street and Bonita Avenue, where no feasible mitigation measure exists that would reduce the identified impact to a less than significant level. The Master Plan would therefore conflict with City of La Verne standards establishing measures of effectiveness for the performance of the circulation system, and this impact would be Class I, significant and unavoidable.	Mitigation Measure T-1: Circulation System Performance Improvement. The project applicant shall be responsible for the following improvements: a. Intersection No. 5: A Street/Arrow Highway. i) Prior to issuance of the first occupancy permit for Phase III development, the applicant shall restripe the southbound A Street approach from one shared left/through/right-turn lane to one shared left/through lane and one right-turn only lane. b. Intersection No. 11: D Street/Bonita Avenue. i) Prior to issuance of the first occupancy permit for Phase II development, the applicant shall restripe the northbound D Street approach to provide a northbound right-turn lane. ii) Prior to issuance of the first occupancy permit Phase II development, the applicant shall restripe the westbound Bonita Avenue approach to provide a westbound right-turn lane. iii) Prior to issuance of the first occupancy permit for Phase II development, the applicant shall install an eastbound right-turn only lane within the existing eastbound Bonita Avenue approach right-of-way. c. Intersection No. 17: E Street-Fairplex Drive/Arrow Highway. i) Prior to issuance of the first occupancy permit for Phase III development, the applicant shall restripe the southbound E Street approach to provide a southbound right-turn lane. The project applicant shall guarantee (e.g the posting of a bond or other sufficient form of surety) the improvements for the respective phase prior to issuance of a building permit for that phase (as described above). The improvement would need to be constructed prior to issuance of the first certificate of occupancy associated with the respective phase. Should any of the recommended mitigation measures not be reviewed and approved by the City, a substitute measure of equal or greater effectiveness would need to be determined. In the event that any of the recommended mitigation measures is not approved and a substitute measure is not feasible, the corresponding impact(s) would remain significant and unavoidable during the respective phase.	Significant and unavoidable

Impact	Mitigation Measures	Significance After Mitigation
Impact T-2: Congestion Management Plan Consistency. Full implementation of the Master Plan would increase traffic on the surrounding street network, including certain intersections included in the Los Angeles County Congestion Management Program (CMP). However, the proposed project would not add a sufficient number of trips to meet the threshold for a potentially significant impact on the CMP highway system. This impact would therefore be Class III, less than significant.	None Required	Less than significant without mitigation
Impact T-3: Air Traffic. Implementation of the Master Plan would not result in an increase in air traffic levels or a change in air traffic patterns. This impact would therefore be Class III, less than significant.	None Required	Less than significant without mitigation
Impact T-4: Traffic-Related Hazards and Emergency Access. With adherence to applicable City codes and regulations, development carried out under the Master Plan would not increase traffic-related hazards due to a design feature or incompatible uses or result in inadequate emergency access. These impacts would therefore be Class III, less than significant.	None Required	Less than significant without mitigation
Impact T-5: Alternative Transportation. The Master Plan contains	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
various elements to accommodate and encourage the use of alternative means of transportation, including pedestrian, bicycle and transit modes, and it would therefore not conflict with adopted policies, plans, or programs supporting alternative transportation. This impact would therefore be Class III, less than significant.		
Utilities and Service Systems		
Impact UTL-1: Increased Water Usage. Full implementation of the proposed Master Plan would create an incremental increase of water usage per year. Based on the 2015 Urban Water Management Plan, adequate water supply exists to meet projected demand through the year 2040. Therefore, impacts to water supply would be Class III, Less than significant.	None Required	Less than significant without mitigation
Impact UTL-2: Increased Demand on Wastewater and Sewer Facilities. Full implementation of the proposed Master Plan would incrementally increase the demand on wastewater and sewer facilities; however, the increase will not exceed the wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board. The implementation of the project will not require the construction of new wastewater treatment	None Required	Less than significant without mitigation

Impact	Mitigation Measures	Significance After Mitigation
facilities or expansion of existing facilities. The current wastewater treatment provides has adequate capacity to serve projected demand. Therefore, impacts to wastewater and sewer facilities would be Class III, less than significant.		
Impact UTL-3: Increased Solid Waste Generation. Full implementation of the proposed Master Plan would generate approximately 25.7 tons of solid waste per year that would need to be disposed of at a landfill. However, projected future solid waste generation would remain within the capacity of local landfills. Impacts would therefore be Class III, less than significant.	None Required	Less than significant without mitigation
Impact UTL-4: Increased Offsite Conveyance of Storm water. Full implementation of the proposed Master Plan would not result in increased offsite conveyance of storm water. Impacts would be Class III, less than significant.	None Required	Less than significant without mitigation
Impact UTL-5: Need for New Sources of Natural Gas or Electricity. Implementation of the proposed Master Plan would not require major new sources of natural gas or electricity such that new or expanded gas or electricity power plants would be required. Impacts would therefore be Class III, less than significant.	None Required	Less than significant without mitigation

1 Introduction

This document is a Program Environmental Impact Report (EIR) that evaluates the University of La Verne Facilities and Technology Master Plan Update (Master Plan), in the city of La Verne, California. The EIR was prepared in accordance with the California Environmental Quality Act (CEQA) *Guidelines for Implementation of the California Environmental Quality Act*, published by the Resources Agency of the State of California (Title 14, CCR 15000 et. seq.), and the City of La Verne's (City) procedures for implementing CEQA. This report was prepared by professional planning consultants in conjunction with City of La Verne staff.

This section describes (1) the general background of the proposed Master Plan's EIR process; (2) the purpose and legal authority of the EIR; (3) the scope and content of the EIR; (4) the type of EIR; (5) lead, responsible, and trustee agencies; and (6) the environmental review process required under the CEQA.

1.1 Environmental Impact Report Background

The City prepared a Notice of Preparation (NOP) for an environmental impact report and distributed the NOP for agency and public review for the required 30-day review period from July 18, 2016 to August 18, 2016. During that time, the City received seven comments from public agencies and other commenters. The NOP is provided in Appendix A along with the full text of the comments received.

A public scoping meeting was held on July 26, 2016, at the City Council Chambers in La Verne. The intent of the scoping meeting was to provide interested individuals, groups, public agencies and others a forum to provide input in an effort to assist in further refining the intended scope and focus of the EIR. Table 2 summarizes the comments received in response to the NOP and Table 3 summarizes the comments from the public scoping session.

Table 2 Notice of Preparation Comments and Environmental Impact Report Response

Commenter	Comment/Request	How and Where it was Addressed
California Department of Fish and Wildlife	Discuss the purpose and need for, and description of, the proposed project, including all staging areas and access routes to the construction and staging areas.	EIR Section 5, Effects Found Not to be Significant; It has been determined that impacts to biological resources would be less than significant, as the improvements envisioned in the University of La Verne Facilities and Technology Master Plan would take place within areas of the campus already developed or within areas previously designated for urban

Commenter	Comment/Request	How and Where it was Addressed
		development by the Arrow Corridor Specific Plan.
	Discuss feasible alternatives. The alternative should avoid or otherwise minimize direct and indirect impacts to sensitive biological resources and wildlife movement areas.	See comment above.
	Lake and Streambed Alteration Agreements (LSA). The document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the LSA.	See comment above.
	California Endangered Species Act (CESA). If the project, project construction, or any project-related activity during the life of the project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, the Department recommends that the project proponent seek appropriate take authorization under CESA prior to implementing the project.	See comment above.
	Provide a complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, sensitive, regionally and locally unique species, and sensitive habitats.	See comment above.
	Provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.	See comment above.
	Include measures to fully avoid and otherwise protect sensitive plant communities from project-related direct and indirect impacts.	See comment above.
	Include mitigation measures for adverse project-related impacts to sensitive plants, animals, and habitats.	See comment above.

Commenter	Comment/Request	How and Where it was Addressed
	In order to avoid impacts to nesting birds, require that clearing of vegetation and construction occur outside of the peak avian breeding season, which generally runs from February 1st through September 1st (as early as January 1st for some raptors).	See comment above.
California Department of Transportation	Caltrans does not expect project approval to result [in a] direct adverse impact to the existing State transportation facilities. However, [they] recommend consideration be given to a ride-share program and/or an exclusive shuttle bus for current and future students to commute to school if one is not already in place.	EIR Section 4.13, Transportation and Circulation
El Siglo XX Corporation	El Siglo XX Corporation is against the University of La Verne's Master Plan to close Third Street from B Street to C Street	EIR Section 4.13, Transportation and Circulation
	Closing Third Street from B Street to C Street would create a hardship for many residents.	EIR Section 4.13, Transportation and Circulation
	This proposal would increase traffic on Bonita and inconvenience many La Verne residents who travel through the city.	EIR Section 4.13, Transportation and Circulation
County of Los Angeles Airport Land Use Commission	Prior to [an] amendment of a general plan or specific plan…the local agency shall first refer the proposed action to the ALUC for a consistency determination with the adopted Bracket Field Airport Land Use Compatibility Plan.	EIR Section 4.8, Land Use and Planning
	The types of potential airport impacts [would be]:	
	1) Exposure to aircraft noise;	EIR Section 4.9, Noise
	2) Land use safety – the risks, both to people on the ground and the occupants of aircraft, associated with aircraft accidents near airports;	EIR Section 4.6, Hazards and Hazardous Materials; EIR Section 4.8 Land Use and Planning
	3) Protection of airport airspace from hazards to flight; and	EIR Section 4.6, Hazards and Hazardous Materials; EIR Section 4.8 Land Use and Planning

Commenter	Comment/Request	How and Where it was Addressed
	4) General concerns, especially annoyance, related to aircraft overflights.	EIR Section 4.6, Hazards and Hazardous Materials; EIR Section 4.8 Land Use and Planning
Native American Heritage Commission	AB 52 applies to any project for which a notice of preparation or a notice of negative declaration is filed on or after July 1, 2015. If [the] project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18. Both SB18 and AB 52 have tribal consultation requirements.	EIR Section 4.3, Cultural Resources
	To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:	EIR Section 4.3, Cultural Resources
	1) Contact the appropriate regional CHRIS Center for an archaeological records search;	EIR Section 4.3, Cultural Resources
	2) If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey;	EIR Section 4.3, Cultural Resources
	3) Contact the NAHC for a Sacred Lands File search and a Native American Tribal Consultation List; and	EIR Section 4.3, Cultural Resources
	4) Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.	EIR Section 4.3, Cultural Resources
Jeannie Davis - Resident	Do not close the streets – they are used by residents, police and fire.	EIR Section 4.13, Transportation and Circulation
	Consider Woody Hall and [Hoover] buildings – both men were a very important part of University history.	EIR Section 4.3, Cultural Resources
	Consider carefully when granting destruction privileges [to Stu-Han Hall and the chapel].	EIR Section 4.3, Cultural Resources

Commenter	Comment/Request	How and Where it was Addressed
Doug Strange – Resident	Cal Trans and Metro have goals to triple the number of trips by bike, double the number of trips by foot, and reduce the number of trips by cars by 5% by 2020. How will the changes at ULV further these goals within La Verne, and or create barriers. If barriers, what would be the mitigation?	EIR Section 4.13, Transportation and Circulation
	Transit Oriented Development (TOD) around future Metro stops such as the planned Gold Line station are expected with the scope of this study area. A key attribute of TOD is the ability for car free living and travel throughout. Does the master plan assume and integrate with these expected changes and prevent adding significant car traffic into this emerging environment?	EIR Section 4.8 Land Use and Planning; EIR Section 4.13, Transportation and Circulation
	Will surrounding streets provide "complete street" design standards, signage such as indicating bike priority zones, and similar other best practices for integrating college/residential/historic cores to further encourage, and ensure safety for non-motorized movement by students, staff and area residence within the area?	EIR Section 4.13, Transportation and Circulation
	What will the impacts be of students, staff and maintenance moving between campuses e.g., from East campus to athletic events on West campus. Can this be easily/safely done via non-motorized options such as foot and/or bicycle? Would improvements need to be made to encourage these modes and would these benefit the surrounding community as well?	EIR Section 4.13, Transportation and Circulation
	The master plan outlines a potential second parking structure, with the Gold Line proposing a separate third parking structure. Are there alternative options to invest in alternative options for mobility that would eliminate the need to build a costly second parking structure? Would this also have a larger	EIR Section 4.13, Transportation and Circulation

Commenter	Comment/Request	How and Where it was Addressed
	community wide benefit beyond the college itself?	
	How will the university master plan protect or enhance Bonita as an active transportation option through the region?	EIR Section 4.13, Transportation and Circulation

Table 3 Public Scoping Meeting Comments

Subject	Where it was Addressed
General	
Plans for Park Campus	EIR Section 2.0, Project Description
Building materials quality	EIR Section 4.1, Aesthetics
Aesthetics	
Parking lot design	EIR Section 4.1, Aesthetics
Landscape buffer abutting the Carrion Adobe property	
Alternatives	
Minimize impacts to the Carrion Adobe property	EIR Section 7.0, Alternatives
Cultural Resources	
Demolition of historic buildings	EIR Section 4.3, Cultural Resources
Impacts to the Carrion Adobe property	
Cumulative Impacts	
"College Creep"	EIR Section 4.8, Land Use and Planning
Hazards and Hazardous Materials	
Monitoring of soil hazard/plume on Campus West	EIR Section 4.6, Hazards and Hazardous Materials
Land Use and Planning	
Neighborhood compatibility	EIR Section 4.8, Land Use and Planning
"College Creep"	
Multi-family housing on Campus West	
Population and Housing	
Student capacity	EIR Section 4.10, Population and Housing
Multi-family housing Campus West	
Transportation/Circulation	
Parking structure service for Gold Line riders	EIR Section 4.13, Transportation and Circulation
Traffic speed along Walnut Street – safety issue	
Parking lot capacity	
Road closures	
Circulation through neighborhoods	

1.2 Purpose and Legal Authority

This EIR has been prepared in accordance with CEQA, the *CEQA Guidelines*, and the City of La Verne's CEQA procedures. This EIR is intended to serve as an informational document that, in accordance with Section 15121 of the *CEQA Guidelines,* that "will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project."

Therefore, the EIR is an informational document for use by decision makers, public agencies, and the general public. It is not a document that sets forth City policy about the desirability of the proposed Master Plan or any project described in it.

The proposed Master Plan requires various discretionary approvals from the City of La Verne (described in Section 2.6, *Required Discretionary Approvals*) and is therefore subject to the requirements of CEQA - Public Resources Code, Section 21000, et. seq.

1.3 Scope and Content

This EIR addresses the issues determined to be potentially significant by the City of La Verne and responses to the NOP. The issues addressed in this EIR include the following:

- Aesthetics
- Air Quality
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems

Impacts related to Agriculture and Forestry Resources, Biological Resources, and Mineral Resources were determined to be less than significant and are not discussed in this EIR.

This EIR addresses the issue areas referenced above and identifies the potentially significant environmental impacts, including site-specific and cumulative effects, of the proposed Master Plan. In addition, the EIR recommends feasible mitigation measures, where possible, that would eliminate or reduce adverse environmental effects.

The EIR references pertinent City policies and guidelines, certified EIRs and other adopted CEQA documents, and background documents prepared by the City in preparing the analysis. A full reference list is provided in Section 8.0, References.

The Alternatives section of the EIR (Section 7.0) was prepared in accordance with Section 15126.6 of the CEQA Guidelines. The Alternatives discussion evaluates the CEQA-required "no project" alternative and two other alternative development scenarios for the Plan Area. It also identifies the environmentally superior alternative among the alternatives assessed.

The CEQA Guidelines provide the standard of adequacy on which this document is based. The *Guidelines* state:

An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure (Section 15151).

1.4 Type of Environmental Impact Report

This EIR has been prepared as a Program EIR pursuant to Section 15161 of the *CEQA Guidelines*. As stated in the *CEQA Guidelines*:

A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

1. Geographically
2. As logical parts in the chain on contemplated actions
3. In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program
4. As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways

Due to the scope of the proposed Master Plan, and the long-term nature of Master Plan implementation, this EIR does not preclude the requirement for individual developments within the Plan Area to undergo further environmental review.

1.5 Lead, Responsible, and Trustee Agencies

The City of La Verne is considered the lead agency in preparing this EIR and will be responsible for the discretionary approvals that would allow the regulatory changes and subsequent development.

Section 15367 of the State CEQA Guidelines defines a “lead agency” as:

“…the public agency which has the principal responsibility for carrying out or approving a project. The Lead Agency will decide whether an EIR or Negative Declaration will be required for the project and will cause the document to be prepared.”

The City of La Verne is the lead agency with discretionary approval authority over the proposed Master Plan. This EIR is intended to provide environmental information to a number of agencies which may be involved in serving the Plan Area, or may otherwise have an interest in the proposed Master Plan’s potential environmental impact. There are no

responsible agencies for the proposed Master Plan. Section 15381 of the State CEQA Guidelines defines a "responsible agency" as:

"…a public agency which proposed to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term "Responsible Agency" includes all public agencies other than the Lead Agency which have discretionary approval power over the project."

Other neighboring jurisdictions, such as the cities of Claremont, Pomona, and San Dimas and the county of Los Angeles, may have an interest in potential impacts within their jurisdictions, such as traffic impacts upon freeways and arterials. Other, regional agencies such as the Southern California Association of Governments and the Los Angeles Regional Water Quality Control Board may also have an interest in the proposed Master Plan. The City of La Verne has solicited the input of these agencies in the EIR process, starting with the circulation of the NOP.

Trustee agencies have jurisdiction over certain resources held in trust for the people of California, but do not have a legal authority over approving or carrying out the proposed Master Plan. CEQA Guidelines Section 15386 designates four agencies as trustee agencies: the California Department of Fish and Wildlife with regards to fish and wildlife, native plants designated as rare or endangered, game refuges, and ecological reserves; the State Lands Commission, with regard to state-owned "sovereign" lands, such as the beds of navigable waters and state school lands; the California Department of Parks and Recreation, with regard to units of the state park system; and the University of California, with regard to sites within the Natural Land and Water Reserves System. Upon review of the improvements envisioned as part of the University and La Verne Facilities and Technology Master Plan Update, there are no trustee agencies for the proposed project.

1.6 Environmental Review Process

The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1. The steps are presented in sequential order.

1. Notice of Preparation Distributed. Immediately after deciding that an EIR is required, the lead agency must file a Notice of Preparation soliciting input on the EIR scope to "responsible," "trustee," and involved federal agencies; to the State Clearinghouse, if one or more state agencies is a responsible or trustee agency; and to parties previously requesting notice in writing. The Notice of Preparation must be posted in the County Clerk's office for 30 days. A scoping meeting to solicit public input on the issues to be assessed in the EIR is not required, but may be conducted by the lead agency. The City of La Verne prepared a Notice of Preparation (NOP) for an environmental impact report and distributed the NOP for agency and public review for the required 30-day review period from July 18, 2016 to August 18, 2016. A public scoping meeting was held on July 26, 2016, at the City Council Chambers in La Verne.

2 Draft EIR Prepared. The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) alternatives; g) mitigation measures; and h) irreversible changes.

3 Public Notice and Review. A lead agency must prepare a Public Notice of Availability of an EIR. The Notice must be placed in the County Clerk's office for 30 days (Public Resources Code Section 21092) and sent to anyone requesting it. Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the Clearinghouse (Public Resources Code 21091). Distribution of the Draft EIR may be required through the State Clearinghouse. This Draft EIR will be circulated for a 45 day period.

4 Notice of Completion. A lead agency must file a Notice of Completion with the State Clearinghouse as soon as it completes a Draft EIR.

5 Final EIR. A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.

6 Certification of Final EIR. The lead agency shall certify: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project.

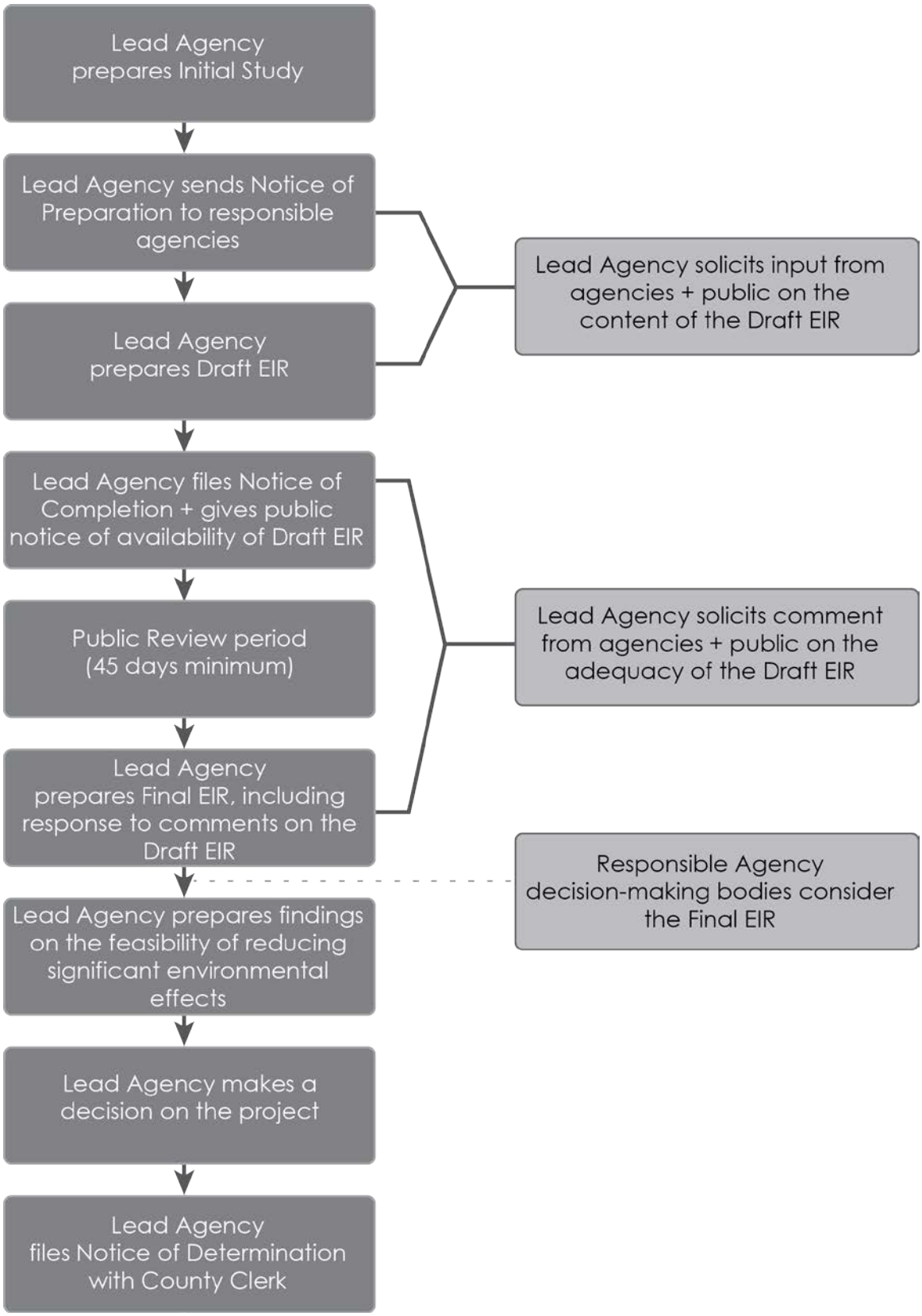
7 Lead Agency Project Decision. A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted.

8 Findings/Statement of Overriding Considerations. For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible. If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that set forth the specific social, economic or other reasons supporting the agency's decision.

9 Mitigation Monitoring/Reporting Program. When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted. Additionally, all mitigation measures shall be adopted as conditions of project approval.

10 Notice of Determination. An agency should file a Notice of Determination with the County Clerk after deciding to approve a project for which an EIR is prepared. When filed, the Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA challenges.

Figure 1 Environmental Review Process



2 Project Description

The project analyzed in this EIR is the proposed University of La Verne Facilities and Technology Master Plan (Master Plan). The Master Plan provides the intentions of the University of La Verne (University) in the planning and development of their lands over a period of approximately 20 years from the date the City approved the Master Plan. The Master Plan is consistent with the University's 2020 Strategic Vision, and would result in a physical development plan that extends to the year 2035 in three, six-year phases, and provides a policy plan to guide the University in its facility and technology strategic investments. The Master Plan would give priority attention to academic and co-curricular learning spaces, as well as technology improvements that enhance and support the educational process.

The Master Plan's goals and associated recommendations to accomplish the programmatic needs of the University over the 20-year life of the Master Plan are discussed below.

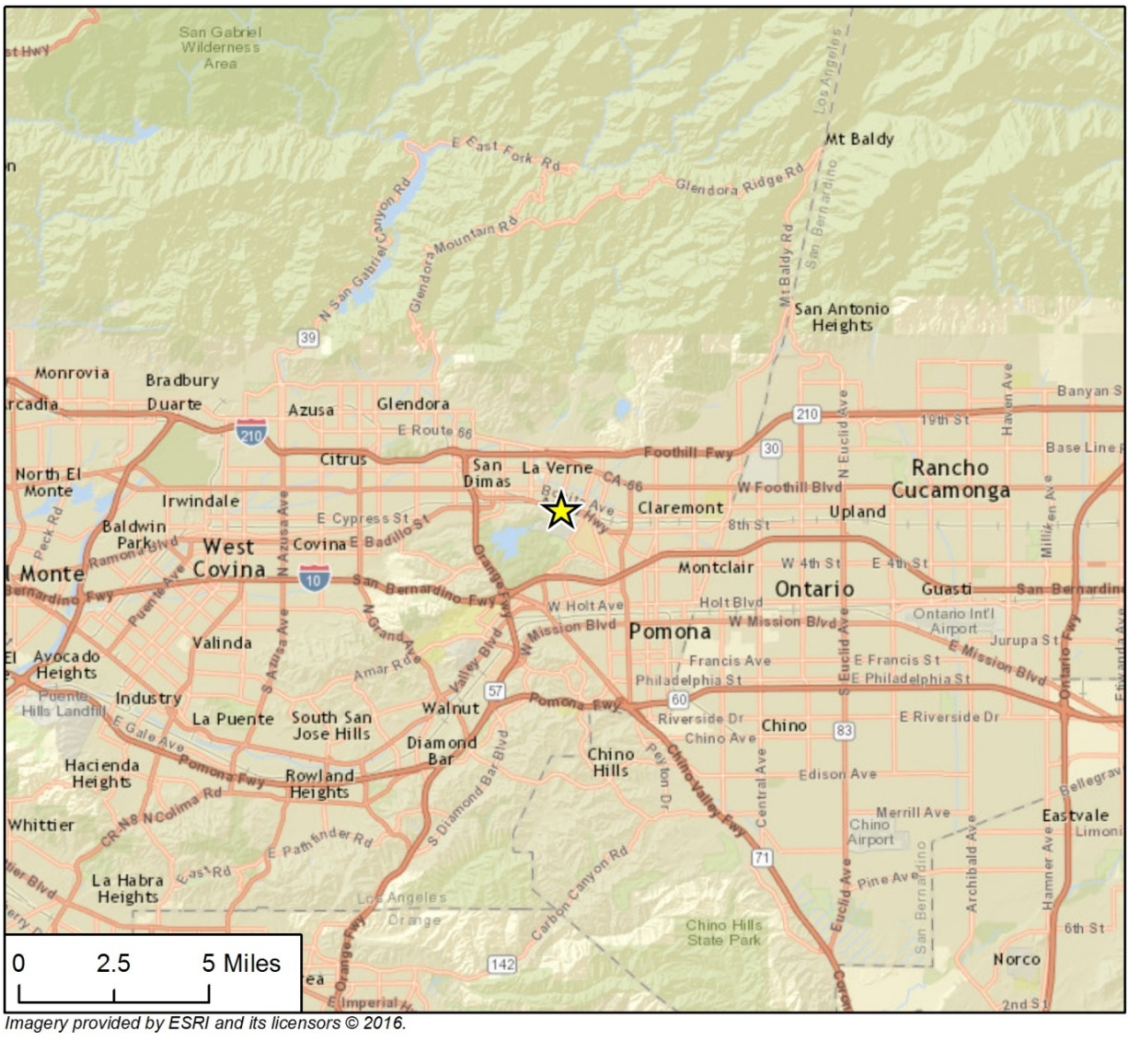
2.1 Project Applicant

University of La Verne
1950 Third Street
La Verne, California 91750

2.2 Project Location

The project area (Plan Area) encompasses the entire University of La Verne complex, approximately 97 acres, comprises three campuses: La Verne Campus, Park Campus, and Campus West. La Verne Campus, which is the primary University campus, consists of approximately 38 acres and is roughly bounded by Arrow Highway to the south, B Street to the west, Bonita Avenue on the North, and E Street on the east. Park Campus consists of approximately four acres and is bounded by the Metrolink Rail Line on the south, Park Avenue on the west, Arrow Highway on the north, and A Street on the east. Campus West consists of approximately 54.8 acres and is roughly bounded by the Metrolink rail line on the north, Wheeler Avenue on the east, Puddingstone Drive on the south, and a Puddingstone Reservoir storm water channel on the west. The regional and local locations of the Plan Area are shown in Figure 2 and Figure 3.

Figure 2 Regional Location



Imagery provided by ESRI and its licensors © 2016.

Project Location

N

Fig 2-1 Reg Locn

Figure 3 Project Location

Imagery provided by Google and its licensors © 2016;
Additional Data provided by University of La Verne Facilities and Technology Master Plan, September 2016.

2.3 Existing Site Characteristics

2.3.1 Current Land Uses

The three campuses that make up the Plan Area are La Verne Campus, Park Campus, and Campus West. The approximate boundaries of these campuses are described below and are shown in Figure 4.

La Verne Campus

La Verne Campus consists of approximately 38 acres and is roughly bounded by Arrow Highway on the south, B Street on the west, Bonita Avenue on the north, and E Street on the east. It is dominated by academic buildings, residence halls, dining halls, and recreational fields, as well as landscaped open spaces, parking lots, and pathways. The campus contains many mature trees and other vegetation.

Park Campus

Park Campus is located approximately 0.3 miles southwest of La Verne Campus and is bounded by the Metrolink rail line on the south, Park Avenue on the west, Arrow Highway on the north, and A Street on the east. The purpose of this campus is primarily to provide satellite parking for the main campus and additional instructional space. The 4.2-acre area is comprised of two parcels. The smaller parcel contains a 3,240-square-foot building (Carson Building) and the larger parcel contains 455 parking spaces. In addition, the University leases an 18,523 square foot building adjacent to the parking lot for use as additional administrative and instructional space.

Campus West

Campus West is located approximately 0.6 miles southwest of La Verne Campus and is comprised of eight parcels, totaling 54.8 acres. The campus is roughly bounded by Metrolink rail line on the north, Wheeler Avenue on the east, Puddingstone Drive on the south, and a Puddingstone Reservoir storm water channel on the west. Currently, 14 acres of Campus West are developed with the University's Athletic Complex. The Athletic Complex is comprised of ball fields and associated dugouts, locker rooms, training rooms, and restrooms. There are also 180 parking spaces available for those using the facilities. The majority of the 40 acres to the west and south of the Athletic Complex are currently vacant, with the exception of the northern most 12-acres near Arrow Highway that have been previously developed with industrial uses.

Figure 4 Existing University of La Verne Campuses

Imagery provided by Google and its licensors © 2016;
Additional Data provided by University of La Verne Facilities and Technology Master Plan, September 2016.

2.3.2 Surrounding Land Uses

Land uses surrounding the project area in its entirety broadly include Old Town La Verne o the north and northeast, residential neighborhoods (primarily within the Lordsburg Specific Plan area) on the west, north, and east. Damien High School is located to the west/northwest and Bonita High School is located to the northeast. The Los Angeles County Fairplex is located southeast of the project area and is in the City of Pomona. Brackett Field Airport (Los Angeles County jurisdiction), Mountain Meadows Golf Course (City of Pomona) and Frank Bonelli Regional Park (City of San Dimas) are located to the south. More specific surrounding land uses are described below for each of the University campuses. Refer to Figures 7 through 9 in Section 4.1, Aesthetics for representative photographs of land uses within each campus.

La Verne Campus

La Verne Campus is in the Old Town La Verne Specific Plan (OTLVSP) area. Along its northwest border, La Verne Campus primarily abuts single-family residential properties. To the north, beyond parking lot P, across Bonita Avenue and east of C Street, there is an automotive tire shop. On its east side, across C Street and north of Third Street, La Verne Campus is bordered by an eclectic mix of commercial land uses that are within the Old Town La Verne Specific Plan area. The City's primary Public Safety Facility abuts the University on the northeast corner of Third and C streets. Sneaky Park is located on the southeast corner of Third and C streets. To the east, across D Street and north of Second Street, La Verne Campus is bordered by commercial retail and restaurant land uses. On its south side, La Verne Campus is bordered by the Atchison, Topeka, and Santa Fe Railroad (AT&SFRR). freight line and the future Metro Gold Line railroad tracks, the future Gold Line station, and Arrow Highway. A mix of light industrial and commercial land uses are located south of Arrow Highway, with residential properties beyond. The land west of the University is within the Lordsburg Specific Plan area and the primary land use is single-family residential.

Park Campus

Park Campus is in the Arrow Corridor Specific Plan (ACSP) area. Land uses in the ACSP area include a mixture of light industrial and commercial uses with limited areas of residential uses to the north and east. Immediately north of Park Campus, the mixture of commercial and office land uses include a dental office, a property management company, a vehicle towing company and a cabinet making business. The areas east of Park Campus include single-family residential properties. The areas south of Park Campus include the Metrolink rail line and the La Verne Business Park. The Business Park includes commercial, manufacturing, and industrial land uses. The areas west of Park Campus feature the Princeland La Verne Commerce Center that includes light industrial and manufacturing land uses.

Campus West

Campus West is located in the boundaries of the ACSP. The northern portion of Campus West is adjacent to the Mohawk Western Plastics, Inc. manufacturing facility and Direct Edge, a car repair and maintenance business. Further north, Campus West abuts a vacant industrial/manufacturing facility, a non-profit food pantry, a medical diagnostics laboratory, and a human resources company. The eastern portion of Campus West is adjacent to a Gilead biopharmaceutical manufacturing facility (built in 2016), a light industrial facility (built in 2015), and the La Verne Business Park. The southern portion of Campus West is adjacent to Puddingstone Drive, across from Brackett Air Field and Frank G. Bonelli Regional Park. The historic Carrion Adobe property is located adjacent to the southwest corner of the Campus West. The Park La Verne single-family residential neighborhood is located adjacent to the western boundary of Campus West.

2.3.3 Land Use Regulatory Overview

The City of La Verne regulates the mix of land uses built in its incorporated boundaries through its General Plan, Specific Plans, and Municipal Code. These regulatory documents establish policies that apply citywide, or to specific subareas in the city. The Plan Area has two General Plan land use designations: Commercial Business Park and Community Facilities. The Plan Area zoning regulations were established by three separate Specific Plans: OTLVSP, Lordsburg Specific Plan (LSP), and the ACSP. The portions of the City of La Verne's General Plan Land Use Map and Zoning Map covering the Plan Area and its surroundings are shown in Figure 20 of Section 4.8, Land Use and Planning. Policies of the La Verne General Plan, Specific Plans, and Municipal Code that would apply to the proposed Master Plan are discussed in Section 4.8, Land Use and Planning, and other sections relevant to their respective issue areas.

2.3.4 Project Characteristics

Table 4 through Table 10 summarize existing and proposed conditions in the Plan Area. Figure 5 and Figure 6 show plans that illustrate the buildout of the University campuses. Photos of the Plan Area and its surroundings appear in Figure 7 through Figure 9 in Section 4.1*,* Aesthetics, as part of the analysis of the visual character and quality of the Plan Area and its surroundings

2.3.5 Project Overview

In order to accommodate the projected increase in enrollment from 4,849 full time students (2016-2017) to 5,631 full time students (2035) (an increase of 782 full time students) over the course of the 20-year Master Plan, the following development plans are anticipated.

La Verne Campus

As the University's primary campus, La Verne Campus currently has 40 educational buildings. Ten of these building are proposed to be demolished and replaced with newly-

configured buildings over the course of the three phases of the proposed project. Upon completion of the envisioned improvements, there would be a net increase of approximately 403,577 square feet of La Verne Campus building area, which would bring the total campus square footage to approximately 1,030,000 square feet. The student residence hall capacity would be increased from 874 beds up to a maximum of 1,542 beds. Parking capacity would increase from 2,319 spaces to 2,692 spaces, an increase of 373 spaces. Table 4 provides an overview of existing and proposed campus conditions. Table 5lists all buildings that are located on La Verne Campus and indicates which would be demolished or restored in each phase of the Master Plan. Table 6 summarizes all proposed new construction throughout each phase of the Master Plan. Table 7 gives an overview of parking capacity fluctuations throughout each phase of the proposed Master Plan. Table 8 provides an overview of available parking at the buildout of the Master Plan.

Table 4 La Verne Campus: Overview of Existing and Proposed Conditions

	Existing (2016)	Proposed (2035)	Change
Land Area (approx. acres)	38	38	–
Campus Building Area (GSF[1])	626,554	1,030,131	403,577
Density (GSF per acre)	16,488	27,108	10,620/acre
Students[2]	4849	5631	782
GSF Per Student	129.2	182.9	53.7
Student Beds	874	up to 1,542	668
Parking Spaces[3]	2,319	2,692	373
Parking per Student	0.47	0.48	0.01 percent

[1] Gross Square Feet
[2] Full Time Equivalent (FTE) students as measured by full study loads
[3] Includes 455 spaces in Park Campus Shuttle Lot

Table 5 La Verne Campus: All Buildings plus Demolition and Renovations, All Phases

Building	Demolition	Square Footage Removed	Renovation[1]	Square Footage Affected
Acquired Buildings North of Oaks Res. Hall	Phase III			
Barkley Annex	Phase III	3,200		
Barkley Building	Phase III	11,281	Phase II	TBD
Bonita Building				
Brandt Residence Hall			Phase I	22,500
Center for Teaching & Learning				
Central Services				
Enrollment Management				
College of Business & Public Management			Phase II	TBD
Counseling & Psychological Services				
Dailey Theater				
Davenport Dining	Phase II	9,570		
E Street Building				
ELS Language Center				
Faulty House				
Founders Hall				
Hanawalt Fitness Center				
Hanawalt House				
Health Services	Phase III	1,455		
Hoover Building			Phase I	TBD
Interfaith Chapel	Phase I	2,600		
Landis Academic Center			Phase I	TBD
Leo Hall	Phase III	28,550	Phase II	TBD
Leo Park				
Maniero/La Fetra Building			Phase I	TBD
Miller Hall			Phase I	TBD
Modular Classroom Building	Phase I	3,200		
Music Annex				
Oaks Residence Hall	Phase III	48,104		
Ortmayer Athletic Complex				
Parking Structure I/ Safety Office				
Physical Plant South				
Sports Science & Athletic Pavilion				
Studebaker-Hanewalt (Stu-Han) Residence Hall	Phase I	28,800		

Building	Demolition	Square Footage Removed	Renovation[1]	Square Footage Affected
University Advancement				
Vista La Verne Residence Hall				
Wilson Library			Phase I	TBD
Woody Hall	Phase II	13,522		

TBD: To be determined

[1] Renovations and spaces will be prioritized based on the educational needs of the institution and space available.

Table 6 La Verne Campus: New Construction, All Phases

	New Square Footage		
Building	Phase I	Phase II	Phase III
1st Street Promenade			Open Space/ No Facility
Second Street Promenade			Open Space/ No Facility
Academic Building	53,100		
Academic Building II		51,000	
Academic/Mixed-Use Building			50,000
Arrival Plaza/Historical Grove			Open Space/ No Facility
Attached Retail Base			18,000
Center for Spirituality, Interfaith Cooperation and Multicultural Advancement	9,300		
Connecting Mall	Open Space/ No Facility		
Consolidated Student Services Center		45,000	
Dedicated Service Yard	Open Space/ No Facility		
Dining/Event Space	48,800		
Gold Line Gateway Plaza	Open Space/ No Facility		
Meditation Garden/Water Feature	Open Space/ No Facility		
North Physical Plant	2,000		
Parking Structure II			N/A
Pedestrian promenades	Open Space/ No Facility		
Physical Plant East/Pool Support Building			4,500

Building	New Square Footage		
	Phase I	Phase II	Phase III
Residence Hall	79,650		
Residence Hall II/Mixed-Use Building			108,000
Residence Hall III/Mixed-Use Building			47,000
Service Yard			Open Space/ No Facility
Student Court			Open Space/ No Facility
Student Dining Plaza	Open Space/ No Facility		
Student Life Quad	Open Space/ No Facility		
Student Recreation Center/Mixed-Use			35,000
Student Recreation Pool			Open Space/ No Facility
Visitor Parking	Lot only/ No Facility		
Total Gross Increase	192,850	96,000	262,500
Total Gross Decrease (Table 4)	33,091	22,092	92,590
Total Net Increase	159,759	73,908	169,910
Total Existing Square Footage (square feet)	626,554		
Phase Period Ending	2021	2028	2035
Total Project Square Footage	786,313	860,221	1,030,131[1]

[1] Final Buildout

Table 7 La Verne Campus: Affected Parking Lots

Parking Lot Affected	Phase Period Loss/Gain		
	Phase I 2015-2021	Phase II 2022-2028	Phase III 2029-2035
Second Street	-24		
C Street	-2		
"D" Parking Lot	-128		
"E" Parking Lot, eastern portion			-65
Oaks Residence Parking: "G" Lot, "H" Lot, "H1" Lot, "H2" Lot, "K" Lot			-187
"I" Parking Lot, western portion	-18		
"O" Parking Lot	-25		
Parking Structure II			750
Visitor Parking (Lot SS)	+72		
Net Change	-125		498
Total Existing Parking (2016)	2,319	–	–
Total Projected Parking	**2,194**	**2,194 (no change)**	**2,692**

Table 8 La Verne Campus: Available Parking at Build Out

Parking Lot	Spaces
A	87
B	71
CTL (dentist office, shared)	4
D	12
E	48
I1	35
I2	21
J	19
L	47
M	17
N	11
P	18
BB (Bonita Building)	47
SS (Student Services)	72
Parking Structures	
Parking Structure I	940
Parking Structure II	750
Off-Campus Parking	
Lot S (Shuttle Lot – Park Campus)	455
Princeland (HR, OIT, Literacy Center)	38
Total Parking Spaces	**2,692**

Figure 5 Site Plan Illustration – La Verne Campus

Park Campus

There are no proposed changes to the use or capacity of existing facilities or parking on Park Campus. The site may be improved through new pavement, striping, and landscaping.

Campus West

In Phase I, Campus West would expand into 20 acres of adjacent, vacant land and envisions up to 170 multi-family residential units in the southeast portion of the site. Phase II would involve the construction of a new 5,000 square foot University House with an associated 60-space parking lot at the terminus of the new east-west access route. The structure would serve as the home of University Presidents and would include modest conference facilities to support gatherings and University guests. Phase III would include the construction of a new 67,000 square foot administrative facility northwest of the University House. This building would allow administrative functions to be consolidated to a central facility. Phase III envisions additional parking areas and a maintenance yard. The buildout of Campus West would provide vehicular access to both new facilities and include required emergency vehicle access to both Carrion Road north to Arrow Highway and a new connection south to Puddingstone Drive. Further details regarding the multi-family housing component and areas surrounding the University House are unknown at this time. Therefore, future multi-family development as well as any future development in areas labeled as “Undetermined Use” in the Master Plan shall require future, independent environmental review. Table 9 and Table 10 provide an overview of existing and proposed development on Campus West.

Table 9 Campus West: Existing Conditions

Existing Conditions	Description
Total Land Area	54.8 acres
Existing Athletic Complex	14 acres; comprised of ball fields and associated dugouts, locker rooms, training rooms, and restrooms
Existing Undeveloped Land	40 acres
Existing Parking	180 spaces, associated with the Athletic Complex

Table 10 Campus West: Proposed Conditions

New Development	Phase	Description
East-West Road Extension with New Bridge	**Phase I**	Create east-west access to the western portion of Campus West over Marshall Canyon storm water channel
Multi-family Residential (unknown details)		20 acres and up to 170 units; No site specific development plans have been prepared
University House	**Phase II**	5,000 square feet
University House Parking		60 spaces
Administrative Facility	**Phase III**	67,000 square feet
North-South Access Route with Loop Road		Create vehicular access to the new facilities by extending Carrion Road between Arrow Highway and Puddingstone Drive
Landscape Buffer		A variety of trees and shrubs
Office Parking/Maintenance & Operations Yard		No formal development plans have been prepared

Figure 6 Site Plan Illustration – Campus West

Existing Building / Development | New Building / Structure | Undeveloped Land | New Development

EXISTING SITE PROJECTS
1 Athletic complex
2 Multi-family residential
3 University House
4 University House parking

NEW SITE PROJECTS
5 Loop road
6 Landscape buffer
7 North access road
8 South access road
9 Office Parking / M&O Yard

NEW BUILDINGS / COMPLEX
A HR/Facilities/OIT building - 67,000 sq. ft
B Undetermined Use

0 150 300 Feet

N

2.3.6 Project Objectives and Goals

The overarching objective of the Master Plan is to serve as a guide for a 20-year program of campus development in support of the University's 2020 Strategic Vision. Under this overarching framework, the Master Plan is designed to achieve the following objectives and goals:

Project Objectives

- Create a plan that enables and supports the Initiatives of the 2020 Strategic Vision.
- Create a plan that maximizes the academic and educational experience and provides for appropriate and flexible classrooms and laboratories that are technologically capable of supporting increasing technology in the learning experience.
- Utilize a planning process that is inclusive and engaging of campus and community stakeholders and is guided by data as well as the aspiration to fulfill the promise of the University of La Verne.
- Design a plan that demonstrates a commitment to sustainability and environmental conservation and engages and tests new ideas.
- Create a plan that defines physical and technological connections between and among La Verne regional campuses, the online community and with the main campus.
- Identify a plan for the utilization and development of Campus West, including a convenient and attractive linkage that integrates Campus West as a part of the core campus.
- Create a campus coherence that emphasizes an intimate sense of place with safe pedestrian scale that promotes personal interaction, community identity and a welcoming experience for the diversity of La Verne students.
- Provide vehicle parking and circulation that meets the needs of the campus community and is compatible with the residential and business community adjacent to the main campus.
- Create a campus that has vitality and encourage co-curricular activities such as recreation, arts, clubs and athletics as well as quiet spots for conversation and reflection.
- Develop a campus plan that creates a positive interface between the University and La Verne community, including the support of a vibrant Old Town La Verne and the opening of the Gold Line light rail system.
- Create a plan that strategically integrates the role of technology into the University's teaching and learning experience and administrative operational processes.

Goals

Phase I Goals (2015-2021)

1. Construct a "Center for Spirituality" adjacent to the new academic building that will replace the chapel and allow for interfaith and multicultural programs. This project will require the demolition of the existing chapel. This new center will be integrated with the renovated Brandt Hall.

2 Construct a prominent “gateway” academic building on the north end of the existing north-south mall, facing Bonita Avenue, which includes an archway that allows a view from Bonita Avenue to Founders Hall.
3 Develop a more pedestrian-oriented campus by closing (except or emergency access) C Street below Third Street, and Second Street in front of the Abraham Campus Center.
4 Construct a new residence hall and dining facility in the area to the south of the Abraham Campus Center. The existing Studebaker-Hanewalt (Stu-Han) Residence Hall will be demolished when the new residence hall opens and a parking lot will be constructed on the site.
5 Construct a second central services physical plant in the parking lot north of Woody Hall to serve the existing and new buildings north of Third street.
6 Initiate the expansion of technology infrastructure for academic and administrative needs, including construction of a data center.
7 Delineate new edges and mark key entry points to La Verne Campus by installing “Campus Entry Markers”, as well as landscaping and signage features that will enhance way-finding and reinforce the University’s identity.
8 Develop the Gold Line Gateway Plaza as a pedestrian-oriented welcome center into the University and Old Town areas. A landscaped pedestrian promenade along the eastern perimeter of campus will be created to facilitate the connection between the La Verne Light Rail station and Old Town.
9 Renovate and update facilities as necessary and at the time when new buildings are opened and the vacated space is reprogrammed. Brandt Residence Hall will be included in these renovations.
10 Given plans for future development of the western portion of Campus West (former Brown and Gainey Properties), the University plans to cross the Marshal Canyon storm water channel to provide access to this currently undeveloped land.
11 Regional and Online Campuses and the College of Law will receive investments in modernizing facilities and technology in a manner that will focus on connectivity, technology and branding that supports the academic program and the University of La Verne brand.

Phase II Goals (2022-2028)

1 Construct a new academic building along B Street between Third Street and Bonita Avenue to frame the west boundary of the north mall. This project will require the demolition of Woody Hall.
2 Construct a Student Services building at the southwest corner of Third Street and C Street that will centralize admissions and student services functions and present a major main entrance to the campus. This project will require the demolition of Davenport Dining Hall and will be served by the new parking lot across the street after the demolition of Studebaker-Hanawalt Residence Hall.
3 Develop a more pedestrian oriented campus by closing (except for emergency access) T Street between B Street and C Street for the creation of a Pedestrian Promenade.
4 On Campus West, a new University House to serve as the home of current and future University Presidents will be constructed. The house will also include modest

conference facilities to support gatherings and university guests. The University House will have adjacent parking to support function of the facility.

5 Renovate and update facilities as necessary and at the time when new buildings are opened and the vacated space is reprogrammed.

6 Technology infrastructure and support services will be provided to accommodate expanded utilization of technology in meeting academic and administrative needs.

7 Regional and Online Campuses and the College of Law will receive investments in modernizing facilities and technology in a manner that will focus on connectivity, technology and branding that supports the academic program and the University of La Verne brand.

Phase III Goals (2029-2035)

1 Construct a mixed-use academic building on the Wilson Library parking lot along D Street between Third Street and Second Street. This building will define the eastern "face" of the University. Because of its location on a major commercial retail street in Old Town La Verne, the first floor of this building facing D Street will provide retail or commercial space.

2 Develop a student residential complex and mixed-use development by removing "The Oaks" residence halls, and including the entire block that involves Leo Hall and Barkley Hall. The site will require the University to acquire additional property so that the redevelopment site fully incorporates the area bounded on the west by D Street, on the north by Second Street, on the east by E Street, and on the south by the railroad tracks along Arrow Highway. The new student residential complex will involve higher density housing development, but also with extensive student recreational components, including a swimming pool. A new parking garage is expected to be built on the south portion of the block, along the railroad tracks. It is anticipated that the design and composition of the mixed-use development will be influenced by the arrival of the Gold Line Light Rail Transit, which will have a station platform nearby at the southwest corner of E Street and Arrow Highway. The mixed-use development may include some market oriented retail stores. The Arts and Communication Building will remain and perhaps be reprogrammed as a part of the project.

3 On Campus West, the University is looking to consolidate administrative functions into a central facility. This facility will potentially include offices for Facility and Technology Services, Office of Information Technology, Facilities Management, Human Resources, and Finance office space.

4 Renovate and update facilities as necessary and at the time when new buildings are opened and the vacated space is reprogrammed.

5 Technology infrastructure and support services will be provided to accommodate expanded utilization of technology in meeting academic and administrative needs.

6 Regional and Online Campuses and the College of Law will receive investments in modernizing facilities and technology in a manner that will focus on connectivity, technology and branding that supports the academic program and the University of La Verne brand.

Required Approvals

Implementation of the Master Plan and any associated development would require the following discretionary approvals from the City of La Verne:

- Approval of the Master Plan
- Amendment of the General Plan, as necessary
- Amendment of the Arrow Corridor Specific Plan, as necessary
- Design review approval of all new construction, building relocations, and other site changes
- Removal of protected street or on-campus trees will require approval of a permit from the Director of Community Development
- A permit for any temporary construction trailers or other temporary construction-related uses, as applicable
- Ministerial and ancillary permits required to carry out individual projects under the Master Plan, such as landscape permits, demolition permits, buildings permits, and occupancy permit
- Lot mergers and/or lot line adjustments, as necessary

3 Environmental Setting

This section provides a general overview of the environmental setting for the proposed Master Plan (Plan Area). More detailed descriptions of the environmental setting germane to each environmental issue area can be found in Section 4, Environmental Impact Analysis

3.1 Regional Setting

The City of La Verne is located in the Pomona Valley in the eastern portion of Los Angeles County. La Verne is bordered by unincorporated portions of Los Angeles County to the north, the city of Claremont to the east, the city of Pomona to the south, and the city of San Dimas to the west. La Verne is located on an alluvial fan originating in the San Gabriel Mountains that serves as the backdrop to the city on its northern side. Various portions of the foothills in the northern portions of La Verne are preserved as open space, and areas north of these areas are in the Angeles National Forest and the San Gabriel Mountains National Monument. Like the rest of southern California, La Verne is in a seismically active region.

La Verne has mild winters and hot summers. As in most of southern California, most rainfall occurs from late fall to early spring. Winter days are moderately warm with an average high temperature in December and January of 68 degrees Fahrenheit (°F), and an average December low temperature of 41°F. Summer weather in La Verne is hot, with an average high temperature in July and August of 89 degrees Fahrenheit, and an average low temperature in July and August of 59°F. During the hottest months, daytime temperatures in La Verne can exceed 100°F (intellicast.com 2016).

Major vehicle circulation routes in the city include the Interstate 210 (Foothill Freeway) and east-west arterial roadways such as Baseline Road, Foothill Boulevard, Bonita Avenue, Puddingstone Drive, and Arrow Highway. Major north-south roadways include Wheeler Avenue, White Avenue, B Street, D Street, and Esperanza Drive. Other transportation modes serving La Verne include rail, air, bus, bicycle, and pedestrian accommodations. The closest Amtrak train station is on Garey Avenue in downtown Pomona, approximately four miles southeast of the Plan Area. The future La Verne Metro Gold Line station will be located north of Arrow Highway and east of E Street, just south of the southeastern boundary of La Verne Campus. This transit station is part of the Foothill Gold Line Extension from Glendora to Montclair, which is currently in the advanced engineering phase. La Verne is also near several airports, including Cable Airport, Brackett Field (within city limits), and Ontario International Airport. Foothill Transit provides local bus service to the Plan Area, connecting La Verne to the rest of the Pomona and San Gabriel valleys, as well as to downtown Los Angeles. La Verne also contains an extensive network of bike lanes, sidewalks, and trails serving bicyclists and pedestrians. Like many areas in and around

college campuses, bicycle and pedestrian modes are highly used in and around the Plan Area.

3.2 Project Site Setting

The city of La Verne is mostly urbanized and land use patterns are well established. The University of La Verne is primarily located in the heart of Old Town La Verne, which includes a mixed-use district and the Lordsburg residential neighborhood. Lordsburg homes include single and multiple-family units along streets with mature trees. There residences exhibit an eclectic variety of architecture, including Victorian style cottages and Craftsman style bungalows. Most houses are in good condition and flood control channels divide several the residential blocks.

As previously discussed, the entire University of La Verne Master Plan Area encompasses 97 acres and includes the three campuses: La Verne Campus, Park Campus, and Campus West. La Verne Campus, is the University's primary campus, consists of approximately 38 acres in Old Town La Verne and is roughly bounded by Arrow Highway on the south, B Street on the west, Bonita Avenue on the north, and E Street on the east. La Verne Campus is built-out and dominated by large-scale academic buildings and facilities including lecture halls, residence halls, dining halls, recreational fields, sidewalks, pathways, parking lots, and supporting infrastructure. The campus facilities are generally oriented around landscaped courtyard spaces, lined with large mature tree.

The Park Campus is an extension of La Verne Campus, and is located approximately 0.3 miles southwest of the primary campus. This campus area includes an existing parking lot and an existing office building on approximately four acres. It is bounded by the Metrolink rail line on the south, Park Avenue on the west, Arrow Highway on the north, and A Street on the east.

Campus West is located approximately 0.6 miles southwest of the primary campus and consists of roughly 54.8 acres. Existing land uses onsite include the University's Athletic Complex, which encompasses 14 acres of the property and includes ball fields and associated dugouts, locker rooms, training rooms, and restrooms. There are 180 parking spaces available for those utilizing the facilities. Surrounding land uses include the La Verne Business Park and the new Gilead pharmaceutical manufacturing building to the east, Brackett Field to the south, industrial uses to the north, and residential development to the west. The historic Carrion Adobe, believed to be La Verne's oldest structure, is located adjacent to the southwestern boundary of Campus West.

3.3 Cumulative Development

CEQA defines "cumulative impacts" as two or more individual events that, when considered together, are considerable or will compound other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of development of a proposed projects and other nearby projects. For example, traffic impacts of two nearby projects may be insignificant when analyzed separately, but could have a

significant impact when analyzed together. Cumulative impact analysis in the EIR provides a reasonable forecast of future environmental conditions so it can precisely gauge the effects of a series of projects.

Table 11 lists the cumulative and related projects considered for this analysis. In summary, cumulative development would result in the future development of approximately 425,000 square feet of commercial and industrial development, 184 residential units, and a 600 space parking structure to support the future Gold Line Transit Station.

Table 11 Cumulative Projects List

Project No.	Project Name	Project Location	Description
1	Mr. D's Retail Project	919 Foothill Boulevard	7,500 sq. ft. of retail
2	Cedar Springs	1351 Palomares Ave.	36 multi-family dwellings and 10,500 sq. ft. of retail
3	Warehouse	688 Arrow Highway	9,000 sq. ft. of industrial
4	Gilead Sciences	1800 Wheeler Ave.	380,000 sq. ft. of light industrial uses
5	Puddingstone Hill	Assessor Parcel Number:: 8382-006-025 and 8382-006-033	15 single-family dwellings
6	Emerald Collection	2006 Baseline Road	19 single-family dwellings
7	Metro Gold Line Extension	East side of E Street, north of Arrow Highway	600 space parking structure
8	Princeland Building	Southwest corner of Park Ave./Arrow Highway	18,523 sq. ft. of office
9	Oak Valley (TTM 7311)	San Dimas Ave. south of Allen Ave. in City of San Dimas	78 single-family dwellings
10	East Foothill Boulevard	299 E. Foothill Boulevard in City of San Dimas	21 single-family dwellings
11	Walnut Ave. and Moore Lane	216-300 Walnut Ave. and 343 Moore Lane in City of San Dimas	7 single-family dwellings
12	Gladstone Street	405 W. Gladstone Street in City of San Dimas	4 single-family dwellings
13	Gladstone Street	526 W. Gladstone Street in City of San Dimas	4 single-family dwellings

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4 Environmental Impact Analysis

4.1 Aesthetics

This section evaluates the proposed project's potential impacts to aesthetics, including potential impacts on scenic vistas, scenic resources, visual character and quality, and impacts from light and glare.

4.1.1 Setting

Existing Conditions

La Verne Campus

The 38-acre La Verne Campus is the functional core and main campus of the University. Dominated by large-scale academic buildings and facilities, facilities include lecture halls, residence halls, dining halls, recreational fields, sidewalks, pathways, parking lots, and supporting infrastructure (with lighting). The campus is generally surrounded by a mix of uses in Old Town La Verne, mature tree-lined streets, and the Lordsburg residential neighborhood. The campus area is generally flat.

Park Campus

Park Campus is located approximately 0.3 miles southwest of La Verne Campus and provides additional vehicle parking and University administrative space beyond the main campus. It includes a paved parking lot and two buildings used for a variety of activities. The Carson Building is approximately 3,240 square feet and is located next to the 455-space parking lot along A Street. The University leases an 18,523 square foot building for additional administrative and instructional space, in the Princeland Center on Arrow Highway. The Park Campus area is also generally flat, with minimal landscaping. The parking lot is lighted along the perimeter.

Campus West

Campus West is located approximately 0.6 miles southwest of La Verne Campus, and is adjacent to the recently constructed University Athletic Complex, south of the Metrolink rail line, west of Wheeler Avenue, and north of Puddingstone Drive and the Puddingstone storm water channel. The site is approximately 54.8 acres, of which 14 acres has been developed as the University Athletic Complex. This facility includes baseball fields and associated dugouts, locker rooms, training rooms, restrooms, and 180 parking spaces. Approximately 12 acres of the northwest portion of Campus West was once developed with industrial uses that have since been demolished (former Gainey property). An unused paved parking lot is adjacent to the previously developed industrial area bordered by Arrow

Highway. East of the Athletic Complex, the Gilead pharmaceutical manufacturing campus is currently under construction with an anticipated completion date in late 2016 or early 2017. The historic Carrion Adobe, believed to be La Verne's oldest structure, is adjacent to the southwestern campus boundary. The entire area shows evidence of previous disking/grading and the topography generally consists of a hillslope landform descending from the 1,017-foot elevation in the northern portions of the site to the 981-foot elevation adjacent to Puddingstone Drive. Photographs of existing conditions in and surrounding the Plan Area are provided in Figure 7 through Figure 9.

Visibility of the Plan Area

The structures and landscaped areas of the La Verne and Park Campuses generally blend in with their surroundings. This is due in part to the extensive urban framework of the campus and immediately surrounding areas. Some parts of La Verne Campus bordering residential areas of the Lordsburg Neighborhood have buildings that are larger in scale than their surroundings, but even in these cases, due to mature landscaping, these buildings are only visible from the closest land uses and adjacent streets. The surrounding streets such as Bonita Avenue, B Street, C Street, D Street, E Street and Arrow Highway provide the most direct views of La Verne Campus and Park Campus. Both La Verne Campus and Park Campus, as well as the surrounding areas, are located on land which is generally flat, a condition which does not provide any prominent vantage points from which to observe larger areas of the campus. Campus West is surrounded by existing industrial development to the north, east and south, and single-family dwellings to the west. Because of topography, site location, and adjacent development, views into the site are primarily available only from Arrow Highway, Wheeler Avenue, Puddingstone Drive and from the adjacent Brackett Field Airport.

Scenic Vistas

Views of the San Gabriel Mountains and its foothills are the predominant scenic vista in La Verne. Unobstructed views of the San Gabriel Mountains are primarily available from the northern portions of City and beyond. Because of the existing urban development and extensive mature landscaping, views of the San Gabriel Mountains within and immediately bordering La Verne Campus are available from a limited number of locations. The best views of the mountains are from large areas of unobstructed open space, such as the athletic fields in the western part of campus. North-south streets such as B through E Streets also provide some views of the mountains, but to a more limited extent. In other areas, views of the mountains are fully to partially obstructed by existing trees and buildings. Views of the San Gabriel Mountains from the Park Campus are limited due to an existing line of mature trees lining Arrow Highway.

Unobstructed views of the mountains from Campus West are available from the upper undeveloped portions of the site closer to Arrow Highway and from the athletic fields in the eastern portion of the campus. Views of the San Gabriel Mountains to the north and open space areas south of Brackett Field are available from within Campus West, along Wheeler Avenue and from select locations along Puddingstone Drive.

Figure 7 Photographs of La Verne Campus

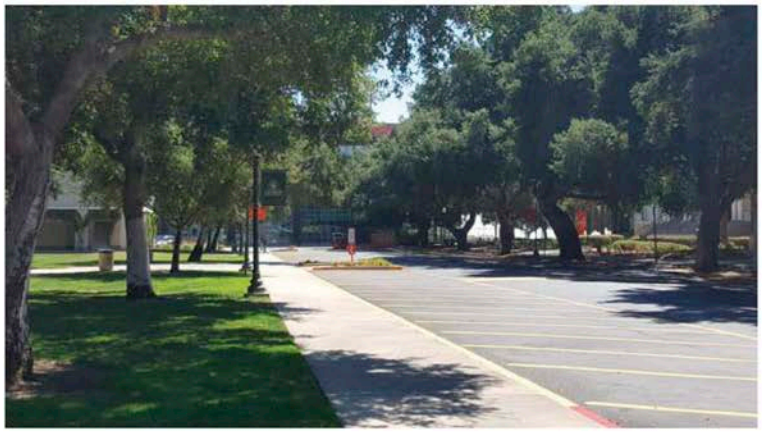

Photo 1: La Verne Campus C Street at Sneaky Park

Photo 2: La Verne Campus Sneaky Park

Photo 3: La Verne Campus 3rd and C looking north

Photo 4: La Verne Campus D and 2nd looking south

Figure 8 Photographs of Park Campus

Photo 1: Park Campus aerial

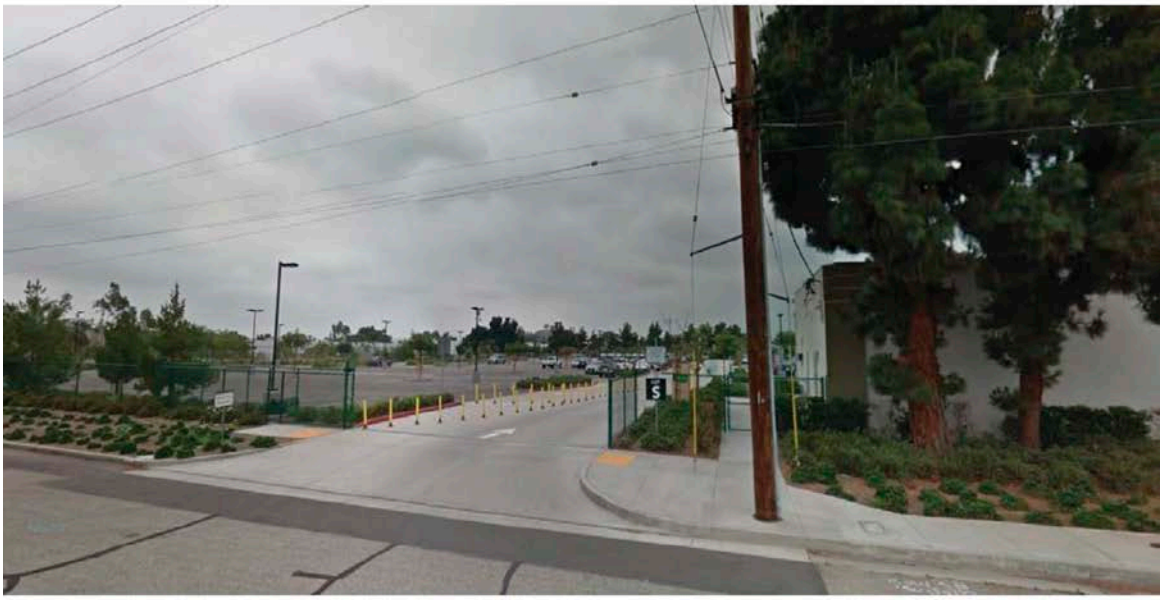

Photo 2: Park Campus looking west

Figure 9 Photographs of Campus West

Photo 1: Campus West aerial

Photo 2: Campus West parking lot looking northeast

Photo 3: Campus West parking lot looking northwest

Photo 4: Campus West parking lot looking south

Light and Glare

The existing campus environments and the immediately surrounding uses have a variety of lighting conditions, from well-lit parking lots, pedestrian pathways, campus facilities and roadways, to residential neighborhoods without any street lights and completely unlit areas in the southern portions of Campus West. During the day, sunlight reflecting from structures, roadways, and cars is the primary source of glare, while nighttime light and glare comes from both stationary and mobile sources. Stationary sources of nighttime light include exterior structure illumination, interior lighting, lighting for sports fields and courts, decorative landscape lighting, and streetlights. Near roadways, driveways, and parking lots, the principal mobile source of nighttime light and glare is vehicle headlights. In general, nighttime lighting levels on and adjacent to the campus are moderate due to the intensity of development in the area. However, nighttime lighting levels on more heavily travelled roadways, such as Arrow Highway and Bonita Avenue, can be higher. Nighttime lighting levels are also higher during athletic events at outdoor facilities on La Verne Campus and Campus West.

Regulatory Setting

The City of La Verne regulates the design of the built environment through its General Plan, Zoning Ordinance, and Specific Plans. These documents prescribe and establish policies and design review procedures. The majority of La Verne Campus is in the City's OTLVSP, and three University properties are in the boundary of the LSP. Park Campus and Campus West areas are in the City's ACSP.

Pursuant to Section 18.64.010 of the City's Municipal Code (Zoning Ordinance), the Specific Plan zone provides for the classification and development of parcels of land as a coordinated, comprehensive project in order to create a superior environment resulting from site-specific community planning. The regulations established therein allow residential, commercial, or industrial land uses and development standards to be created specifically for the project area and still meeting the spirit, intent, and provisions of the City's General Plan and other applicable state laws. The policies and design guidelines provided by the respective specific plans have been incorporated by reference into to the University Master Plan and all development in the Master Plan area will be subject to the City's Development Review procedures (La Verne Municipal Code Section 18.16).

La Verne Campus is located in the "University of La Verne District," "Old Town Mixed-Use District," and "Adaptive Re-Use Districts" of the OTLVSP and the "Institutional Zone" of the City's Zoning Map. Municipal Code Section 18.60.010 states that the Institutional zones are intended for private institutional uses including but not limited to private schools and colleges and their associated uses and facilities. The OTLVSP defers to the previously approved University of La Verne Master Plan for all site-specific development standards. The proposed Master Plan references the OTLVSP's standards for building setbacks, building height, building coverage, and parking requirements.

The Park Campus and Campus West are located in the Industrial and Business Park land use classifications of the Arrow Corridor Specific Plan, respectively. Development standards for the Industrial land use classification are intended to upgrade existing industrial development built under less stringent standards and to provide guidance for more attractive and compatible new developments. Design standards for the Business Park designation are well established and the area is envisioned to include individually designed buildings with a "high-tech" architectural style. No development standards for the Park Campus and Campus are included in the Master Plan. The design of future facilities in these areas must be consistent with the Arrow Corridor Specific Plan design standards and the City's Development Review provisions.

4.1.2 Impact Analysis

Methodology and Significance Thresholds

The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Reactions to the same aesthetic conditions vary according to the viewer. This evaluation compares the existing visual environment of the Plan Area (which corresponds to the existing University campuses, as described above in Section 4.1.1) to the anticipated visual environment after implementation of the proposed Master Plan, analyzing the nature of the anticipated change. It is important to highlight that the proposed Master Plan does not include detailed building designs. Therefore, this analysis largely consists of a review of planned and proposed changes to the arrangement of built space to open space, including building massing and height, not the aesthetics of precise architectural design, which would be reviewed by the City through the applicable development review process. An impact is considered significant if development facilitated by the proposed Master Plan would result in one or more of the following conditions, which are based upon the City of La Verne's environmental checklist, which in turn is based upon the environmental checklist in Appendix G of the state CEQA Guidelines:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

The proposed Master Plan has potential impacts in all of the environmental impact areas listed above. Therefore, all the issue areas above are discussed below under Impacts AES-1 through AES-4.

Project Impacts

IMPACT AES-1 VIEW CORRIDORS

The scale of development proposed in the Master Plan is designed to preserve and enhance the existing view corridors. Thus, implementation of the proposed Master Plan would not significantly block or impede views of scenic vistas. Impacts would be Class III, less than significant.

The City of La Verne General Plan, the OTLVSP, and the ACSP do not identify the Plan Area as a scenic vista or as vantage point to view the scenic vistas of the San Gabriel Mountains and the Glendora Foothills, approximately two miles to the north. As discussed above, because of existing development and structures, mature landscaping, and intervening topography, views of these mountains and foothills are available from only a limited number of locations on and immediately bordering the University campuses. These include locations with large areas of unobstructed open space, such as the athletic fields in the western part of La Verne Campus and the Athletic Complex in the center portion of Campus West. North-south streets, such as A Street through E Street and Wheeler Avenue, also provide expansive views of the mountains, while east-west streets provide more limited views of the mountains along Arrow Highway, Bonita Avenue, and Puddingstone Drive at their intersections with north-south streets. Views from these streets are primarily available between gaps in existing mature landscaping and existing buildings.

Full implementation of the proposed Master Plan on La Verne Campus would involve the demolition and replacement of 10 of the 40 existing buildings, with the newly-designed structures being built over the course of the three phases. During Phase I, four new buildings will be constructed and two existing buildings will be renovated for a net increase of 159,759 square feet. Phase I construction would also include a net loss of 125 parking spaces and new pedestrian promenades/plazas (including the future Gold Line Gateway Plaza near E Street's intersection with the Gold Line). These improvements would replace previously existing buildings located along Bonita Avenue and within the internal portions of La Verne Campus south of Second Street. The pedestrian promenade linking Third Street and Second Street will align with C Street and thus provide views north toward the mountains. During Phase II, two new buildings would be constructed and the Baum Building will be adaptively re-used as a mixed-use project for a net increase of 73,908 square feet. Additional pedestrian and emergency access improvements are also proposed along Third Street between B Street and C Street. The planned Phase II improvements would replace previously existing buildings and would be located inside the campus area, between B Street and C Street behind more prominent campus buildings lining Bonita Avenue. During Phase III, four new buildings would be constructed for a net increase of 169,910 square feet along with a net increase of 498 parking spaces. These Phase III improvements would be located within the internal portions of La Verne Campus, parallel to D Street and south of Second Street between D Street and E Street.

Full implementation of the proposed Master Plan on the Park Campus would not alter the configuration of the existing buildings and parking lots.

Implementation of the proposed Master Plan on Campus West would include the Phase I construction of a bridge over the Marshall Canyon storm water channel to access the eastern portion of Campus West and up to 170 multi-family residential units. Phase II would include the construction of a 60-space parking lot, the University House totaling approximately 5,000 square feet, and the installation of a landscape buffer around the northern, western, and southern boundary of Campus West adjacent to the existing residential uses and the Carrion Adobe. Phase III would include the construction of a 67,000 square foot building in the northwest corner of Campus West, construction of additional landscaping, and roadway/drainage infrastructure. Use of the remaining portions of Campus West remains undetermined and thus, no development is assumed for these areas.

The arrangement of existing and planned buildings, built open space, pedestrian pathways, sidewalks, and internal roadways on La Verne Campus area would be configured within the existing development footprint and thus view corridors would be maintained through areas of the campus towards the foothills and mountains to the north. Similarly, views of scenic vistas from adjacent residential neighborhoods to the west and north would not be significantly impacted, as new building heights would be compatible with existing structures and would be located in the internal portions of the campus.

Within Campus West, where existing topography creates unique opportunities for views of the mountains to the north and south, the topography descending from Arrow Highway to Puddingstone Drive would be maintained and future development would be designed with building heights similar to the surrounding industrial and residential structures. Therefore, the implementation of the proposed Master Plan would not significantly impact scenic vistas and impacts would be less than significant.

MITIGATION MEASURES

No mitigation measures are required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT AES-2 SCENIC RESOURCES

The Plan Area contains scenic resources including buildings, open space, and trees. If implementation of the proposed Master Plan adversely affected these resources, it could have a potentially significant impact. The proposed Master Plan is designed to avoid impacts to such resources, and implementation of design guidelines in the Master Plan, applicable Specific Plans, the City of La Verne Design Review Process, and mitigation measures contained in this EIR would further protect these potentially scenic resources. Impacts would be Class III, less than significant.

According to the City of La Verne General Plan, there are no officially-designated scenic resources on or adjacent to the Master Plan boundaries. The City of La Verne General Plan identifies three historical/visual landmarks; the Hanawalt House, Miller Hall, and the Carrion Adobe located within or adjacent to the Plan Area. See Section 4.3 Cultural Resource for further discussion regarding these buildings. La Verne Campus and Campus

West contain resources that may have aesthetic value, including mature oaks and other trees; building and other structures; public quadrangles and gardens, and other open spaces. As described in Section 2 Project Description, future development would involve activities that would eliminate or alter some of these resources. Potential impacts to these resources are discussed below.

Buildings. Buildings that would be demolished, remodeled, renovated, or relocated under the proposed Master Plan are listed in Table 4 through Table 10 of Section 2, Project Description. They include the following:

- Phase I:
  - Demolish: Portion of Second Street and C Street, "D" Parking Lot, west portion of "I" parking lot, Interfaith Chapel, "O" Parking Lot, and Stu Han Residence Hall
  - New Projects: Academic Building 1, Connecting Mall along Second and C streets, Dedicated Service Yard, Dining/Event Space, Gold Line Gateway Plaza, Meditation Garden/Water Feature, Multicultural Center, North Physical Plant, Second and C streets pedestrian promenades, Residence Hall, Student Dining Plaza, Student Life Quad, and visitor parking
  - Possible Renovations: Brandt Residence Hall, Hoover Building, Landis Academic Center, Mainiero Hall, Miller Hall, Wilson Library
- Phase II:
  - Demolish: Portion of Third Street, Davenport Dining, and Woody Hall
  - New Projects: Third Street pedestrian promenade, Academic Building II, Consolidated Student Services Center
  - Possible Renovations: Abraham Campus Center, Arts and Communications Building, Barkley Building, College of Business and Public Management, and Leo Hall
- Phase III:
  - Demolish: Acquired Buildings North of Oaks Residence Hall, Barkley Annex, Barkley Building, East portion of "E" parking lot, G lot, H lot, H1 lot, H2 lot, Health Services, K lot, Leo Hall, Oaks Residence Hall
  - New Projects: First Street Promenade, Academic/Mixed Use Building, Arrival Plaza/ Historical Grove, Attached retail base, Parking Structure II, Physical Plant East/Pool Support Building, Residence Hall II/Mixed-Use Building, Residence Hall III/Mixed-Use Building, Service Yard, Student Court, Student Recreation Center/Mixed Use, Student Recreation Pool

The majority of the buildings to be demolished or renovated do not rise to the level of being scenic resources, as they are located in areas surrounded by parking lots or ornamental landscaping, in areas adjacent to storm drainage facilities, or within internal portions of the campus not visible from primary roadways surrounding the campuses. The possible exceptions are the Interfaith Chapel, Stu-Han Residence Hall, Brandt Residence Hall, Davenport Dining Hall, and Woody Hall. As described in Section 4.3, Cultural Resources, these buildings have been identified as potentially historic resources for the purposes of CEQA. Therefore, the demolition and/or renovation of these buildings could adversely impact these potentially scenic resources. The potential renovation of these buildings

would be required to be consistent with the design standards established in the OTLVSP. As designed, the new buildings proposed to replace the Interfaith Chapel, the Stu-Han Residence Hall, Woody Hall, and the Brandt Residence Hall along the northern boundary of the campus fronting Bonita Avenue would be limited to three stories and would be designed to function as a prominent campus gateway entrance and would be buffered from the street by streetscape landscaping, gardens, and a water feature and the entrance will frame a formal view corridor terminating at the entry to Founders Hall. Generous streetscape landscaping would partially screen the new structures along Bonita Avenue, B Street, and C Street frontages, thus retaining the existing scenic qualities of the existing streetscapes. Section 4.3, Cultural Resources, provides an assessment of impacts to cultural resources and recommends mitigation measures to offset the demolition, renovation, and replacement of the above-described buildings. The implementation of Mitigation Measures CR-6 through CR-8 would reduce impacts to historic resources as scenic resources to the greatest extent feasible.

No new buildings are proposed as part of the Park Campus. Landscaping is proposed along the perimeter of the parking lot located adjacent to Park Avenue and A Street. Therefore, no impact on scenic resources on or near Park Campus would occur.

The Carrion Adobe, a prominent historical resource, is located approximately 300 feet southwest of Campus West, just north of Puddingstone Drive. The Carrion Adobe site is occupied as a single family home and surrounded by dense trees that obscure views into and out of the site. None of this existing landscape screening would be removed as part of future plans for the development of Campus West. Therefore, no impact on this historic structure would occur.

Open Space. The proposed Master Plan calls for a number of new facilities in previously landscaped areas that currently serve as open space in the northern portion of the site adjacent to Bonita Avenue. However, as discussed above, streetscape and gateway landscape would surround these new buildings. In addition, two new pedestrian promenades would be created along Third Street, between C Street and B Street and along C Street and Second Street within the interior portions of La Verne Campus. The proposed Gold Line Gateway Plaza at the intersection of E Street and 1st Street would include seating and shade, interactive landscaping elements, and an urban park. These new pedestrian-oriented environments would sufficiently offset the removal of open spaces and landscaping by including enhanced paving materials, urban furniture, landscaping and signage, and a human-scale mixed-use promenade. All other facilities proposed under the Master Plan would be located in spaces already occupied by buildings or in surface parking lots. Therefore, impacts on open space as a scenic resource would be less than significant.

Trees. La Verne Campus and Campus West areas of the Master Plan have a number of mature trees. Pursuant to the Master Plan, “Heritage Trees will be managed in accordance with Chapter 18.78 of the La Verne Municipal Code.” The purpose of this code section is to “protect certain trees in order to preserve cultural heritage, maintain and enhance the scenic beauty of the city, improve air quality, abate soil and slope erosion, preserve and enhance property values and promote public health and safety.” Existing heritage trees in

the northern and southeastern portions of La Verne Campus and trees on Campus West could be impacted during implementation of the proposed Master Plan. However, the La Verne Municipal Code requires that potential impacts to heritage trees be evaluated by a certified arborist at the time development is proposed and replacement trees shall be planted if heritage trees are proposed for removal. As shown in the Master Plan, a significant number of trees are proposed along the perimeter and interior portions of La Verne Campus. In addition, a landscape buffer is proposed along the northern, southern, and western portions of Campus West.

While implementation of the proposed Master Plan would lead to the removal of some trees, it would also minimize tree removal where possible and introduce new trees to the Plan Area. After Master Plan implementation, trees would continue to be distributed throughout the Plan Area. With implementation of City policies, codes, ordinances, and the guidelines and practices discussed in the Master Plan, trees would remain a scenic resource in the Plan Area and impacts to those trees as scenic resources would be less than significant.

MITIGATION MEASURES

The above specified guidelines and regulations, including the La Verne Municipal Code tree preservation standards would mitigate any impacts to scenic resources to a less than significant level; therefore, no further mitigation is necessary.

SIGNIFICANCE AFTER MITIGATION

Upon compliance with existing codes and existing Master Plan and Specific Plan design and preservation measures, potential impacts to scenic resources would be reduced to a less than significant level.

IMPACT AES-3 VISUAL CHARACTER AND QUALITY OF PLAN AREA

Development under the proposed master plan would include physical changes to the Plan Area that could degrade its visual character and quality. Future development carried out under the Master Plan would be required to adhere to the guiding principles laid out in the Master Plan, the City's General Plan design principles, and any development or joint use agreements between the University of La Verne and the City. It would also be required to undergo Development Review as required by the City's Municipal Code. Adherence to these policies and requirements, as well as Mitigation Measures AES-1 would reduce impacts related to visual character and quality to a Class II, less than significant with mitigation incorporated.

The proposed Master Plan is a program of improvements planned to be carried out on the Plan Area over a period of approximately 20 years from the date of City approval of the Master Plan. Implementation of the Master Plan over the three phases would include demolition; renovation of 18 buildings, which are located within the existing La Verne Campus; and construction of 28 new improvement projects, including new buildings, supporting infrastructure, parking lots, recreational facilities, and landscaping. If these new facilities (including open spaces) were not designed to fit into, complement, and be

sensitive to their surroundings, or were themselves not of high aesthetic quality, they could potentially degrade the visual character and quality of the Plan Area and its surroundings.

The visual character of the Plan Area is comprised of a varied landscape of both built and natural elements, from the formal setting of La Verne Campus, to the semi-natural but disturbed landscape of Campus West. The buildings on campus display a mix of architectural styles. The campus is noted for its beauty and as a prominent example of well-executed college master planning, so it can be fairly stated that the existing campus displays a high level of visual character and quality.

The elements of the "Vision and Goals" of the proposed Master Plan most relevant to visual character and quality are the following:

- Maintain and improve the existing campus character defined by the relationship between building massing and mature landscape and streetscape (gray versus green ratios)
- Encourage density as means to maximize energy and available land resources. Buildings that concentrate more square footage with a small footprint allow for larger campus open spaces, optimal ground water infiltration, natural ventilation, and reduced heat-island effect
- Create a landscape plan that preserves the legacy and features of the University while transitioning to a dough-tolerant (native and adaptive) planting palette, using water-intensive material with purpose and particular care

These principles build upon, and therefore would not detract from, the existing visual character and quality of the Plan Area. The Master Plan would implement these principles in the following ways:

- Facilities would be expanded in ways consistent with previous studies and plans such as the 2006 Master Plan, the Lordsburg Specific Plan, the Old Town La Verne Specific Plan, and the Arrow Corridor Specific Plan, which have established the desired land use patterns, future development potential, the required level of infrastructure improvement to support the anticipated growth, and urban design guidelines governing the visual quality of all future improvements within the University's La Verne Campus, Park Campus, and Campus West.
- A limited number of structures would be constructed on existing undeveloped open space. The only structures that would occupy an area currently undeveloped would be located on Campus West and would include the University House and associated parking area, the HR/Facilities/OIT Building, and up to 170 residential dwellings. The 5,000 square foot University House, the 67,000 square foot HR/Facilities/OIT Building, and the residential development would be consistent with the existing visual character and quality of this area, including the existing University Athletic Complex, the existing industrial uses located adjacent to Arrow Highway and Wheeler Avenue, and the existing single-family residential neighborhood located west of the Campus West boundary. The remainder of Campus West would remain undeveloped during the 20-year planning period.

- All future development envisioned under the Master Plan would be consistent with the height of the surrounding uses. For example, the new buildings and building renovations proposed along B Street, C Street, and Bonita Avenue, would be limited to three stories, which is consistent with the height of the current buildings; the new buildings located along D Street and within the block south of Second Street (between D Street and E Street) would range between one and five stories, which is consistent with the height of current buildings.
- Existing open spaces would be expanded in targeted areas, such as the east-west pedestrian promenade along Third Street between B and C Street and the north-south/east-west pedestrian promenade along C Street and Second Street just east of Miller Hall, consistent with the vision and goals of the Master Plan.
- Open space, pedestrian, and vehicular circulation improvements would be designed to work together to improve circulation and visibility on campus.

Compliance with the Master Plan Vision and Goals; the design recommendations contained in the LSP, OTLVSP, and the ACSP, and the City's Design Review process would help ensure that projects carried out under the proposed Master Plan would be generally consistent with existing on-campus development, the intent of the campus's foundational Master Plan, and the surrounding uses in terms of organization, form, massing, setback, height, color, materials, and landscaping.

The visual character and quality of the campus is also defined by its open spaces, including landscaping. Implementation of the proposed Master Plan would not adversely affect the amount or arrangement of open space in the Plan Area. While the Master Plan would increase on-campus lot coverage (particularly on Campus West) the majority of new improvements would occur in areas that are currently developed with existing buildings or parking lots. In other areas such as Campus West, the Master Plan would involve little conversion of open space to structures. For example, the Master Plan includes conceptual landscaping plans that illustrate the use of primary street trees along Bonita Avenue, C Street, D Street, E Street, Third Street, and Second Street. The Master Plan envisions prominent landscaping framing the pedestrian promenades and student quads leading to Founders Hall and the Student Life Quad footprint would be expanded to increase the open space resources on La Verne Campus. Perimeter landscaping is also proposed along the northern, western and southern boundaries of Campus West and around the borders of Park Campus.

As described above, the implementation of the Master Plan would change the visual character of the University of La Verne Campuses. However, Chapter 18.16, Development Review, of the La Verne Municipal Code requires the City to review projects to determine the level of visual impact they would have after construction and would ensure that development is consistent with the City's General Plan, applicable zoning and specific plans. The Development Review Committee would also ensure the project implements tree preservation, architectural, site planning, circulation, landscaping and other planning policies. Compliance with this existing code requirement will ensure that the design of the

campus facilities would not individually or cumulatively detract from the visual character and quality of the Master Plan Area or its surroundings.

The Master Plan lists 46 separate projects that could involve demolition and/or construction activities. While construction of each of these projects would be temporary, these construction projects would be carried out over the 20-year life of the Master Plan, and thus implementation of the Master Plan could lead to construction occurring somewhere on campus over a significant portion of this period, creating an impression of ongoing construction activity within the Plan Area. If these construction activities were consistently highly obtrusive and visually unattractive, then they could potentially degrade the visual character and quality of the Plan Area and its surroundings. Mitigation Measure AES-1 is required to ensure that future construction of the envisioned improvements would not individually or cumulatively detract from the visual character and quality of the Master Plan Area or its surroundings.

Mitigation Measures

Mitigation Measure AES-1 Precise Plan Review of Visual Impacts of Construction

Prior to issuance of grading permits for any construction project carried out under the Master Plan, the City's Development Review Committee, during its review of the project (as already required under Chapter 18.16, Development Review Committee, of the La Verne Municipal Code), shall review the temporary construction-related impacts of the project on the visual character and quality of the Plan Area and its surroundings, including its potential cumulative impacts with other concurrent construction projects. If the Committee determines that measures are required during construction to avoid significant impacts in this regard, it shall impose conditions of approval on the project in order to protect the visual character and quality of the area. Examples of such measures include the following:

- **Location of Materials**. Materials and equipment should be minimally visible to the public; the preferred location for materials is onsite or in a construction staging area, with a minimum amount of materials within the public right-of-way of other publicly-accessible areas.
- **Temporary Fencing**. Install opaque temporary fencing at construction sites and staging areas for the duration of construction activities, and ensure that the placement and design of such fencing is sufficient to obstruct views of ground-level construction activities and equipment from the perspective of surrounding streets and publicly-accessible open spaces. Such fencing shall be subject to review by the City's Development Review Committee for visual character and quality.
- **Restoration of Disturbed Areas**. Restore and revegetate any areas disturbed by construction activities outside of fenced-off construction areas as expeditiously as possible.

Significance after Mitigation

Impacts would be less than significant with mitigation incorporated.

IMPACT AES-4. LIGHT AND GLARE

Implementation of the proposed Master Plan would lead to new development in the Plan Area with the potential to create new sources of light and glare. Any future development in the Plan Area would be required to comply with principles and standards contained in the City's General Plan and Municipal Code and the proposed Master Plan specifically designed to reduce lighting impacts. Adherence to these policies and standards would reduce light and glare impacts, but mitigation measures are required to reduce these impacts to Class II, less than significant with mitigation incorporated.

Site illumination serves multiple functions. It enhances visibility and safety along roadways and other public spaces for vehicles, bicyclists, and pedestrians. It can also serve to interpret site plan arrangement by emphasizing pathways, signage, focal points, gathering places, and building entrances.

Implementation of the proposed Master Plan would potentially create new light sources, with any new or remodeled building having the potential to produce light from interior or exterior illumination. Other new light sources may include exterior lighting such as lighting for parking lots, pathways, and pedestrian crossings. If these light sources created significant increases in ambient light levels and/or new sources of glare created by direct or reflected visual exposure to the light source, then the proposed Master Plan could have a significant impact related to light or glare. The City's Development Review process requires a review and approval of "Precise Plans" and the adoption of findings confirming that any future lighting proposed as part of development would be consistent with the General Plan, applicable Specific Plans, zoning, and other applicable ordinances. Compliance with Design Review Committee conditions of approval would reduce potential lighting impacts to a less than significant level.

The exterior of facilities listed in the proposed Master Plan could include reflective surfaces such as glass and metal that could create glare due to reflections from these surfaces. None of the conceptual building designs images included in the Master Plan are highly reflective. Although it is unlikely that future structures would include large expanses of highly reflective materials such as polished metals or glass arranged in such a way as to produce such impacts, the City of La Verne does not specifically prohibit the use of such materials. A potentially significant impact could occur, therefore, if such materials are utilized by causing glare focused on adjacent properties and roadways. Mitigation Measure AES-2 requires that any structure proposed under the Master Plan be reviewed by the City to ensure that the use of any such reflective exterior materials would not create significant glare impacts on surrounding properties or roadways.

MITIGATION MEASURES

MITIGATION MEASURE AES-2. LIGHTING PLAN

In conjunction with site plan development of any project carried out under the Master Plan abutting an offsite residential neighborhood that would include outdoor lighting or produce light spillover, a lighting plan shall be required that minimizes light spillover and conforms to all applicable regulations, including all applicable standards of the La Verne Municipal Code.

MITIGATION MEASURE AES-3. GLARE

Prior to issuance of building permits, any structure proposed under the Master Plan shall be reviewed during the City of La Verne's standard review process to ensure that proposed building materials do not impact roadways or pilots in nearby airspace, create a nuisance for surrounding areas, not create glare in a manner that could endanger motorists on adjacent roadways, or otherwise impact the community. Use of reflective materials such as polished metal or glass shall be prohibited unless the applicant can provide substantial evidence prepared by a qualified professional to the City's Community Development Director that use of such materials will not cause glare impacts on surrounding properties or roadways.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant with mitigation incorporated. These mitigation measures shall be imposed on all projects implemented under the Master Plan.

4.1.3 Cumulative Impacts

Cumulative impacts to the aesthetics of the Plan Area and its surroundings would derive from visible changes envisioned under the proposed Master Plan, as well as growth and development of surrounding areas envisioned under the La Verne General Plan and in specific development proposals for surrounding properties as described in Chapter 3.0, Environmental Setting. These projects represent a substantial amount of development and redevelopment that would create physical changes with potential aesthetic impacts. Population growth envisioned under and enabled by applicable planning documents could also lead to further development, also with potential aesthetic impacts. It has been determined that the proposed Master Plan would not have an unmitigable significant adverse impact on the aesthetics of the Plan Area and its surroundings, with enforcement of applicable regulations and incorporation of mitigation measures. The same regulations, policies, and procedures that would help avoid adverse aesthetic impacts from the proposed Master Plan, such as City development review processes (including architectural review), would also serve to avoid negative aesthetic impacts from cumulative development. Cumulative impacts related to aesthetics would be less than significant.

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4.2 Air Quality

This section analyzes the proposed Master Plan's potential temporary and long-term impacts to local and regional air quality from sources such as construction emissions, operational emissions, and carbon monoxide (CO) hotspots; as well as its consistency with the regional air quality management plan (AQMP). Greenhouse gas emissions are discussed in Section 4.5, Greenhouse Gas Emissions.

4.2.1 Setting

Climate and Meteorology

The semi-permanent high-pressure system west of the Pacific coast strongly influences California's weather. It creates sunny skies in the summer and influences the pathway and occurrence of low-pressure weather systems that bring rainfall to the area in the months of October through April. During the day, the predominant wind direction is from the west and southwest, and at night, wind direction is from the north.

These predominant wind patterns are broken during the winter by storms coming from the north and northwest and by episodic Santa Ana winds. Santa Ana winds are strong northerly to northeasterly winds that originate from high pressure areas centered over the desert of the Great Basin. These winds are usually warm, very dry, and often full of dust. They are particularly strong in the mountain passes and at the mouths of canyons.

La Verne has mild winters and hot, dry summers. The average summer high temperature in July and August is 89°F, with an average low temperature in July and August of 59°F. During the hottest months, daytime temperatures in La Verne can exceed 100°F.

Two types of temperature inversions (warmer air on top of colder air) are created in the area: subsidence and radiational (surface). A regional subsidence inversion occurs when air from a higher elevation flows downward to a lower elevation. As the air decreases in elevation its temperatures rises as it becomes increasingly compressed. In the South Coast Air Basin air flowing downward from Angeles Crest and the San Bernardino Mountains slides over top of the cool marine air. This type of inversion can occur throughout the year, but is most evident during the summer months. Surface or radiational inversions are formed by the more rapid cooling of air near the ground during the night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed; the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion. The primary air pollutant of concern during the subsidence inversions is ozone, while the greatest pollutant problems during surface inversions are CO and NO_x.

Air Pollution Regulation

The federal and state Clean Air Acts regulate the emission of airborne pollutants from various mobile and stationary sources. The United States Environmental Protection Agency (USEPA) is the federal agency designated to administer air quality regulations, while the

California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency. These agencies have established ambient air quality standards for the protection of public health. Local air quality management control and planning is provided through regional Air Pollution Control Districts (APCD) established by the CARB for the 14 air basins throughout the state. The CARB is responsible for control of mobile emission sources, while the local APCDs are responsible for control of stationary sources and enforcing regulations. La Verne is located in the South Coast Air Basin (Basin), which is under the jurisdiction of the SCAQMD.

Federal and state standards have been established for ozone, CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 10 microns and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (refer to Table 12). California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. Table 12 lists the current federal and state standards for criteria pollutants.

Table 12 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	–	–
	24-Hour	–	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	–	20 $\mu g/m^3$
	24-Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
$PM_{2.5}$	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$
	24-Hour	35 $\mu g/m^3$	–
Lead	30-Day Average	–	1.5 $\mu g/m^3$
	3-Month Average	0.15 $\mu g/m^3$	–

ppm = parts per million
µg/m3 = micrograms per cubic meter
Source: CARB

SCAQMD is required to monitor air pollutant levels in the Basin to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in “attainment” or “non-attainment.” The Basin is in non-attainment for the federal standards for ozone and $PM_{2.5}$. In addition, the Basin is in non-attainment for the state standards for ozone, PM_{10}, and $PM_{2.5}$. The non-attainment status is a result of several factors, the primary ones being the naturally adverse meteorological conditions that limit

the dispersion and diffusion of pollutants, the limited capacity of the local air shed to eliminate pollutants from the air, and the number, type, and density of emission sources within the Basin. Thus, the Basin currently exceeds several state and federal ambient air quality standards and is required to implement strategies that would reduce the pollutant levels to recognized acceptable standards. Characteristics of ozone, CO, NO_2, and suspended particulates are described below.

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG). Nitrogen oxides are formed during the combustion of fuels, while reactive organic compounds are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide. Carbon monoxide (CO) is a local pollutant that is found in high concentrations only near the source. The major source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 ppm may occur. Nitrogen dioxide absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM10 and acid rain.

Suspended Particulates. PM_{10} is particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM_{10} and $PM_{2.5}$ are by-products of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes, as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs

and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Current Air Quality

The closest air quality monitoring station to the site is the Pomona Station, located at 924 North Garey Avenue in Pomona, approximately three miles southeast of the Plan Area. This station monitors all criteria pollutants, except PM_{10} and $PM_{2.5}$. The next nearest monitoring station is the Glendora-Laurel Station, located at 840 Laurel Avenue in Glendora, approximately seven miles northwest of the Plan Area. Therefore, PM_{10}, and $PM_{2.5}$ data was obtained from the Glendora-Laurel Station. Air quality at these two stations is representative of the ambient air quality in and around the Plan Area. Table 13 indicates the number of days that each of the standards has been exceeded at the closest monitoring station. As shown, the ozone concentration exceeded the state standard 12 times in 2013, 22 times in 2014 and 30 times in 2015. PM_{10} and $PM_{2.5}$ federal exceedances data was missing for 2013-2015 at both stations. No exceedances of either the state or federal standards for NO_2 or CO have occurred at these monitoring stations in the vicinity of the Plan Area in the last three years.

Table 13 Ambient Air Quality Data

Pollutant	2013	2014	2015
Ozone, ppm - Worst Hour	0.125	0.123	0.136
Number of days of State exceedances (>0.09 ppm)	12	22	30
Number of days of Federal exceedances (>0.12 ppm)	1	0	2
Carbon Monoxide, ppm - Worst 8 Hours	*	*	*
Number of days of State/Federal exceedances (>9.0 ppm)	*	*	*
Nitrogen Dioxide, ppm - Worst Hour	78.8	88.9	72.3
Number of days of State exceedances (>0.25 ppm)	0	0	0
Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours [1]	100.7	78.0	100.6
Number of samples of State exceedances (>50 $\mu g/m^3$)	*	*	*
Number of samples of Federal exceedances (>150 $\mu g/m^3$)	0	0	0
Particulate Matter <2.5 microns, $\mu g/m^3$ Worst 24 Hours[1]	78.7	53.5	86.5
Number of samples of Federal exceedances (>35 $\mu g/m^3$)	*	*	*

Pomona Monitoring Station

[1] Data for PM10 and PM2.5 are not available at the Pomona Monitoring Station. Data sourced from the Glendora-Laurel Monitoring Station.

* insufficient data

Source: California Air Resources Board, 2013, 2014, 2015 Annual Air Quality Data Summaries available at *http://www.arb.ca.gov/adam/topfour/topfour1.php*, accessed September 2016

Air Quality Management

Under state law, SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the Basin is in non-compliance. SCAQMD aims to update the plan every three years. Each reiteration of the AQMP is an update of the previous plan and has a 20-year horizon. SCAQMD has published the draft of their 2016 AQMP, which is a comprehensive and integrated plan primarily focused on addressing the ozone and $PM_{2.5}$ standards (SCAQMD 2016).

The 2016 Draft AQMP was prepared to ensure continued progress towards clean air and comply with state and federal requirements. This AQMP builds upon the approaches taken in the 2012 AQMP for the Basin for the attainment of the federal ozone and $PM_{2.5}$ standards. The 2016 Draft AQMP highlights the pollutant reductions needed and the need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the Clean Air Act.

Additionally, the 2016 Draft AQMP requires that three standards have new attainment demonstrations: the 8-hour ozone National Ambient Air Quality Standards (NAAQS) established in 2008 (2008 8-hour Ozone), the annual $PM_{2.5}$ NAAQS established in 2012 (2012 annual $PM_{2.5}$), and the 24-hour PM2.5 NAAQS established in 2006 (2006 24-hour $PM_{2.5}$). However, given the overlaps in emissions and control strategies for other yet-to-be-attained NAAQS, the 2016 Draft AQMP will also include revisions to the attainment demonstrations for two additional standards: the 1997 8-hour ozone NAAQS and the 1979 1-hour ozone NAAQS. The 2016 Draft AQMP proposes attainment demonstration of the federal 8-hour ozone and $PM_{2.5}$ standards through a more focused control of NOx emissions by 2023. To ensure air quality goals will be met while maximizing benefits and minimizing adverse impacts to the regional economy, the following policy objectives guided the development of the 2016 Draft AQMP:

- Eliminate reliance on future technologies (CAA §182(e)(5)) measures to the extent feasible.
- Calculate and take credit for co-benefits from other planning efforts.
- Develop a strategy with fair-share emission reductions at the federal, state, and local levels.
- Invest in strategies and technologies meeting multiple objectives regarding air quality, climate change, air toxics exposure, energy, and transportation.
- Seek significant funding for incentives to implement early deployment and commercialization of zero and near-zero technologies.
- Enhance the socioeconomic analysis and pursue the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets
- Prioritize non-regulatory, innovative and “win-win” approaches for emission reductions.

SCAQMD is responsible for limiting the amount of emissions that can be generated throughout the Basin by various stationary, area, and mobile sources. Specific rules and regulations have been adopted by the SCAQMD Governing Board, which limit the emissions that can be generated by various uses/activities and that identify specific pollution reduction measures that must be implemented in association with various uses and activities. These rules not only regulate the emissions of the federal and state criteria pollutants but also Toxic Air Contaminants (TAC) and acutely hazardous materials. The rules are also subject to ongoing refinement by SCAQMD.

SCAQMD rules applicable to the proposed Master Plan are listed below.

- Rule 403 (Fugitive Dust) requires the use of stringent best available control measures to minimize PM_{10} emissions during grading and construction activities. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust (see also Rule 1186).
- Rule 445 (Wood-Burning Devices) requires that no wood-burning devices are installed into any new development. Rule 445 is intended to reduce the emission of particulate matter from wood-burning devices.
- Rule 1113 (Architectural Coatings) requires reductions in the volatile organic compound (VOC) content of coatings, with a substantial reduction in the VOC content limit for flat

coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

- Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) requires that the owner or operator of any demolition or renovation activity have an asbestos survey performed prior to demolition and provide notification to SCAQMD prior to commencing demolition activities.
- Emissions sources subject to these rules are regulated through SCAQMD's permitting process. Through this permitting process, SCAQMD also monitors the amount of stationary emissions being generated and uses this information in developing AQMPs.

Under CEQA, SCAQMD is an expert commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the Federal Clean Air Act, SCAQMD has adopted federal attainment plans for ozone and $PM_{2.5}$. SCAQMD reviews projects to ensure that they would not: 1) cause or contribute to any new violation of any air quality standard; 2) increase the frequency or severity of any existing violation of any air quality standard; or 3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan.

Sensitive Receptors in the Plan Area

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases. The majority of sensitive receptor locations are therefore residences, schools, and hospitals. Potentially sensitive receptors on La Verne Campus include existing students, faculty, and staff. Sensitive receptors located outside of the campuses, but within the vicinity of the Plan Area, include single family residences within two blocks north, east, and west of La Verne Campus, Hillcrest Retirement Community (approximately 0.12 miles north of La Verne Campus), Marion Roynon Elementary School (0.2 miles northeast of La Verne Campus), Damien High School (approximately 0.2 miles north of Campus West), and the David and Margaret Home (approximately 0.2 miles north of Campus West).

4.2.2 Impact Analysis

Methodology and Significance Thresholds

Based on Appendix G of the State CEQA Guidelines a project may be deemed to have a significant impact on air quality if it would:

1. Conflict with or obstruct the implementation of the regional air quality management plan

2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation
3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)
4 Expose sensitive receptors to substantial pollutant concentrations
5 Create objectionable odors affecting a substantial number of people

This air quality analysis conforms to the methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* (1993). The handbook includes thresholds for emissions associated with both construction and operation of proposed projects.

Construction activities associated with development would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. Some of this equipment would be used during grading activities as well as when structures are constructed. It is assumed that all construction equipment used would be diesel-powered. Construction emissions associated with development of the proposed Master Plan were calculated using the California Emissions Estimator Model (CalEEMod) developed for SCAQMD by estimating the types and number of pieces of equipment that would be used onsite during each of the construction phases. See Appendix B for the assumptions and outputs from CalEEMod. The impact from construction emissions was determined using the regional and localized thresholds established by SCAQMD and published in the *CEQA Air Quality Handbook*.

Operational emissions associated with onsite development were estimated using CalEEMod. Operational emissions include mobile source emissions, energy emissions, and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Plan Area associated with operation of onsite development. Vehicle trip generation rates were taken from the Traffic Impact Assessment prepared by Linscott, Law and Greenspan Engineers. For a detailed description of vehicle trip estimates, please refer to Section 4.13, *Transportation*. Emissions attributed to energy use include electricity and natural gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products and architectural coating. To determine whether a regional air quality impact would occur, the increase in emissions was compared to SCAQMD's recommended regional thresholds for operational emissions.

<u>Regional Significance Thresholds</u>. SCAQMD has developed specific numeric thresholds that apply to projects within the Basin. SCAQMD has established the following significance thresholds for construction activities within the Basin:

- 75 pounds per day of ROG
- 100 pounds per day of NO_X
- 550 pounds per day of CO
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

SCAQMD has also established the following significance thresholds for project operations within the Basin:

- 55 pounds per day of ROG
- 55 pounds per day of NO_X
- 550 pounds per day of CO
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

Localized Significance Thresholds. In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LST) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook*. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that would not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area, project size, and distance to the sensitive receptor. However, LSTs apply only to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2003). As such, LSTs for operational emissions do not apply to onsite development, as the majority of emissions would be generated by cars on the roadways.

LSTs have been developed for emissions within construction areas up to five acres in size. The SCAQMD provides lookup tables for project sites that measure one, two, or five acres. The Plan Area is comprised of three campuses covering a total of 97 acres. However, this analysis assumes that there would be no more than five acres under active construction at one time, and relies on the five-acre LSTs for significance determinations. For example, the campus improvements proposed within the northwest corner of La Verne Campus, along Bonita Avenue between B Street and C Street is approximately 4.7 acres and is within 50 meters of existing residential uses. Therefore, the five-acre LSTs provide a more stringent threshold for construction emissions compared to the analysis of emissions over a larger area. According to the SCAQMD's publication, *Final Localized Significant Thresholds Methodology*, the use of LSTs is voluntary, to be implemented at the discretion of local agencies. LSTs for construction on a five-acre site are shown in Table 14. La Verne falls under Source Receptor Area 10, Pomona/Walnut Valley, and the LST thresholds in Table 14 are consistent with SRA 10.

Table 14 Southern California Air Quality Management District Localized Significance Thresholds for Construction

	Allowable emissions as a function of receptor distance in feet from a five acre site (lbs/day)				
Pollutant	**82**	**164**	**328**	**656**	**1,640**
Gradual conversion of NO_x to NO_2	236	265	330	426	681
CO	1,566	2,158	3,691	7,011	23,450
PM_{10}	12	36	51	82	175
$PM_{2.5}$	7	9	15	28	93

Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2, accessed online September 2016.

CO Hotspots Thresholds. The significance of localized project impacts for CO under CEQA depends on whether ambient CO levels in the vicinity of a project site are above or below state and federal CO standards. If ambient levels are below the standards, a project would have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, project emissions would be significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

The SCAQMD recommends that screening for possible elevated CO levels should be conducted for severely congested intersections experiencing LOS E or F with project traffic where a significant project traffic impact may occur.

AQMP Consistency. Criteria for determining consistency with the SCAQMD's AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook, and includes the following:

- The project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- The proposed project will not exceed the assumptions in the AQMP based on the year of project buildout.

Project Impacts and Mitigation Measures

IMPACT AQ-1. CONSTRUCTION EMISSIONS

Individual construction projects in the proposed Master Plan would be staggered over the life of the Plan. Average construction emissions over the life span of the Master Plan would not exceed SCAQMD thresholds for any criteria pollutants. However, construction of multiple project phases concurrently could exceed SCAQMD thresholds for construction emissions. Therefore, impacts would be Class II, less than significant with mitigation incorporated.

Construction emissions estimates were generated using the CalEEMod model (Version 2013.2.2). The emissions estimates generated from CalEEMod assume concurrent construction of all individual projects within the proposed Master Plan. Because the individual projects within proposed Master Plan would not be performed concurrently, these estimates provide a conservative, worst case scenario for construction emissions. The construction phases used in the analysis include: demolition, site preparation, grading, building construction, architectural coating, and paving. Construction equipment would include tractors, loaders, backhoes, cranes, forklifts, dozers, pavers, air compressors, and saws (see Appendix B for construction equipment mixes utilized in analysis). The following mandatory emission reduction measures were included:

- SCAQMD Rule 403 – Requires dust control measures and 15 mph off-road vehicle speeds
- SCAQMD Rule 445 – Prohibits installation of wood burning hearths in new development
- SCAQMD Rule 1113 – Requires the use of low VOC paint 50 g/L for interior residential, 100 g/L exterior residential, 150 g/L interior commercial/institutional, and 150 g/L commercial/institutional exterior

Table 15 shows the estimated worst case daily emissions, if all projects under the Master Plan were built concurrently over a three year period. However, individual projects would be staggered throughout the lifespan of the proposed Master Plan, defined as approximately 20 years from the date of City approval. Therefore, total estimated construction emissions were averaged over a 20 year period.

Table 15 Estimated Construction Maximum Daily Air Pollution Emissions (lbs/day)

	Emissions (lbs/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
2017	6.2	69.7	56.8	21.0	12.5
2018	5.2	35.7	53.5	7.3	3.1
2019	60.8	32.4	50.8	7.1	2.9
Total	72.2	137.8	161.1	35.4	18.5
Project Average	3.61	6.9	8.1	1.8	0.9
SCAQMD Threshold	75	100	550	150	55
Threshold Exceeded?	No	No	No	No	No
LST Threshold	N/A	236	1,566	12	7
Threshold Exceeded?	No	No	No	No	No

Notes: see Appendix B for CalEEMod calculations. Winter calculations shown.

As shown in Table 15, average daily construction emissions over the 20 year life of the Master Plan would range from approximately 3.61 pounds per day (ROG) to 8.1 lbs/day (CO).The LST thresholds only apply to those emissions generated by onsite construction activities, such as emissions from onsite grading, and do not apply to offsite mobile emissions. The LST thresholds for sensitive receptors 82 feet from the Plan Area were used to illustrate the closest receptors, which are student residents within the La Vern Campus and single family residential units (located around the perimeter of La Verne Campus and Campus West). Emissions of PM_{10} and $PM_{2.5}$ could exceed SCAQMD LSTs in 2017, if all projects under the Master Plan were constructed concurrently. However, individual projects would be staggered throughout the lifespan of the proposed Master Plan. As demonstrated in Table 15, average daily emissions of PM_{10} would be less than 2 lbs/day and $PM_{2.5}$ would be less than 1 lb/day over the life of the plan.

If all projects were built concurrently, construction emissions have the potential to exceed SCAQMD's regional and local significance thresholds. However, no specific development projects are proposed at this time and the projects would be built in phases. In order to quantify the level of emissions associated with individual development projects and compare emissions to established project-level SCAQMD thresholds, specific information regarding the size and type of development and the location of receptors would be needed. Any project proposed in the Plan Area would be required to undergo CEQA review, which would include analysis of construction emissions. Appropriate mitigation measures would be identified at that time and would generally correspond to the following.

MITIGATION MEASURES

The following Mitigation Measures shall be implemented as part each individual project developed in the Plan Area:

Mitigation Measure AQ-1 Construction Scheduling

Construction scheduling for any construction projects carried out under the proposed Master Plan shall be established such that buildout Phase I occurs over the period of 2016-2021, Phase II buildout occurs over the period of 2022-2028, and Phase III buildout occurs over the period of 2029 to 2035 to ensure that the SCAQMD daily thresholds for emissions of reactive organic gases (ROG) are not exceeded. Prior to issuance of grading permits, the University of La Verne shall submit a construction schedule to the City of La Verne Community Development Director to verify that scheduling of construction activities conforms to this mitigation measure. If more than one phase of development is to be undertaken concurrently, and the City of La Verne determines that an air quality study completed by University of La Verne demonstrates that construction emissions for those activities will not exceed applicable thresholds, then those activities may be carried out concurrently.

Mitigation Measure AQ-2 Maximum Vehicle Speed

All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

Mitigation Measure AQ-3 High Wind Construction Suspension

All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

Mitigation Measure AQ-4 Idling Times

Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Clear signage shall be provided for construction workers at all access points.

Mitigation Measure AQ-5 Equipment Maintenance

All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Mitigation Measure AQ-6 NO_x and Particulate Matter Reduction

All construction equipment, diesel trucks, and generators must be equipped with Best Available Control Technology for emission reductions of mono-nitrogen oxides (NO_x) and particulate matter (PM).

Significance after Mitigation

Implementation of Mitigation Measure AQ-1 would ensure that impacts resulting from overlapping construction activities under the proposed Master Plan would not exceed SCAQMD significance thresholds. Further, implementation of Mitigation Measures AQ-2 through AQ-6 would reduce potential emissions from construction equipment and activities

to a less than significant level. In addition to the above Mitigation Measures, individual projects with the potential to generate significant air quality impacts would be required to undergo site specific CEQA review, which could identify any required additional site specific mitigation measures. With implementation of Mitigation Measures AQ-1 through AQ-6, air quality impacts would be less than significant.

IMPACT AQ-2. OPERATION EMISSIONS

Operation of the buildings and facilities called for under the Master Plan would generate air pollutant emissions but not in excess of SCAQMD operational significance thresholds for any criteria pollutant. Therefore, operational air quality impacts would be Class III, less than significant.

Long-term, or operational, air pollutant emission impacts are those associated with stationary sources and mobile sources involving any changes related to implementation of the proposed Master Plan. Implementation of the proposed Master Plan would result in a net increase in the number of students and built facilities on campus. It would result in net increases, therefore, in both stationary and mobile source emissions. The stationary source emissions would come from additional natural gas consumption for buildings, and electricity for building and parking area lighting. Vehicle trips related to implementation of the proposed Master Plan are dependent on the number of students travelling to and from campus on a daily basis. A detailed discussion of daily vehicle trips is included in Section 4.13, Transportation. This analysis conservatively assumes a worst case scenario where all enrolled students, including full time enrollment (FTE), partial enrollment, online enrollment, would be travelling to and from the campus on the same day. Table 16 provides an assessment of worst case operational pollution emissions on a daily basis.

Table 16 Estimated Worst Case Operational Maximum Daily Air Pollution Emissions (lbs/day)

	Emissions (lbs/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	21.9	0.2	14.3	0.1	0.1
Energy	0.2	1.7	1.2	0.1	0.1
Mobile	10.1	24.9	104.3	23.0	6.4
Total	32.2	26.8	119.9	23.2	6.6
SCAQMD Threshold	55	55	550	150	55
Exceed Threshold?	No	No	No	No	No

Notes: see Appendix B for CalEEMod calculations. Winter calculations shown.

Operational emissions associated with full buildout of the proposed Specific Plan are shown in Table 16. Overall operational emissions associated with buildout of the proposed Specific Plan would not exceed applicable SCAQMD thresholds for criteria pollutants. Therefore impacts would be less than significant.

MITIGATION MEASURE

No mitigation would be required at this time.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT AQ-3. TRAFFIC EMISSIONS

Vehicle trips generated by development called for under the proposed Master Plan, and relative to other cumulative traffic in the area, would incrementally increase carbon monoxide (CO) levels in and near the Plan Area, and would potentially contribute to the creation of a CO hotspot at the intersections of A Street/Arrow Highway, D Street/Bonita Avenue, and E Street-Fairplex Drive/Arrow Highway. However, with implementation of mitigation measures required to improve the level of service (LOS) at the intersection of A Street/Arrow Highway and E Street-Fairplex Drive/Arrow Highway, CO levels would remain within state and federal standards. Further, average daily trips at the intersection of D Street/Bonita Avenue would not generate CO levels which would exceed state or federal standards. This impact would be Class II, less than significant with mitigation incorporated.

As previously discussed, elevated levels of CO may be found near areas of high traffic volumes. CO emissions are a function of vehicle idling time, meteorological conditions and traffic flow. At the Pomona monitoring station, the station closest to the University of La Verne Campus that measures CO, the maximum 8-hour CO level recorded was 1.47 parts per million (ppm) in 2012, approximately one-fifth of the 9 ppm state and federal 8-hour standard.

Although CO is not expected to be a major air quality concern in La Verne, elevated CO levels can occur at or near intersections that experience severe traffic congestion. A project's localized air quality impact is considered significant if the additional CO emissions resulting from the project create a "hot spot" where the California 1-hour standards of 20.0 ppm or the 8-hour standard of 9 ppm is exceeded. These standards have been set at a level that protects the public from the health effects of CO discussed in Section 4.2.1. Pursuant to SCAQMD guidance, a CO hotspot analysis should be conducted for intersections where the proposed project would have a significant impact at a signalized intersection, causing the Level of Service (LOS) to change to E or F, or when the volume to capacity ratio (V/C) increases by two percent or more as a result of a proposed project for intersections rated D or worse (SCAQMD 2003).

As discussed in Section 4.13, Transportation, the traffic study for the proposed Master Plan (Linscott Law & Greenspan Engineers 2016, provided in Appendix E) identified that buildout of the different phases of the proposed Master Plan could result in potentially significant impacts to the following intersections:

- Phase I Project
  - Int. No. 6: B Street/Bonita Avenue (Existing with Project Impact Only)
- Phases I & II Project
  - Int. No. 6: B Street/Bonita Avenue (Existing with Project Impact Only)

  - Int. No. 11: D Street/Bonita Avenue (Year 2028 with Project Impact Only)
- Project Build-out (Phases I, II & III)
  - Int. No. 5: A Street/Arrow Highway (Year 2035 with Project Impact Only)
  - Int. No. 6: B Street/Bonita Avenue (Existing with Project Impact Only)
  - Int. No. 11: D Street/Bonita Avenue (Year 2035 with Project Impact Only)
  - Int. No. 17: E Street-Fairplex Drive/Arrow Highway (Year 2035 with Project Impact Only)

Phase I

As discussed in Section 4.13, Transportation, currently intersection number 5 and intersection number 6 currently operate at F during a.m. and p.m. peak hours. However, only intersection number 6 would have a significant impact under the existing plus project scenario. Intersection number 6 was analyzed under the current two-way stop control operation. However, the City of La Verne is currently completing the installation of a traffic signal at this location. This is anticipated to improve the LOS at this intersection to LOS C or better through full buildout of the proposed Master Plan. Therefore, impacts to air quality would be less than significant.

Phases I and II

Buildout of Phase I and II of the proposed Master Plan would generate approximately 178 vehicle trips during a.m. peak hours and 194 vehicle trips during p.m. peak hours, which would result to potentially significant impacts to intersection number 11 under the year 2028 with plus project scenario (LLG 2016, Appendix F). The increase in trips would result in and estimated total of 1,877 peak hour trips through intersection number 11. A standard rule for estimating average daily trips (ADT) through an intersection is that ADT equals roughly ten times peak hour trips; therefore, a total of 18,770 daily trips are anticipated through intersection number 11. This is anticipated to reduce the LOS of intersection number 11 from LOS B (a.m.) and LOS C (p.m.) to LOS D (a.m.) and LOS E (p.m.). The traffic study determined impacts during p.m. peak hours at intersection number 11 to be potentially significant and unavoidable.

A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin that would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the Interstate 405 Freeway. The concentration of CO at this intersection was 4.6 ppm, well below the 35-ppm 1-hour CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day. The estimated 18,770 daily trips at intersection number 11 is approximately 19 percent of the traffic volume at the location where the highest CO concentration in the region occurs. Furthermore, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future land use conditions would be substantially lower than those under existing conditions. Thus, even though there may be incrementally

more traffic congestion at intersection 11 due to the proposed project, local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the one-hour or eight-hour ambient air quality standards for CO. Therefore, impacts to air quality would be less than significant.

Phase I, II, and III

Full buildout of the proposed Master Plan would generate approximately 289 vehicle trips during a.m. peak hours and 367 vehicle trips during p.m. peak hours, which would result in potentially significant impacts to intersection numbers 5, 11, and 17 in the year 2035 plus project scenario (LLG 2016, provided in Appendix E). Intersection 5 currently operates at LOS F during a.m. and p.m. peak hours and would have an increase in delay of greater than two percent with full buildout of the Master Plan. Intersection 17 currently operates at LOS B (a.m.) and LOS C (p.m.) and would decrease to LOS C (a.m.) and LOS D (p.m.). However, implementation of traffic improvements described in Mitigation Measure T-1 in Section 4.13, Transportation, would improve LOS at intersection number 5 to better than current conditions and would improve intersection number 17 to LOS C under the year 2035 plus project scenario. Therefore, impacts to air quality would be less than significant.

Full buildout of the proposed Master Plan would result in approximately 23,020 daily vehicle trips through intersection number 6. This is approximately 23 percent of the 100,000 daily vehicle trips where the highest CO concentration in the region occurs discussed above. Further, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future land use conditions would be substantially lower than those under existing conditions. Therefore, impacts to air quality would be less than significant.

MITIGATION MEASURE

Mitigation Measure T-1 described in Section 4.13, Transportation, would ensure that elevated CO levels would not occur at intersections 5 and 17. No further mitigation would be required at this time. However, any project proposed for the Plan Area would be required to undergo CEQA review that would include analysis of construction emissions. Any significant increases in CO levels identified during individual project level CEQA review would be required to implement mitigation measures designed to reduce CO emission levels to the greatest extent feasible.

SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measure T-1 would improve LOS at intersection 5 to better than existing levels and would improve LOS at intersection 17 to LOS C. Therefore, impacts would be less than significant.

IMPACT AQ-4. POPULATION GROWTH

Implementation of the proposed Master Plan could generate population growth as it would potentially increase the campus population by 782 full time equivalent students and 132 staff. However, such growth would be within the population projections upon which the SCAQMD AQMP is based. Therefore, impacts associated with AQMP consistency would be Class III, less than significant.

As described in the Methodology and Significance Thresholds above, a significant impact would occur if implementation of the proposed Master Plan would conflict with or obstruct implementation of the AQMP for the Basin. Although most development projects would have an incremental adverse impact on air quality in the Basin, of primary concern is that project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible.

According to the SCAQMD Handbook, the purpose of the consistency finding is to determine whether a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus whether it would interfere with the region's ability to comply with federal and state air quality standards. If a project is inconsistent, local governments need to consider project modifications or inclusion of mitigation to eliminate the inconsistency. Consistency with the AQMP implies that a project is consistent with the goals, objectives and assumptions in the respective plan to achieve the federal and state air quality standards.

Per the SCAQMD Handbook, there are two main indicators of a project's consistency with the AQMP:

- Whether the project would increase the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and
- Whether the project would exceed the AQMP's assumptions for yearly increments, based on the year of project buildout and phase.

As indicated under Impact AQ-2, emissions associated with implementation of the proposed Master Plan would not exceed SCAQMD thresholds; therefore, the proposed Master Plan satisfies the first criteria for consistency with the AQMP. In addition, implementation of the proposed Master Plan would not result in the formation of CO hotspots from the increase of traffic at study intersections (see Impact AQ-3).

A project may also be inconsistent with the AQMP if it would generate population, housing or employment growth exceeding the forecasts used in the development of the AQMP. The Draft 2016 AQMP, the most recent AQMP prepared by SCAQMD, incorporates in part local city general plans and SCAG's 2016 Regional Transportation Plan socioeconomic forecast projections of regional population, housing and employment growth. However, this analysis is based on the adopted 2012 AQMP, which incorporates population projections from the 2012 SCAQ Regional Transportation Plan and Sustainable Community Strategy (RTP/SCS).

As discussed in Section 4.10, Population and Housing, the proposed Master Plan would allow an expansion of enrollment at University of La Verne of 782 full time equivalent (FTE) students over an approximate 20-year time frame from the date of City approval of the Master Plan. The proposed Master Plan would also result in an increase in faculty and staff at the University. Assuming an increase in faculty and staff proportional with the increase in students resulting from Master Plan implementation, the total increase in faculty and staff would be approximately 132 by 2035. This analysis assumes that all 782 new full-time equivalent students and 132 new staff and faculty would contribute to a total direct population growth of 914 students, faculty, and staff. This increase, when compared to the existing city population of 33,200 (DOF 2016), would add up to 34,114 persons in La Verne, an increase of approximately 2.7 percent.

As discussed above, the 2012 AQMP uses population forecasts from the 2012 RTP/SCS as well as individual City's General Plan estimates. The SCAG 2012 RTP/SCS forecasts that the population of La Verne will be 35,600 in 2035. Therefore, direct population growth associated with buildout of the proposed Master Plan would not contribute to the City's exceedance of SCAG's growth forecasts. Additionally, implementation of the proposed Master Plan would not produce emissions in exceedance of SCAQMD thresholds. Therefore, the Master Plan would not conflict with or obstruct the implementation of the SCAQMD AQMP. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

4.2.3 Cumulative Impacts

SCAQMD's approach to determining cumulative air quality impacts for criteria air pollutants is to first determine whether or not the proposed project would result in a significant project-level impact to regional air quality based on SCAQMD significance thresholds. If the project does not exceed SCAQMD thresholds, then the lead agency needs to consider the additive effects of related projects only if the proposed project is part of an ongoing regulatory program or is considered in a Program EIR, and the related projects are located within approximately one mile of the proposed project site. If there are related projects within the vicinity (one-mile radius) of the project site, that are part of an ongoing regulatory program or are considered in a Program EIR, then the additive effect of the related projects should be considered.

As the proposed Master Plan is not part of an ongoing regulatory program, the SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed under Impact AQ-2, implementation of the proposed Master Plan would result in an increase in daily operational emissions. However, emissions would not exceed the SCAQMD thresholds. As discussed under Impact AQ-3, traffic generated by implementation of the proposed Master Plan, together with

other cumulative traffic in the area, would not exceed state and federal standards after the implementation of all required mitigation measures.

Because the proposed Master Plan would not generate emissions that exceed the SCAQMD's operational thresholds, and it is consistent with the AQMP (as discussed under Impact AQ-4), implementation of the Master Plan would not make a cumulatively considerable contribution with regard to criteria pollutants. Therefore, the Master Plan's contribution to cumulative regional, long-term air quality impacts would not be cumulatively considerable.

As discussed under Impact AQ-1, construction-generated emissions averaged over the 20-year life of the plan would not exceed SCAQMD significance thresholds for ROC, NO_x, CO, PM_{10} and $PM_{2.5}$. Further, any individual project proposed in the Plan Area would be required to undergo project level review under CEQA. Therefore, the Master Plan's contribution to temporary cumulative regional air quality impacts would not be cumulatively considerable.

4.3 Cultural Resources

The analysis in this section has been prepared in accordance with Section 15064.5 of the CEQA Guidelines, which considers potential impacts to archaeological, historic, and paleontological resources. This section includes a brief summary of cultural resources background information review of known archaeological, paleontological and built environment resources; and the Master Plan's potential impacts on these resources.

4.3.1 Regulatory Setting

Cultural resources, including built environment and archaeological resources, may be designated as historic by National, State or local authorities. In order for a resource to qualify for listing in the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR) or as a locally significant resource in the city of La Verne, it must meet one or more identified criteria of significance. The resource must also retain sufficient historic integrity, defined in *National Register Bulletin 15* as the "ability of a property to convey its significance" (National Park Service [NPS] 1990). An explanation of these designations follows.

Federal

Cultural resources are considered during federal undertakings chiefly under Section 106 of the National Historic Preservation Act (NHPA) through one of its implementing regulations, 36 Code of Federal Regulations 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of the NHPA. Other relevant federal laws include the Archaeological Data Preservation Act of 1974, American Indian Religious Freedom Act of 1978, Archaeological Resources Protection Act of 1979, and Native American Graves Protection and Repatriation Act of 1989.

National Register Historic Places

The NRHP was established by the National Historic Preservation Act NHPA of 1966 as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 CFR 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history;

Criterion B: It is associated with the lives of persons who are significant in our past;

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; and/or

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

State

California Register of Historic Resources

CEQA (Section 21084.1) requires that a lead agency determine whether a project could have a significant effect on historical resources. A historical resource is one listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (Section 21084.1), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

A historical resource is a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (Section 21084.1), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

PRC Section 5024.1, Section 15064.5 of the CEQA Guidelines, and PRC Sections 21083.2 and 21084.1 were used as the basic guidelines for this cultural resources study. PRC Section 5024.1 requires an evaluation of historical resources to determine their eligibility for listing in the CRHR. The purpose of the register is to maintain listings of the state's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated below.

According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it: 1) retains substantial integrity, and 2) meets at least one of the following California Register criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in our past.
- It embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values.
- It has yielded or may be likely to yield information important in prehistory or history.

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed in or eligible

for listing in the CRHR are considered a significant impact. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (CEQA Guidelines, Section 15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register (CEQA Guidelines, Section 15064.5[b][2][A]).

Codes Governing Human Remains

Section 15064.5 of the CEQA Guidelines also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. The disposition of human remains is governed by Health and Safety Code Section 7050.5 and PRC Sections 5097.94 and 5097.98, and falls within the jurisdiction of the NAHC. If human remains are discovered, the County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to PRC Section 5097.98, will immediately notify those persons it believes to be most likely descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment or disposal.

Senate Bill 18

Enacted on March 1, 2005, Senate Bill 18 (SB18) (California Government Code Sections 65352.3 and 65352.4) requires cities and counties to notify and consult with California Native American tribal groups and individuals regarding proposed local land use planning decisions for the purpose of protecting traditional tribal cultural places (sacred sites), prior to adopting or amending a General Plan or designating land as open space. Tribal groups or individuals have 90 days to request consultation following the initial contact.

Assembly Bill 52

California Assembly Bill 52 (AB 52), enacted on July 1, 2015, expands CEQA by establishing a formal consultation process for California tribes within the CEQA process. The bill specifies that any project that may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” According to the legislative intent for AB 52, “tribes may have knowledge about land and cultural resources that should be included in the environmental analysis for projects that may have a significant impact on those resources.” Section 21074 of AB 52 also defines a new category of resources under CEQA called “tribal cultural resources.” Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is either listed on or eligible for the California Register of

Historical Resources or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource. See also PRC Section 21074(a)(1)(A)-(B).

Local

The City of La Verne does not have a historic preservation ordinance; however Section 16.34.050 of the City's Municipal Code provides guidance and procedures for the protection of identified historic resources throughout the city. Individual properties can be designated as local landmarks by council resolution, with landmark nominations initiated by either property owner or the City. City-initiated nominations are limited to commercial buildings and owner consent is required.

The City has also created several specific plan areas that provide development standards and design guidelines. These are the LSP, the OTLVSP, and the ACSP. The Lordsburg Specific Plan Area has been designated by the City as a historic district. The LSP and OTLSVP both overlap with the Plan Area for La Verne Campus. Park Campus, and Campus West are in the ACSP. These are discussed further below, along with other pertinent local regulations that relate to the identification and protection of cultural resources.

City of La Verne General Plan

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to preserving the unique heritage of the community. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Identify, document, and preserve cultural resources
- Preserve archeological resources
- Protect cultural resources and landscapes
- Promote public art
- Integrate cultural resources into daily planning practice

Old Town La Verne Specific Plan

The provisions of the OTLVSP apply to all properties in the OTLSVP area. Appendix A of the Specific Plan contains guidelines and principles for historic structures within the OTLSVP that also fall within the boundaries of the LSP. As it pertains to the affected Heritage University buildings in the proposed Master Plan, guidelines for demolition and alterations state:

- No demolition of a heritage building shall be permitted without City approval
- Environmental review shall be required as part of the procedure prior to the issuance of a demolition permit
- Demolition of character-defining features shall not be permitted
- Demolition of non-character-defining features and non-original features will be permitted if they do not impact character-defining features
- Demolition of non-character-defining features and non-original features will be permitted with City approval

- Alterations to heritage buildings shall be permitted if the changes do not affect the character-defining features of the building
- No exterior alterations of heritage buildings will be permitted without City approval
- All additions to heritage buildings shall be sympathetic to the character-defining features of the heritage buildings. Additions shall be recognizable as a product of their own time

Appendix A of the OTLVSP also provides guidelines for moving heritage buildings, for the rehabilitation of heritage commercial structures, the rehabilitation of non-heritage commercial structures in the historic commercial district, and for the construction of new commercial structures in the historic commercial district.

Lordsburg Specific Plan

The LSP surrounds the OTLVSP area to the west, north, and east. The City of La Verne has designated the LSP area as a local historic district. Any structure in the specific plan area built between the years 1888 and 1960 may be considered a "contributing building" to the historic district. Within this broader contributing category, certain structures are further identified as "heritage buildings" that make a particularly important contribution to the historic fabric of the community. Other buildings, constructed after 1960, may be considered as "non-contributing buildings" to the historic district.

Heritage University Buildings

According to the Lordsburg Specific Plan, most of the University of La Verne's major buildings are considered contributing buildings to the historic district, including several built after 1960. To be considered as a Heritage University Building in the LSP, a structure must meet at least one of the following conditions:

- The building shall have been constructed prior to 1966
- The building shall demonstrate architectural value as representing either the earlier campus development period's (pre-1948) California Style or Vernacular Style or the middle period (1948-1966) of brick and red tile roofs; or the building shall make an extraordinary contribution to the architectural fabric of the campus and the community (such as the 1973 tent structures)
- The university building, if adapted from another use, shall demonstrate architectural value as described under another building type category in this specific plan

Historic Lordsburg also contains "heritage infrastructure" that consists of street grid and alleys, building lots, sidewalks and parkways, and street trees. They follow the traditional grid system that has, for the most part, been retained since the Lordsburg town site was laid out in 1887-1888 (City of La Verne 2013).

Arrow Corridor Specific Plan

The ACSP is contiguous with the Old Town La Verne Specific Plan area to the southwest and the east. The University's Park Campus and Campus West are located completely within the boundary of the ACSP. The ACSP provides development standards for the four districts in

the plan area, as well as requirements for historic and archeological resources in the plan area.

4.3.2 Cultural Setting

Regional Prehistory

The University of La Verne is located in the traditional territory of the Native American group known as the Gabrielino. The name Gabrielino was applied by the Spanish to those natives that were attached to Mission San Gabriel (Bean and Smith 1978:538). Today, most contemporary Gabrielino prefer to identify themselves as Tongva, a term that will be used throughout the remainder of this section (King 1994:12).

Tongva territory included the Los Angeles basin and southern Channel Islands as well as the coast from Aliso Creek in the south to Topanga Creek in the north. Their territory encompassed several biotic zones, including Coastal Marsh, Coastal Strand, Prairie, Chaparral, Oak Woodland, and Pine Forest (Bean and Smith 1978).

The Tongva language belongs to the Takic branch of the Uto-Aztecan language family, which can be traced to the Great Basin region (Mithun 2004). This language family includes dialects spoken by the nearby Juaneño and Luiseño, but is considerably different from those of the Chumash people living to the north and the Diegueño (including Ipai, Tipai, and Kumeyaay) people living to the south.

Tongva society was organized along patrilineal non-localized clans, a common Takic pattern. Each clan had a ceremonial leader and contained several lineages. The Tongva established large permanent villages and smaller satellite camps throughout their territory. Recent ethnohistoric work (O'Neil 2002) suggests a total tribal population of nearly 10,000, considerably more than earlier estimates of around 5,000 people (Bean and Smith 1978:540).

Tongva subsistence was oriented around acorns supplemented by the roots, leaves, seeds, and fruits of a wide variety of plants. Protein sources included large and small mammals, freshwater and saltwater fish, shellfish, birds, reptiles, and insects. (Bean and Smith 1978; Kroeber 1925; Langenwalter et al. 2001;; McCawley 1996). The Tongva employed a wide variety of tools and implements to gather and hunt food. The digging stick, used to extract roots and tubers, was frequently noted by early European explorers. Other tools included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Like the Chumash, the Tongva made oceangoing plank canoes (known as a ti'at) capable of holding six to 14 people and used for fishing, travel, and trade between the mainland and the Channel Islands. Tule reed canoes were employed for near-shore fishing (Blackburn 1963; McCawley 1996:117-127).

Chinigchinich, the last in a series of heroic mythological figures, was central to Tongva religious life at the time of Spanish contact (Kroeber 1925:637–638). The belief in Chinigchinich was spreading south among other Takic-speaking groups at the same time the Spanish were establishing Christian missions. Elements of Chinigchinich beliefs suggest it

was a syncretic mixture of Christianity and native religious practices (McCawley 1996:143-144).

Prior to European contact, deceased Tongva were either buried or cremated, with burial more common on the Channel Islands and the adjacent mainland coast and cremation on the remainder of the coast and in the interior (Harrington 1942; McCawley 1996:157). After pressure from Spanish missionaries, cremation essentially ceased during the post-contact period (McCawley 1996:157).

Regional History

Spanish exploration of California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the California coast and made limited inland expeditions, but they did not establish permanent settlements (Bean 1968; Rolle 2003). By the 18th century, Spain developed a three-pronged approach of establishing a chain of presidios (military garrisons), missions and towns throughout what was then known as Alta (upper) California. In 1769 Gaspar de Portolá and Father Junipero Serra established the first Spanish settlement in Alta California at Mission San Diego de Alcalá. In 1771 Mission San Gabriel was founded as the fourth in the chain of 21 missions built between 1769 and 1823. However, in 1775, the mission was moved approximately three miles to its present location, which is approximately 20 miles west of the project area. Mission San Gabriel became one of the most productive and affluent missions in Alta California, providing support for surrounding missions (California Missions Foundation, n.d.). At its peak the mission population reached 1,701 people in 1817 (Bodkin 1910:10).

The Mexican Period for the region commenced when news of the success of the Mexican War of Independence (1810-1821) against the Spanish crown reached California in 1822. A secularization act was passed in 1833 which federalized the mission lands and converted the missions into parish churches. This enabled Mexican governors in California to distribute former mission lands to individuals in the form of land grants. Successive Mexican governors made approximately 700 land grants between 1833 and 1846, putting most of the state's lands into private ownership for the first time (Shumway 2007). The majority of land grants went to retired presidio soldiers or to well-connected families. During this time a class of wealthy landowners known as rancheros or Californios worked large ranches based on cattle hide and tallow production. Sixty land grants were made in what is today Los Angeles County (Beck and Haase 1974).

The city of La Verne was once part of the Rancho San José, which was originally granted to Ygnacio Palomares and Ricardo Vejar in 1837 by the Mexican governor Juan Alvarado. Palomares and Vejar teamed with Luis Arenas, Palomares' brother-in-law, and they successfully petitioned for additional grazing land which was added to the rancho in 1840. Arenas sold his share to Henry Dalton in 1846 (Brackett 1920).

The Mexican Period for the Los Angeles County region ended in early January 1847. Mexican forces fought and lost to combined U.S. Army and Navy forces in the Battle of the San Gabriel River on January 8 and in the Battle of La Mesa on January 9 (Nevin 1978). On

January 10, leaders of the pueblo of Los Angeles surrendered peacefully after Mexican General Jose Maria Flores withdrew his forces. Shortly thereafter, newly appointed Mexican Military Commander of California Andrés Pico surrendered all of Alta California to U.S. Army Lieutenant Colonel John C. Fremont in the Treaty of Cahuenga (Nevin 1978).

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for conquered territory including California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. Settlement of the Los Angeles region increased dramatically in the early American Period.

The discovery of gold in northern California in 1848 led to the California Gold Rush, despite the first California gold being previously discovered in Placerita Canyon in 1842 (Guinn 1977; Workman 1935). By 1853, the population of California exceeded 300,000. Thousands of settlers and immigrants continued to immigrate to the state, particularly after the completion of the First Transcontinental Railroad in 1869.

A severe drought during 1863-1864 had damaging consequences to ranchers' cattle herds and source of income, including Rancho San José. Ygnacio Palomares died in 1864 and his widow began selling ranch land the following year. In 1864 Ricardo Vejar lost his share of the rancho through foreclosure to two Los Angeles merchants, Louis Schlesinger and Heiman Tischler. Shortly afterwards, Schlesinger died and Tischler sold the rancho to Louis Phillips. The City of La Verne developed on the formerly Palomares-owned (northern) portion of Rancho San Jose (Hoover et al. 2002; Brackett 1920).

By the 1880s, the railroads had established networks from Los Angeles' port at San Pedro and throughout the county of Los Angeles, resulting in fast and affordable shipment of goods, as well as a means to transport new residents to the booming region (Dumke 1944). New residents included many health-seekers drawn to the area by the fabled southern California climate in the 1870s–1880s.

The town of Lordsburg was founded as a speculative railroad town in 1887 by Isaac Wilson Lord in what is now the southern portion of La Verne. Having persuaded the Santa Fe Railroad to run its line through the area where he owned a considerable amount of property, Lord had the land subdivided and held a large sale of lots. Lord also built a sizeable hotel in the new town of Lordsburg. The Lordsburg town site was laid out as a grid system of blocks parallel to the tracks of the Santa Fe Railroad. Streets running north and south were given alphabetical designations starting with A Street at the western edge of the city. The streets running east to west were numbered from one to eight. The railroad track ran down the center of Palomares Avenue, along the north side of what is now Arrow Highway (City of La Verne 2013, Old Town La Verne Specific Plan, Appendix A).

The land boom in the southern California region ended and the town of Lordsburg acquired very few permanent residents. The hotel sat vacant until 1891. That year, members of the German Baptist Brethren (later called Church of the Brethren) opened Lordsburg College in the former hotel building, which they had offered to purchase in 1889. A campaign to bring members of the German Baptist Brethren to Lordsburg spurred the town's growth. Many

Brethren families relocated to the town where their children could attend the Christian college. The foothill area to the north, where ranchers had established homes and citrus orchards, became known as La Verne, a name reportedly chosen by Mrs. Bixby of the L.H. Bixby family (La Verne Historical Society, n.d.; Church of the Brethren 2016). La Verne incorporated as a city in 1906 (California Association of Local Agency Formation Commissions 2011).

The two communities eventually united and in 1917, after the death of I.W. Lord, the town of Lordsburg and college took the name La Verne. The citrus industry, which was started in the area in the 1890s, flourished after the turn of the century. The growing, picking, packing and shipping of oranges, grapefruit and lemons engaged nearly all of the people in the community. By 1919 more than 1,000 carloads of fruit were being shipped by rail annually and output continued to increase. Chinese, Indian, Japanese, Filipino and Mexican immigrants provided labor for picking the citrus crop; Mexican laborers also worked in the packing houses (La Verne Historical Society, n.d.).

However, during the 1940s a disease affected citrus trees and the crop declined. As the area's population grew, land was sold for development and many of the orchards were uprooted (Brackett 1920; La Verne Historical Society, n.d.). Following World War II and the completion of Interstate 10, residential development increased in the area. The construction of State Route 210 also benefitted the city's commercial and retail industries (CRM Tech 2008). The City has reached a population of over 31,000 people (United States Census Bureau 2010).

University of La Verne

As discussed above, the University of La Verne was founded as Lordsburg College in 1891 by members of the Church of the Brethren. The College was housed in one building, which was originally intended to be a hotel. The College was much more successful than the failed hotel, and by the end of the first year 136 students were enrolled (Hoover 2002). The founders initially designed the curriculum to provide a liberal arts education, but many of the students were not ready for college level courses. During its first ten years in operation the college had four different presidents, and then closed briefly in 1901-1902 because of administration issues. In 1902, W.C. Hanawalt stepped in as the new president and the school reopened. Hanawalt restructured the coursework to focus on college preparation and enlarged the campus by 20 acres, making future expansion possible (Hoover 2002).

The school continued to grow in size and develop its curriculum. In 1917, the college and community of Lordsburg were renamed La Verne and enrollment doubled (University of La Verne 2016). The school re-focused on college-level coursework during the 1920s, with an emphasis on teacher education for which three-quarters of the student body received instruction in the 1920s and 1930s (University of La Verne ND). Although somewhat affected by World War I, construction of new buildings continued during this period, including Samuel J. Miller Hall, a dormitory (1917); the gymnasium (1921); and Founders Hall, the administration building (1926) (Hoover 2002).

The former hotel, home of the original Lordsburg College, was demolished in 1927 (Hoover 2002). By 1949 the college had grown to 279 students and in 1955 it was accredited by the Western College Association.

During the second half of the twentieth century, the college purchased additional land, constructed new buildings and improved others, and expanded its curriculum. In addition, the school's Board of Trustees became independent from the church at this time. The campus saw its largest phase of construction during the 1950s and 1960s at which time eight new buildings were constructed: W.I.T. Hoover Memorial Library (1951), Studebaker Hall (1956), Hanawalt Hall (conjoined with Studebaker Hall, 1958), Davenport Dining Hall (1958), Brandt Hall (1962), the Chapel (1966), the Science and Education Building and LaFetra Auditorium (1968). Additions to four existing buildings were also completed including the Old Gym (1963), Hoover Library (1967), Presidents Dining Hall and Davenport Dining Hall (1968). Eleven other properties were acquired including the Orange Association property and buildings (1961 and 1967) and the Santa Fe Railroad property along the northern portion of the railroad tracks (1963)(Hoover 2002).

A new Student Center (now the Sports Science and Athletics Pavilion) and the Dailey Theater were constructed in 1973-74. The University added graduate programs and awarded its first master's degree in the 1960s and its first doctorate degree in 1979; the College of Law was opened in 1969. The college reorganized in 1977 as the University of La Verne (University of La Verne n.d). Today, the University of La Verne has grown to be a large educational institution and includes the main campus and satellite campuses throughout the surrounding counties (University of La Verne 2016; University of La Verne, n.d.; Hoover 2002).

4.3.3 Previously Identified Cultural and Paleontological Resources

Cultural Resources

On July 14, 2016, a search of the cultural resource records, housed at the CHRIS Central Coast Information Center at University of California, Santa Barbara was conducted to determine if previously identified archaeological or built environment resources exist at the University of La Verne. The search included a review of the NRHP, the CRHR, the California State Historical Landmarks list, the California Points of Historical Interest list, historic building surveys, the Archaeological Determinations of Eligibility list, and the California Inventory of Historical Resources list. The records search provided information about archaeological resources, historic resources, and reports within a 0.5-mile radius of the University. The records search identified 31 reports of studies previously conducted within a 0.5-mile radius of the University. Of these, 16 overlap with or were within the Plan Area. The records search results also identified one previously recorded archaeological resource and 11 previously recorded built environment resources within the University of La Verne campus (Table 17). Additional research was conducted using historic maps to elucidate information regarding the previous land use in the area. The 1928 Claremont and 1940 La Verne United State Geological Survey (USGS) quadrangle depicts the project site as having minimal development.

Table 17 Previously Recorded Cultural Resources in the University of La Verne Master Plan

Primary Number	Trinomial	Resource Type	Description	Recorded/ Updated By and Year	CRHR Eligibility Status
P-19-002562	CA-LAN-2562H	Historic site	Historic septic tank and refuse scatter	Duffield-Stroll and Becker 1997	Insufficient Information
P-19-187724	None listed	Historic building	Old Gym	Hoover 2002	Recommended Eligible for CRHR; building demolished in 2007
P-19-187726	None listed	Historic building	Davenport Dining Hall	Hoover 2002	Recommended Eligible for CRHR
P-19-187727	None listed	Historic building	Dant Chapel	Hoover 2002	Recommended Eligible for CRHR
P-19-187728	None listed	Historic building	Brandt Hall	Hoover 2002	Recommended Eligible for CRHR
P-19-187729	None listed	Historic building	Founder's Hall	Hoover 2002	Recommended Eligible for CRHR
P-19-187730	None listed	Historic building	Fruit Exchange Office	Hoover 2002	Recommended Eligible for CRHR; building demolished in 2013
P-19-189206	None listed	Historic building	La Verne Citrus Packing District	Chasteen 2004	Recommended Eligible for CRHR
P-19-189207	None listed	Historic building	Orange House Refrigerated Fruit Storage Building No. 2	Chasteen 2003	Recommended Eligible as a Contributor for CRHR
P-19-189208	None listed	Historic building	La Verne Orange Association Building	Chasteen 2004	Recommended Ineligible for the CRHR
P-19-189210	None listed	Historic building	University of La Verne Central Service Office	Chasteen 2003	Recommended Eligible as a Contributor for CRHR
P-19-189211	None listed	Historic building	La Verne Lemon Association Building	Chasteen 2003	Recommended Eligible as a Contributor for CRHR
None listed	None listed	Historic building	Stu-Han Residence Hall	City of La Verne 1992 (updated March 2004)	City of La Verne Heritage University Building

Primary Number	Trinomial	Resource Type	Description	Recorded/ Updated By and Year	CRHR Eligibility Status
None listed	None listed	Historic building	Maniero/La Fetra Building	City of La Verne 1992 (updated March 2004)	City of La Verne Heritage University Building
None listed	None listed	Historic building	Miller Hall	City of La Verne 1992 (updated March 2004)	City of La Verne Heritage University Building
None listed	None listed	Historic building	Woody Hall	City of La Verne 1992 (updated March 2004)	City of La Verne Heritage University Building

Source: SCCIC 2016

Additional Resource Data

In addition to the results at the SCCIC, a number of local surveys have been conducted within the City of La Verne that have identified significant resources. There is no historic resource survey for the entire city, but cultural resource studies have been previously completed for the City's Old Town area (completed in 1986) and for the University of La Verne (completed in 2006) by L&L Environmental, Inc. as part of 2007 University of La Verne Master Plan EIR .

The Lordsburg Specific Plan area has been designated a local historic district, which overlaps La Verne Campus. The Lordsburg Specific Plan area is roughly bound by Wheeler Avenue on the west, Arrow Highway on the southwest to just past D Street, Second Street on the southeast, and the terminus of the Second and Third Street cul-de-sacs on the east. The northern boundary includes portions of Bonita Avenue, the alley between Bonita and Fifth Street, Fifth Street, Sixth Street and the alley north of Sixth Street. Any structure within the specific plan area built between the years 1888 and 1960 may be considered a "contributing building" to the historic district. Within this broader contributing category, certain structures are further identified as "heritage buildings" which make a particularly important contribution to the historic fabric of the community. Other buildings, constructed after 1960, may be considered as "non-contributing buildings" to the historic district.

The LSP identifies the following buildings as Heritage University Buildings: Stu-Han Residence Hall, Maniero/La Fetra Building, Miller Hall, and Woody Hall.

Historic Lordsburg also contains "heritage infrastructure," which consists of street grid and alleys, building lots, sidewalks and parkways, and street trees. They represent the traditional grid system, which has for the most part been retained since the Lordsburg town site was laid out in 1887-1888 (City of La Verne 2013). The proposed Master Plan calls for the closure of major streets that currently dissect the campus such as Second Street, Third Street, and C Street. This may impact a portion of the historic grid blocks created by the Lordsburg Townsite Plan of 1887.

The La Verne Citrus Packing District is located at the southern edge of La Verne Campus. The district boundaries are roughly from just west of D Street on the west to F Street on the east, and just north of First Street on the north to the ATSF rail line on the south. The district, as recorded, was composed of five buildings, four of which were contributors and one was a non-contributor. The buildings are noted to be representative of early citrus production and processing in Southern California, and are good examples of an increasingly rare building type. One of the contributing buildings, the Office of the La Verne Fruit Exchange, Orange and Lemon Growers Association was demolished in 2013. The Lemon Growers Association Packing House, now known as the Arts and Communications Building, is proposed for renovation by the Master Plan.

The 2007 Environmental Impact Report prepared for the University of La Verne 2006 Master Plan identified 10 existing University buildings that could potentially be historic resources. The buildings identified in the 2006 historic resources assessment as potentially historic included:

- Brandt Hall
- Literacy Center
- Stu-Han Residence Hall
- Old Gym
- La Verne Fruit Exchange Office
- Dant College Chapel
- University Bookstore
- Founders Hall
- Dailey Theater
- Davenport Dining Hall

Native American Consultation Assistance

As part of the process of identifying cultural resources issues in or near the Plan area, and to assist the University of La Verne with Native American government-to-government consultation in accordance with California Government Code 65352 (Senate Bill 18 of 2004; SB 18) and Assembly Bill 52 of 2014 (AB 52), Rincon contacted the NAHC on July 15, 2016. Rincon requested a review of the SLF, a list of Native American individuals and tribal organizations for tribal consultation per SB 18, and a list of Native American individuals and tribal organizations for tribal consultation per AB52. Rincon received a response via email on July 21, 2016 stating that the search of the SLF came back with negative results. The NAHC additionally provided a contact list of seven Native American individuals and tribal organizations that may have knowledge of cultural resources in or near the University. On behalf of the University of La Verne, Rincon drafted letters to each of the NAHC individuals and tribal organizations for the University to send in accordance with SB 18 and AB 52. Rincon also provided guidance to the University regarding Native American Consultation and draft tables for tracking consultation. The results of the NAHC requests, draft letters, guidance, and tables are provided in Appendix C.

Paleontological Resources

Paleontological resources (fossils) are the remains and/or traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils is a result of the sedimentary history of the geologic units within which they occur. Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and

the potential for fossils to occur within sedimentary units depends on a number of factors. Although it is not possible to determine whether a fossil will occur in any specific location, it is possible to evaluate the potential for geologic units to contain scientifically significant paleontological resources, and therefore evaluate the potential for impacts to those resources, and provide mitigation for paleontological resources if they do occur during construction.

The project site is located in the Peninsular Ranges geomorphic province, on the east side of the San Gabriel Valley. The San Gabriel Mountains are to the north and the San Jose Hills are to the immediate south. The San Gabriel Valley is separated from the Pomona Valley to the east by the San Jose Fault, which lies just southeast of Puddingstone Reservoir. Tectonic processes formed the San Gabriel Valley starting in the Miocene (Bjorklund et al. 2002; Dibblee and Minch 2002).

Two sedimentary geologic units are mapped within the project area (Dibblee and Minch 2002; Morton et al. 206) ranging in age from Holocene to Pleistocene. Holocene-aged alluvial sediments (Qa) are mapped throughout the Plan Area except along the western most projection of Campus West. Pleistocene age older alluvial sediments (Qoa) are mapped in a small patch within the westernmost portion of Campus West, just south of Arrow Highway. In addition, Miocene-aged volcanic rocks of the Glendora Complex are mapped within the eastern portions of Campus West (Dibblee and Minch 2002; Morton and Miller 2003; Tan 1998, 2000).

Quaternary Geologic Units

Quaternary units mapped in the project site and vicinity included Holocene- to Pleistocene-aged alluvial sediments, as shown in Table 18. Figure 10 presents a map of geologic units in the Plan Area. Holocene sediments are generally considered too young to contain scientifically significant fossils. Construction-related disturbance of these sediments would have a low potential to impact significant paleontological resources. However, these sediments are likely underlain by Pleistocene-aged deposits at unknown, but possibly shallow (i.e., within five feet of the surface) depths. Pleistocene-aged sediments are mapped in a small patch within the project site, along the western boundary, at Campus West. Given the presence of Pleistocene-aged sediments on a portion of the project site, the extent of Pleistocene deposits mapped in the immediate vicinity and the mapped and inferred contacts between the Holocene and Pleistocene alluvial units, Pleistocene-aged sediments may occur at relatively shallow depths (five feet) across the project site.

Table 18 Geologic Units in Project Site

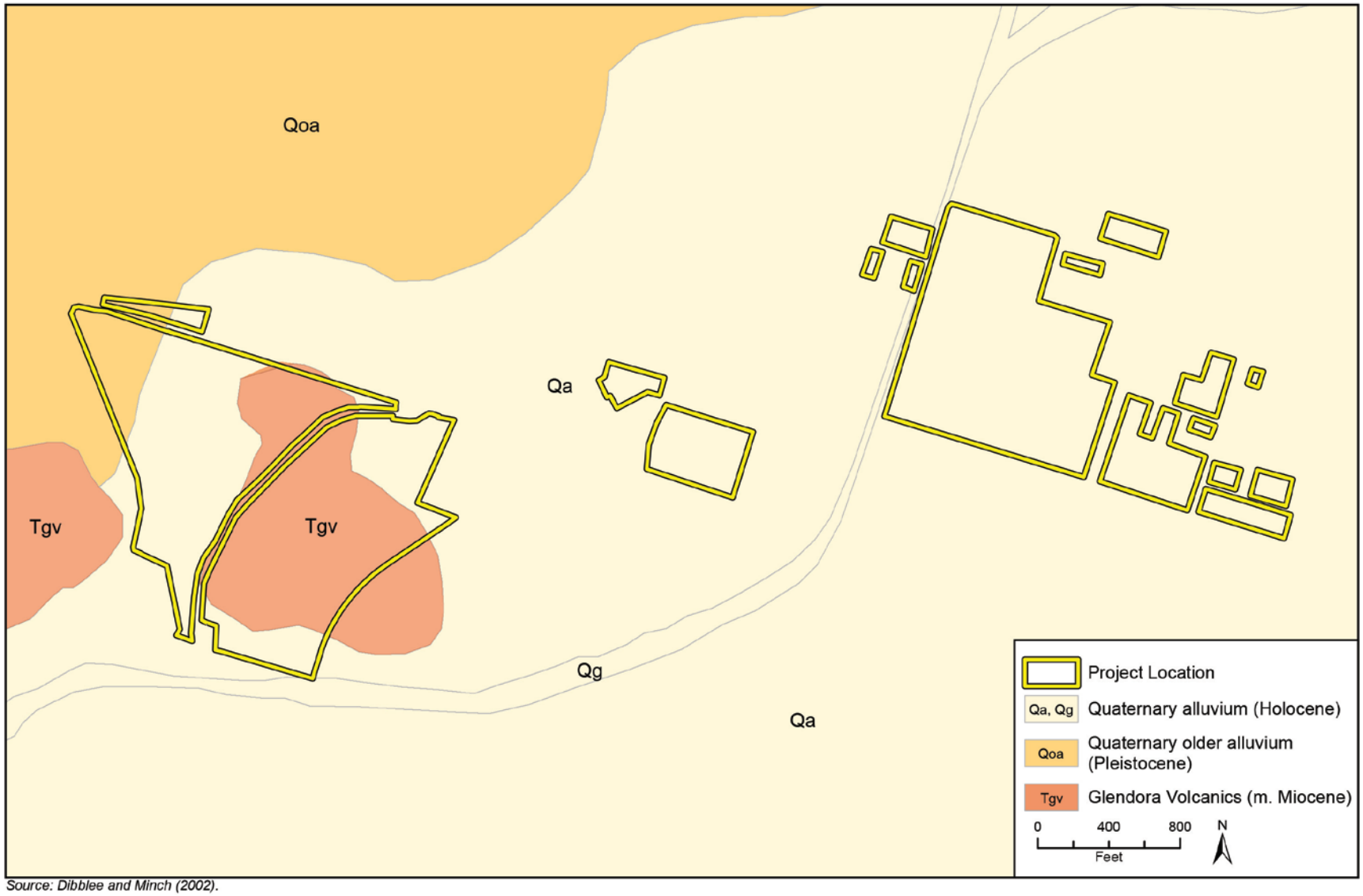
Geologic Unit*	Age*	Notes	Paleontological Sensitivity (SVP)
Alluvial valley sediments (Qa, Qg)	Holocene	Generally consider too young to contain fossils	Low (surface), High (below 5 feet)
Older surficial sediments (Qoa)	Pleistocene	Potential to contain significant paleontological resources	High
Glendora Volcanics (Tgv)	Miocene	Typically does not contain fossils	Low to No

* Source: Dibblee and Minch (2002)

Pleistocene-aged sediments do have potential to contain scientifically significant paleontological resources. The University of California Museum of Paleontology (UCMP 2016) collections database includes nearly 600 Pleistocene localities within Los Angeles County, 22 of which contained vertebrates (including birds, fish, horses, rodents, whales, and sloth). In addition, Rincon conducted a formal search of the Natural History Museum of Los Angeles County's (LACM) paleontological records (McLeod 2016). LACM collections have no records of fossils in the project site, but a vertebrate locality in older Quaternary deposits (LACM 1728) is situated south-southeast of the proposed project area in English Canyon southwest of the city of Chino. This locality contained specimens of fossil horse (*Equus*) and camel (*Camelops*) from a depth of between 15 and 20 feet below the surface and is less than 10 miles south of the current Plan Area.

Pleistocene-aged alluvial deposits have yielded numerous scientifically significant fossils from throughout California and Pleistocene-aged alluvial sediments are generally considered to have high paleontological sensitivity wherever they occur (Agenbroad 2003; Bell et al. 2004; Jefferson 1988, 1991; Merriam 1911; Reynolds et al. 1991; Savage et al. 1954; Scott and Cox 2008; Springer et al. 2009; Wilkerson et al. 2011; Winters 1954).

Figure 10 Geologic Units in the Project Area



Source: Dibblee and Minch (2002).

Miocene Volcanic Rocks

Miocene volcanic rocks mapped in the eastern portion of Campus West are part of the Glendora Volcanic sequence; extrusive basalts, andesites, and rhyolitic flows laid down approximately 16 million years ago (Bjorklund et al. 2002). Because these are volcanic rocks of flow melt origin, they do not typically contain fossils (see sensitivity categories below).

Significant paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, uncommon, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiocarbon dating is possible. Common fossils (especially vertebrates) may even be scientifically important, and therefore considered highly significant.

Paleontological Sensitivity

Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically significant fossils. Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into the geologic deposits (formations) within which fossils are buried and physically destroy the fossils. Since fossils are the remains of prehistoric animal and plant life, they are considered to be nonrenewable. Such impacts have the potential to be significant and, under CEQA guidelines, may require mitigation. Sensitivity is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

The discovery of a vertebrate fossil locality is of greater significance than that of an invertebrate fossil locality, especially if it contains a microvertebrate assemblage. The recognition of new vertebrate fossil locations could provide important information on the geographical range of the taxa, their radiometric age, evolutionary characteristics, depositional environment, and other important scientific research questions. Vertebrate fossils are almost always significant because they occur more rarely than invertebrates or plants. Thus, geological rock units having the potential to contain vertebrate fossils are considered the most sensitive.

The Society of Vertebrate Paleontology (SVP) outlines in their Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010) guidelines for categorizing paleontological sensitivity of geologic units within a project area. The SVP (2010) describes sedimentary rock units as having a high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is

based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. Significant paleontological resources are fossils or assemblages of fossils, which are unique, unusual, rare, uncommon, diagnostically or stratigraphically important, and those which add to an existing body of knowledge in specific areas, stratigraphically, taxonomically, or regionally. While these standards were specifically written to protect vertebrate paleontological resources, all fields of paleontology have adopted these guidelines. Rincon has evaluated the paleontological sensitivity of the Plan Area according to the following SVP categories (SVP 2010).

High Potential (sensitivity)

Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as significant.

Low Potential (sensitivity)

Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic, phylogenetic species and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. However, as excavation for construction gets underway it is possible that significant and unanticipated paleontological resources might be encountered and would require a change of classification from Low to High Potential and, thus, would require monitoring and mitigation if the resources are found to be significant.

Undetermined Potential (sensitivity)

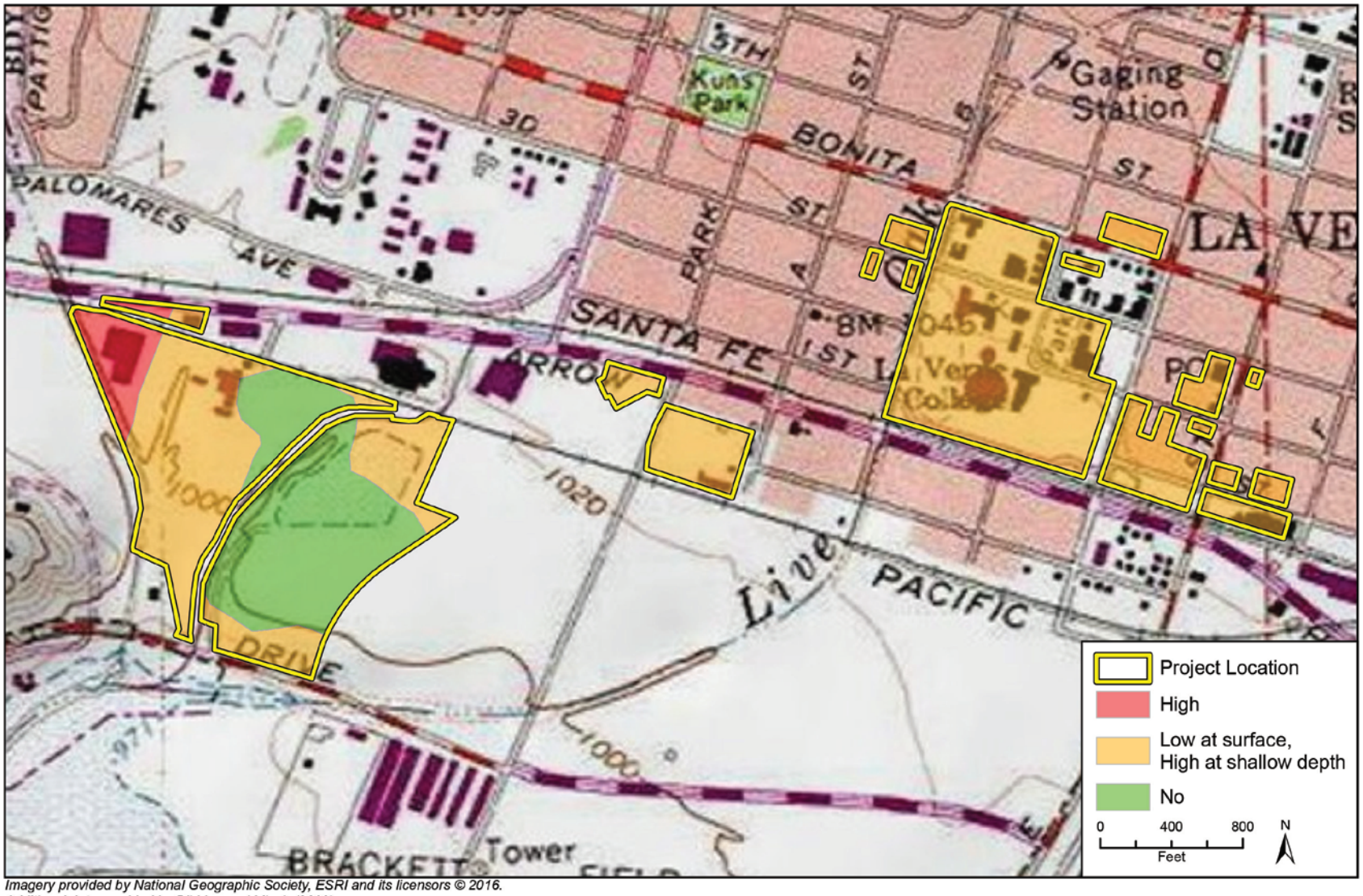
Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

No Potential

Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

In general terms, for geologic units with high sensitivity, full-time monitoring typically is recommended during any project-related ground disturbance. For geologic units with low sensitivity, protection or salvage efforts typically are not required. For geologic units with undetermined sensitivity, field surveys by a qualified paleontologist are usually recommended to specifically determine the paleontological potential of the rock units present within the study area. For geologic units with no sensitivity, a paleontological monitor is not required. Table 18 shows the mapped geologic units within the project site, their age and paleontological sensitivity. Figure 11 displays this information graphically.

Figure 11 Paleontological Sensitivity in the Project Area



Imagery provided by National Geographic Society, ESRI and its licensors © 2016.
Additional data provided by Dibblee and Minch (2002).

4.3.4 Cultural and Paleontological Impacts Analysis

Archaeological Resources

Significance Thresholds

Under CEQA, archaeological resources may meet the definition of a historical resource or unique archaeological resource. Any project that may cause a substantial adverse change in the significance of a historical resource would also have a significant effect on the environment. Substantial adverse change to the significance of a historical resource is defined as physical demolition, destruction, alteration, or relocation of the resource or immediate surroundings such that its significance would be materially impaired. CEQA states that when a project would cause damage to a unique archaeological resource, reasonable efforts must be made to preserve the resource in place or leave it in an undisturbed state. Mitigation measures are required to the extent that the resource could be damaged or destroyed by a project. Implementation of the following mitigation measures would mitigate to the greatest extent feasible the potential for future projects to impact archaeological resources.

Project Impacts

IMPACT CR-1. ARCHAEOLOGICAL RESOURCES

Implementation of the proposed Master Plan could cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measures are required to reduce impacts to a Class II, less than significant with mitigation incorporated.

The records search results indicate that the University of La Verne Master Plan area contains archaeological resources. While portions of the Plan Area were previously studied in 2006, future development or improvements related to changes in land use could potentially impact and cause significant adverse impacts to archaeological resources. The following measures are required to avoid and reduce potential archaeological resource impacts from future projects in the University of La Verne Master Plan area to a less than significant level.

MITIGATION MEASURES

The following Mitigation Measures shall be implemented as part each individual project in the Plan Area

MITIGATION MEASURE CR-1. ARCHAEOLOGICAL RESOURCES ASSESSMENT

To determine the archaeological sensitivity of a proposed project in the Plan area, archaeological resources assessments shall be performed under the supervision of an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) in either prehistoric or historic archaeology. Assessments shall include a California Historical Research Information System (CHRIS) records search at the South Central Coastal Information Center (SCCIC) and of the Sacred Lands File (SLF) maintained by

the Native American Heritage Commission (NAHC). The records searches will determine if the proposed project area was previously surveyed for archaeological resources, identify and characterize the results of previous cultural resource surveys, and disclose any cultural resources that have been recorded and/or evaluated. A Phase I pedestrian survey shall be undertaken in proposed project areas that are undeveloped or in areas where previously identified cultural resources exist to locate any surface cultural materials. By performing a records search, consultation with the NAHC, and a Phase I survey, a qualified archaeologist will be able to classify the project area as having high, medium, or low sensitivity for archaeological resources.

MITIGATION MEASURE CR-2. PHASE II TESTING AND EVALUATION

If potentially significant archaeological resources are identified through an archaeological resources assessment, and impacts to these resources cannot be avoided, a Phase II Testing and Evaluation investigation shall be performed by an archaeologist meeting the PQS prior to any construction-related ground-disturbing activities to determine significance. If resources are determined significant or unique through Phase II testing, and site avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. Mitigation measures might include a Phase III data recovery program that would be implemented by a qualified archaeologist and shall be performed in accordance with the Office of Historic Preservation's (OHP) Archaeological Resource Management Reports: Recommended Contents and Format (OHP 1990) and Guidelines for Archaeological Research Designs (OHP 1991).

MITIGATION MEASURE CR-3. MONITORING

If the archaeological assessment does not identify potentially significant archaeological resources in the Plan Area but indicates the area to be highly sensitive for archaeological resources, a qualified archaeologist shall monitor all ground-disturbing construction and pre-construction activities in areas with previously undisturbed soil. Native American monitoring may also be required. The archaeologist shall inform all construction personnel prior to construction activities of the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial onsite safety meeting, and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the resources are evaluated for significance by an archaeologist who meets the PQS. If the discovery proves to be significant, it shall be curated with a recognized scientific or educational repository.

MITIGATION MEASURE CR-4. TRAINING AND ON-CALL MONITORING

If the archaeological assessment does not identify potentially significant archaeological resources in the Plan Area, but indicates the area to be of medium sensitivity for archaeological resources, an archaeologist who meets the PQS shall be retained on an on-call basis. The archaeologist shall inform all construction personnel prior to construction

activities about the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial onsite safety meeting, and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the on-call archaeologist is contacted. If the discovery proves to be significant, it shall be curated with a recognized scientific or educational repository.

MITIGATION MEASURE CR-5. HUMAN REMAINS DISCOVERY

If human remains are exposed during ground-disturbing activities, State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In accordance with this code, in the event of an unanticipated discovery of human remains, the county coroner would be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD would complete the inspection of the discovery within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

SIGNIFICANCE AFTER MITIGATION

The implementation of Mitigation Measures CR-1 through CR-5 would reduce impacts to archeological resources to a less than significant level.

Historic Resources

Significance Threshold

Under CEQA, any project that may cause a substantial adverse change in the significance of a historical resource would also have a significant effect on the environment. Substantial adverse change to the significance of a historical resource is defined as physical demolition, destruction, alteration, or relocation of the resource or immediate surroundings such that its significance would be materially impaired. CEQA states that when a project will cause damage to a historical resource, reasonable efforts must be made to preserve the resource in place or left in an undisturbed state. Mitigation measures are required to the extent that the resource could be damaged or destroyed by a project. Projects that follow the Secretary of the Interior's Standards for the Treatments of Historic Properties are typically mitigated below the level of significance.

Impacts to Historic Resources

IMPACT CR-2. HISTORIC RESOURCES

Implementation of the proposed Master Plan could cause a substantial adverse change in the significance of historic resources both directly and indirectly through demolition, alteration of buildings and streetscapes and new construction that result in changes in land use and setting. Impacts resulting from these changes would be Class I, significant and unavoidable.

Future development in the Master Plan area has the potential to impact built environment resources both directly and indirectly. The proposed removal of potentially historic buildings, building renovations, or other campus improvements could potentially impact historic buildings and structures and related features and cause significant adverse impacts to historical resources. It is important to note that because only a Master Plan is proposed at this time, individual building designs have not been developed and therefore it is not possible to evaluate the specific impact of renovations.

The cultural resources records search identified 11 previously recorded built environment resources in the Plan Area. Ten buildings and one historic district were previously found eligible for historic designation at the national, state, and/or local level of significance. Two buildings have been demolished since they were recorded. In addition, the LSP identifies four Heritage University Buildings in the Plan Area. While some of these evaluations were completed within the past five years, many of these evaluations were completed more than five years ago and should be updated to reassess the significance of the resources. In addition, many buildings and structures in the Plan Area have never been surveyed for historic significance, or they were surveyed more than 10 years ago and therefore their historic significance may have changed. In accordance with the NRHP and CRHR designation criteria, properties over 50 years of age are potentially historic and should be evaluated for historic significance.

The Master Plan would result in the alteration and demolition of various buildings on campus (Table 19). In addition an increase of 475,577 square feet of additional campus construction is proposed. The Master Plan also intends to create a pedestrian-focused campus by closing streets that currently dissect the campus, including C Street south of Third Street, Second Street in front of the Abraham Campus Center, and Third Street between B Street and C Street.

Twenty-five existing buildings on the University of La Verne campus would be directly impacted as a result of the proposed Master Plan, either as a result of demolition or renovation. Eight of these buildings were previously found to be historical resources in accordance with CEQA, and seventeen of these resources have not been evaluated (see Table 17). In addition, four buildings that are not currently part of the University campus but could be acquired in the future are proposed to be demolished. These include at least three buildings north of the Oaks Residence Hall between D Street and E Street, as well as a building adjacent to Campus West. The impacted buildings date from the late nineteenth to

the early twenty-first centuries and embody a variety of architectural styles. These four off-campus buildings do not appear to have been previously evaluated.

Development at Campus West includes the potential construction of multi-family housing, the University House and associated parking lot, a Human Resources/Facilities/Office of Information Technology building and associated parking lot, as well as a bridge and roads by demolishing existing structures and also by developing vacant land. An additional portion of the Campus West property currently has an undetermined use and may potentially be developed in the future. Impacts to the Carrion Adobe, a California Historical Landmark, are considered potentially significant as the historic property is bordered by Campus West on the north and east.

In addition to the aforementioned historic resources, there are buildings in the Master Plan Area that are over 45 years old and have not been evaluated. There also are buildings that will become over 45 years old during the 20 year period of the Master Plan. It is possible that additional buildings may be considered historically significant after they become 50 years of age. Future development or improvements related to changes in land use could potentially impact historic buildings and structures and cause significant adverse impacts to historical resources. Therefore, impacts to these buildings are considered potentially significant.

Table 19 University of La Verne Campus Buildings to be Altered or Demolished

University of La Verne Campus Building Name	Year Built	Action in Master Plan	Eligibility Status
Interfaith (Dant) Chapel	1966	Demolish in Phase I	Individually eligible for CRHR and locally designated as a Heritage University Building
Stu-Han Residence Hall (Studebaker Hanawalt Hall)	1957, 1959	Demolish in Phase I	Locally designated as a Heritage University Building
Modular classroom building	Unknown	Demolish in Phase I	Unknown
Brandt Residence Hall	1962	Renovate in Phase I	Individually eligible for CRHR and locally designated as a Heritage University Building
Hoover Building	1966, 2001	Renovate in Phase I	Unknown
Landis Academic Center	1996	Renovate in Phase I	Unknown
Maniero Hall/La Fetra Building	1967	Renovate in Phase I	Locally designated as a Heritage University Building
Miller Hall	1917	Renovate in Phase I	Locally designated as a Heritage University Building
Wilson Library	1955, 1969	Renovate in Phase I	Unknown

University of La Verne Campus Building Name	Year Built	Action in Master Plan	Eligibility Status
Davenport Dining	1958, 1971	Demolish in Phase II	Individually eligible for CRHR and locally designated as a Heritage University Building
Woody Hall	1948, 1962	Demolish in Phase II	Locally designated as a Heritage University Building
Abraham Campus Center	2009	Renovate in Phase II	Unknown
Arts and Communications Building (Lemon Growers Assoc. Packing House)	1920+, 2004	Renovate in Phase II	Eligible for CRHR as a district contributor and locally designated as a Heritage Citrus Industry Building
Barkley Building School of Education	1950, 1999	Renovate in Phase II; Demolish in Phase III	Unknown
College of Business and Public Management	Unknown	Renovate in Phase II	Unknown
Leo Hall	1990	Renovate in Phase II; Demolish in Phase III	Unknown
2138 Second Street (acquired building north of Oaks Residence Hall)	1948	Demolish in Phase III	Unknown
2154 Second Street (acquired building north of Oaks Residence Hall)	1895	Demolish in Phase III	Unknown
2137 E Street (acquired building north of Oaks Residence Hall)	1907	Demolish in Phase III	Unknown
Barkley Annex	1950, 2004	Demolish in Phase III	Unknown
Health Services (Student Health Center)	1930	Demolish in Phase III	Unknown
Oaks Residence Hall	1989, 2001	Demolish in Phase III	Unknown
1230 Arrow Highway	1950s-60s	Demolish in Phase III	Unknown
1320 Arrow Highway	1973 est.	Demolish in Phase III	Unknown
1324-1330 Arrow Hwy (acquired building adjacent to Campus West)	1973	Demolish in Phase III	Unknown

Source: University of La Verne, Hoover 2002, Myra Frank & Associates/Jones & Stokes 2004, First American Title Company

MITIGATION MEASURES

The following Mitigation Measures shall be implemented as part each individual project in the Plan Area to avoid and/or reduce potential historic resource impacts from future projects in the Master Plan area to the greatest extent feasible:

MITIGATION MEASURE CR-6. CONSTRUCTION ACTIVITIES IN HISTORIC DISTRICTS

Prior to any construction activities that may affect buildings over 50 years of age or a previously identified historic district, a historical resources assessment shall be performed by an architectural historian or historian who meets the National Parks Service PQS in architectural history or history. The assessment shall include a records search at the SCCIC to determine if any resources that may be affected by the project have been previously recorded, evaluated, and/or designated on the National Register of Historic Places (NRHP) or California Register of Historic Places (CRHR) and shall comply with the historic resource preservation standards in place at the time the assessment is prepared. Following the records search, the qualified architectural historian or historian shall conduct a reconnaissance-level and/or intensive-level survey in accordance with the California Office of Historic Preservation guidelines to identify any previously unrecorded potential historical resources within the project site or vicinity that may be affected by the proposed project. California of Department of Parks and Recreation 523 forms shall be prepared for all surveyed properties. Pursuant to the definition of a historical resource under CEQA, potential historical resources shall be evaluated under a developed historic context.

MITIGATION MEASURE CR-7. RELOCATION, REHABILITATION, OR ALTERATION OF HISTORIC RESOURCES

To ensure that projects requiring the relocation, rehabilitation, or alteration of a historical resource not impair its significance, the Secretary of the Interior's Standards shall be used to the maximum extent possible. The application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the PQS. Prior to any construction activities that may affect the historical resource, a report identifying and specifying the treatment of character-defining features, the extent of adaptive reuse, and construction activities shall be provided to the City for review and approval.

MITIGATION MEASURE CR-8. DEMOLITION OR SIGNIFICANT ALTERATION OF HISTORIC RESOURCES

If a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level and impacts would be significant and unavoidable. However, recordation of the resource prior to construction activities will assist in reducing adverse impacts to the resource to the greatest extent possible. Recordation shall take the form of Historic American Buildings Survey, Historic American Engineering Record, or Historic American Landscape Survey documentation, and shall be performed by an architectural historian or historian who meets the PQS. Documentation shall include an architectural and historical narrative; medium- or large-format black and white photographs, negatives, and prints; and supplementary information such as building plans and elevations, and/or historic photographs. Documentation shall be reproduced on archival paper and copies of this documentation, photographs, and

negatives, along with architectural and historical narrative shall be submitted to the City of La Verne, the Los Angeles County Museum of Natural History, the Los Angeles County Library, the University of La Verne Library, the La Verne Historical Society, and any other appropriate local, state, or federal institutions. The documentation reports shall be completed for each phase of development and shall be approved by the City prior to issuance of demolition permits.

MITIGATION MEASURE CR-9. INTERPRETIVE PLAN

A qualified architectural historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History shall be selected by the City of La Verne to prepare an onsite interpretive plan, which shall consist of a public display, plaque, or other suitable interpretive approach, as approved by the City of La Verne. It shall focus on the significant historic themes associated with the historic properties to be demolished and shall include any collected research pertaining to the historic property, and images and details from the HABS/HAER/HALS documentation. The interpretive display shall be installed in an appropriate public location in the project area within one year of the date of completion of the proposed project for which the respective historic resource was demolished. If no appropriate public location is available, an appropriate offsite public location for the display shall be identified by the applicant and presented to the City for approval. The interpretive display shall remain in public view for a minimum of five years, and if removed, appropriately archived.

SIGNIFICANCE AFTER MITIGATION

The implementation of Mitigation Measures CR-6 through CR-9 would reduce impacts to historic resources but would not eliminate the significant impacts associated with demolition of historic structures. Therefore, impacts would remain significant and unavoidable.

4.3.5 Paleontological Resources

Significance Thresholds

IMPACT CR-3. SURFACE EXCAVATION

Implementation of the proposed Master Plan could involve surface excavation. Although unlikely, these activities have the potential to unearth and/or impact paleontological resources. Impacts would be Class II, less than significant with mitigation incorporated.

Construction in the proposed project site would occur primarily in areas mapped as Holocene-aged alluvial deposits of low paleontological sensitivity. However, construction in far western part of the project site (Campus West) would occur in areas mapped as highly sensitive for paleontological resources at the surface (i.e., Pleistocene-aged) (see Figure 10 and Figure 11). Additionally, excavations exceeding approximately five feet in depth in areas mapped as Holocene-aged alluvium (Qa, Qg) have the potential to impact underlying Pleistocene-aged sediments with high paleontological sensitivity. Direct disturbance of

Pleistocene-aged sediments has the potential to destroy scientifically significant paleontological resources, and impacts to those resources would be potentially significant. The following mitigation measures are required to avoid or reduce paleontological resource impacts to a less than significant level.

MITIGATION MEASURES

The following Mitigation Measures shall be implemented as part each individual project within the Plan Area:

MITIGATION MEASURE CR-10. MITIGATION AND MONITORING PROGRAM

The Paleontological Mitigation and Monitoring Program shall be supervised by a qualified paleontologist. A qualified paleontologist (Principal Paleontologist) is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as a paleontological mitigation project supervisor for a least one year. Monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources.

Prior to the start of construction, construction personnel shall be informed on the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff.

MITIGATION MEASURE CR-11. RESOURCE RECOVERY AND MANAGEMENT PLAN

Ground disturbing activity that does not exceed five feet in depth in areas of low paleontological sensitivity shall not require paleontological monitoring. Any excavations within undisturbed bedrock in areas of high paleontological sensitivity (i.e., Pleistocene-aged deposits;), and excavations that exceed five feet in depth in those areas potentially underlain by Pleistocene-aged deposits (i.e., Holocene-aged alluvial sediments) that exceed five feet in depth shall be monitored on a full-time basis by a qualified paleontological monitor. If no fossils are observed during the first 50 percent of excavations in Holocene-aged sediments exceeding five feet in depth, or if the qualified paleontologists can determine that excavations below five feet are not disturbing Pleistocene-aged (or other potentially fossil-containing) sediments, then paleontological monitoring can be discontinued or reduced to spot-checking under the discretion of the Principal Paleontologist, subject to approval by the City of La Verne Community Development Department.

If fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. Typically fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.

Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the University of California Museum of Paleontology or the Los Angeles County Museum of Natural History), along with all pertinent field notes, photos, data, and maps.

Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

IMPACTS AFTER MITIGATION

The implementation of Mitigation Measures CR-10 and CR-11 would reduce impacts to paleontological resources to a less than significant level.

4.3.6 Cumulative Impacts

Archaeological Resources

Cumulative development on the existing University of La Verne campus, as well as any lands acquired by the University in order to implement the Master Plan, would disturb areas that may potentially contain archaeological resources. While there is the potential for significant cumulative impacts to cultural resources within the University of La Verne Master Plan area, it is anticipated that potential impacts associated with individual development projects would be addressed on a case-by-case basis. In addition, as discussed above, the proposed project's impacts can be reduced to below a level of significance with the proposed mitigation measures. Therefore, significant cumulative cultural resource impacts are not anticipated.

Historic Resources

Cumulative development in the Plan Area and on any lands acquired by the University in order to implement the Master Plan, would disturb areas that may potentially contain historical resources. There are 25 buildings currently on campus that are potentially eligible to be listed on the CRHP, envisioned to undergo renovation or demolition as part of the Master Plan. Should renovation or demolition of these 25 buildings, or the development of additional lands within campus boundaries occur, there is the potential for significant cumulative impacts to historical resources within the University of La Verne Master Plan area.

Paleontological Resources

Cumulative development on the existing University of La Verne Campus, as well as any lands acquired by the University in order to implement the Master Plan, would disturb areas that may potentially contain paleontological resources. While there is the potential for significant cumulative impacts to paleontological resources in the University of La Verne

Master Plan area, it is anticipated that potential impacts associated with individual development projects will be addressed on a case-by-case basis. In addition, as discussed above, the proposed project's impacts can be reduced to below a level of significance with the proposed mitigation measures. Therefore, significant cumulative paleontological resource impacts are not anticipated.

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4.4 Geology and Soils

This section addresses the proposed Master Plan's potential impacts related to geologic and seismic hazards. Specifically, it discusses the potential risk to people and structures in and around the Plan Area resulting from a seismic event. Impacts related to erosion, loss of topsoil, and soil instability are also discussed.

4.4.1 Setting

Regional Geology and Soils

The city of La Verne is located in the Pomona Valley, approximately 27.8 miles northeast of downtown Los Angeles. The proposed project lies entirely within the Peninsular Ranges geomorphic province. This geomorphic province occupies the southwestern corner of California and contains the Laguna Mountains, the San Jacinto Mountains, the Santa Ana Mountains, and the Santa Rosa Mountains. The northern portion of the province includes the Los Angeles Basin and is boundaried on the east by the Colorado Desert and on the north by the transverse ranges, including the San Gabriel Mountains (California Geological Survey [CGS] 2002). The topographic trend roughly parallels the Coast Ranges, but the geology more closely resembles the Sierra Nevada with granitic rock that intrudes through the older metamorphic rocks (CGS 2002).

The geology of southern California formed as a result of complex plate tectonics and fault movement. The most notable fault in southern California, the San Andreas Fault, is a right lateral strike-slip (or transform) fault that marks the boundary between the Pacific tectonic plate and the North American tectonic plate (Wallace 1990). Both plates are moving northward, but the Pacific plate is moving at a faster rate than the North American plate and the relative difference in the two rates results in movement along the San Andreas Fault (Wallace 1990). Northwest of the Los Angeles basin, where the southern San Joaquin Valley meets the San Emigdio and Tehachapi Mountains, the orientation of the San Andreas Fault changes from generally northwest to west-northwest (Wallace 1990). This portion of the fault system is known as the "Big Bend" (Singer, 2005). Another large fault in southern California, the left-lateral Garlock Fault, intersects the San Andreas Fault system at this location. This bend in the San Andreas Fault system results in transpressional forces between the two tectonic plates, a geologic result of which was the uplift of the Transverse Ranges, including the San Gabriel Mountains that rise to the north of the city (Wallace 1990).

The compression between the two plates also resulted in the formation of numerous reverse and thrust faults throughout the Los Angeles Basin. Several of these thrust faults are located near the city of La Verne and are discussed in more detail below. South of the Big Bend, several other major strike-slip faults, including the San Jacinto and the Elsinore faults, parallel the trace of the San Andreas Fault (Singer 2005).

The Los Angeles Basin is an alluviated lowland, or coastal plain, underlain by a structural depression (Yerkes et al. 1965: A1). Deposition of mostly marine sediments has occurred

sporadically since the Late Cretaceous period and continuously since the middle Miocene period (Yerkes et al. 1965: A1). This marine and non-marine deposition over a long geologic timeframe resulted in a layer of organic-rich sediments that is up to several miles thick in some places (Yerkes et al. 1965: A1). These organic-rich sediments are the source of the vast petroleum reserves extracted from the basin throughout the twentieth century (Yerkes et al. 1965: A53).

According to the Natural Hazard Mitigation Plan (NHMP) for the City of La Verne, the surface material of the city includes artificial fill; unconsolidated, fine-grained deposits of silt, sand, gravel, and recent flood plain deposits; and Glendora volcanics, andestite, dacites, rhyolite, and volcanic conglomerates. Torrential flood events can introduce large deposits of sand and gravel. Sandy silt and silt containing clay are moderately dense and firm, and are considered to be prone to liquefaction, an earthquake related hazard. Basaltic lava consists mainly of weathered and non-weathered, dense, fine-grained basalt. Though the characteristics of this lava may offer solid foundation support, landslides are common in many areas where weathered residual soil overlies the basalt (City of La Verne 2012: 28). A combination of relatively flat land in the mid and southern portions and hills in the northern half of the city make up the terrain of the area. Elevations in the city range from a high of 1,700 feet to a low of 1,000 feet (City of La Verne 2012: 27).

Seismic Hazards

Southern California is a region of high seismic activity. Similar to most cities in the region, La Verne is subject to risks associated with potentially destructive earthquakes. The Plan Area is located in the seismically active southern California region, but not within an Earthquake Study Zone defined by the Alquist-Priolo Earthquake Hazards Act of 1972 (Division of Mines and Geology 1978). The type and magnitude of seismic hazards with the potential to affect the Plan Area depends upon the city's distance from the epicenter of the earthquake, the nature of the fault on which the earthquake is located, and the intensity and magnitude of the seismic event.

Faults

The CGS establishes criteria for classification of faults as active, potentially active, or inactive. Active faults are those that show evidence of surface displacement within the last 11,000 years (Holocene age). Potentially active faults are those that demonstrate displacement within the past 1.6 million years (Quaternary age). Faults showing no evidence of displacement within the last 1.6 million years may be considered inactive for most structures, except for certain critical structures. In 1972, the Alquist-Priolo Special Studies Zone Act (now known as the Alquist-Priolo Earthquake Fault Zone Act of 1994) was passed into law, requiring studies within 500 feet of active or potentially active faults. The Alquist-Priolo Earthquake Fault Zone Act designates recently active and well-defined faults (based on the same age criteria used by the CGS) with a relatively high potential for surface faulting or fault creep that may constitute a potential hazards to structures.

The intensity of earthquakes is measured/expressed in terms of two scales. The Modified Mercalli Index, which describes the intensity of earthquakes in terms of observable impacts and the Moment Magnitude scale (MW), developed in the 1970s for measuring the size of an earthquake in terms of the energy released.

Active faults and fault zones that could affect the Plan Area include the San Andreas, San Jacinto, Newport Inglewood, Palos Verdes, Whittier-Elsinore, Santa Monica, Sierra Madre, Cucamonga, San Jose, and Chino faults (City of La Verne 2012: 28). As shown in Figure 12 Regional Earthquake Fault Map, no fault runs immediately under the Plan Area. Although the Indian Hill fault lies near the Plan Area (approximately 0.8 mile to the north), as stated in the City of La Verne's NHMP, it is not considered active by geologists. See Figure 13 for the location of the Indian Hill Fault. Other nearby faults listed in the City of La Verne's NHMP capable of producing substantial ground shaking in the Plan Area are also shown in Figure 12 and Figure 13. Earthquakes along faults in the area could induce substantial ground motion and shaking in the city. The active faults that are closest to the Plan Area are discussed below.

Sierra Madre Fault

The Sierra Madre fault is located approximately 2.0 miles north of the Plan Area. As part of the San Gabriel Mountain frontal fault system, this fault zone has been responsible for uplift of mountains by reverse faulting in response to north-south compression. During the 1971 San Fernando earthquake, approximately seven feet of uplift occurred along the San Fernando and Tujunga Faults (westward extensions of the Sierra Madre Fault Zone). The recurrence interval for large (6.0 to 7.0 MW) earthquakes is estimated at 100 to 5,000 years. The Sierra Madre Fault Zone encompasses essentially all major faults in the foothill area of La Verne, including major surface traces in bedrock as well as sub-parallel faults in alluvial areas immediately to the south. (City of La Verne 2012: 6-10).

Cucamonga Fault

The Cucamonga fault is approximately 6.7 miles northeast of the Plan Area. This is an easterly extension of the Sierra Madre zone. It is considered active and has been mapped from the Lytle Creek area to at least the mouth of San Antonio Canyon, a distance of 10 miles. Geologically, recent movement has occurred just east of Glendora where granite basement rocks have been thrust over alluvial formation and in the vicinity of San Antonio, Deer, and Day Canyons to the east where relative uplift on the northern side has produced steep slopes approximately 200 feet high in recent alluvium (City of La Verne 2012: 6-10).

San Andreas Fault

The San Andreas fault is approximately 19.6 miles north of the Plan Area. This fault is widely recognized as the longest and most active fault in the state. It has been mapped from Cape Mendocino in northern California to an area near the Mexican border, approximately 500 miles. Abundant evidence of historic earthquakes indicates that the fault is active, including those that have caused extensive surface rupture and displacement of recent sediments. Current work indicates that large earthquakes have occurred along the fault at widely

varying intervals, at an average of every 160 years. A maximum probable earthquake of magnitude of 8.3 on the Richter Scale has been assigned to the San Andreas in southern California (City of La Verne 2012: 6-10).

San Jacinto Fault

The San Jacinto fault is approximately 22.0 miles northeast of the Plan Area. This active fault is a large strike-slip fault that has been active for several million years, similar to the San Andreas. It has been the principal focus of historical release of strain in southern California between the North American continental plate and Pacific Ocean plate. Surface rupture has been associated with several historic earthquakes on the fault. A maximum probable earthquake for the San Jacinto of MW 7.5 is estimated, based on historic seismicity and rupture length (City of La Verne 2012: 6-10).

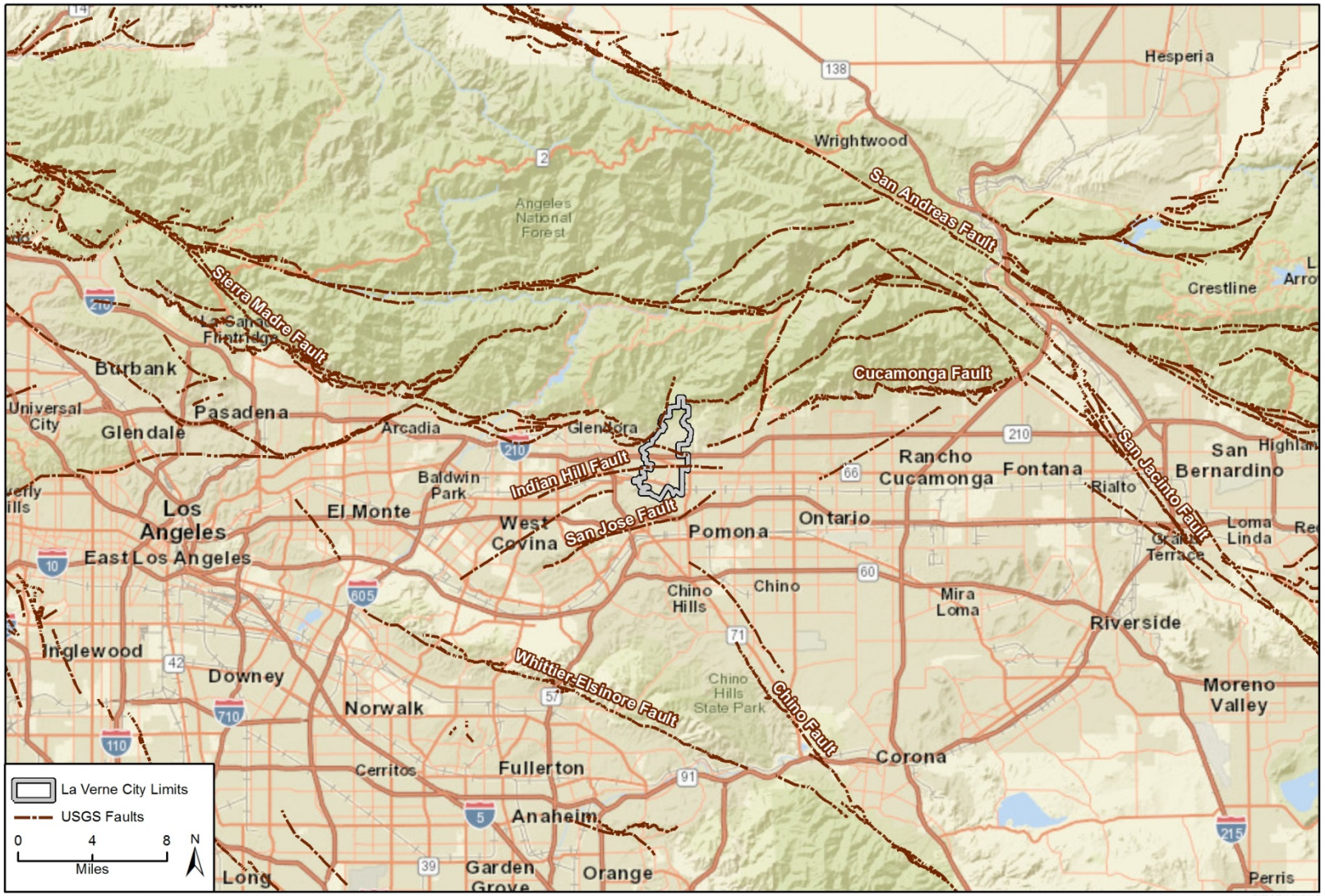
Whittier-Elsinore Fault

This active fault is approximately 12.4 miles southwest of the Plan Area and parallels the San Jacinto Fault. In 1987, a M5.9 earthquake occurred along a previously unknown thrust fault attached to this system. A maximum probable earthquake of MW 7.4 is assigned to the combined Whitter-Elsinore Fault (City of La Verne 2012: 6-10).

San Jose Fault

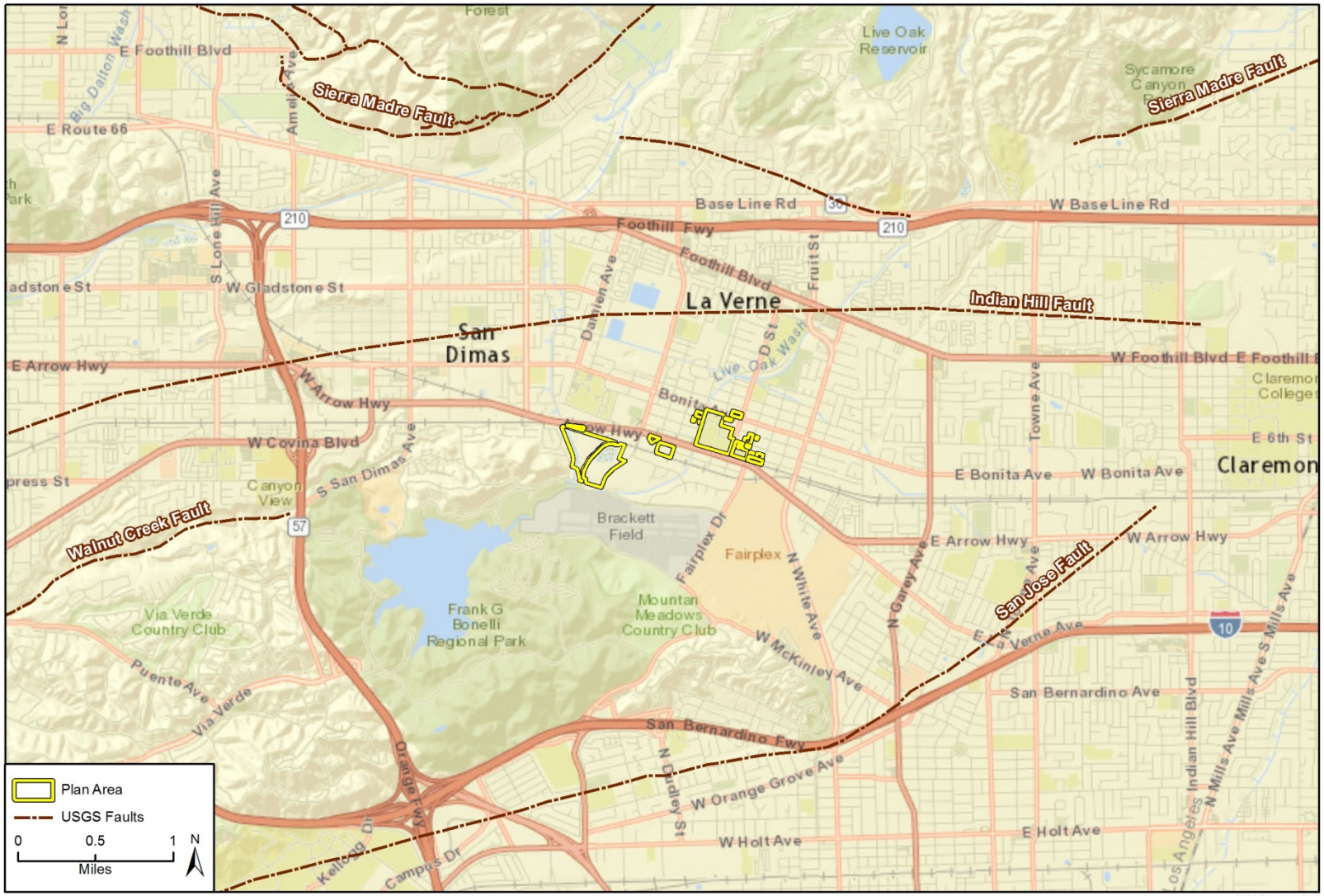
This active fault is approximately two miles south of the Plan Area. It is a left-lateral strike-slip fault with minor reverse component possible. It is approximately 11.2 miles in length and is nearby the Cities of La Verne, Claremont, and Pomona. The last significant earthquake along this fault was a MW 5.4 in 1990. It is a Late Quaternary fault with activity between present day and 700,000 years ago. The maximum probable magnitude of this fault is MW 6.5 (Southern California Earthquake Data Center 2013).

Figure 12 Regional Earthquake Fault Map



Imagery provided by Google and its licensors © 2016;
Additional Data provided by USGS, 2016.

Figure 13 Plan Area Earthquake Fault Map



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Additional Data provided by USGS, 2016; University of La Verne Facilities and Technology Master Plan, September 2016.

Ground Shaking and Surface Rupture

In general terms, an earthquake is caused when strain energy in rocks is suddenly released by movement along a plane of weakness. Faults produce damage in two ways: ground shaking and surface rupture. Seismically-induced ground shaking covers a wide area and is greatly influenced by the distance of the site to the seismic source, soil conditions, and depth to groundwater. In some cases, fault movement propagates upward through subsurface materials and causes displacement at the ground surface because of differential movement. Surface rupture is limited to areas very near the fault. Surface rupture usually occurs along traces of known or potentially active faults, although many historic events have occurred on faults not previously known to be active. Seismicity in southern California is a result of the dominantly reverse-slip regime of the region. The prediction of future fault rupture is impossible and is based on previously encountered faults or ground rupture.

The energy released during an earthquake propagates from its rupture surface in the form of seismic waves. The resulting strong ground motion from the seismic wave propagation can cause substantial damage to structures. At any location, the intensity of the ground motion is a function of the distance to the fault rupture, the local soil/bedrock conditions, and the earthquake magnitude. Intensity is usually greater in areas underlain by unconsolidated material than in areas underlain by more competent rock. Because of the Plan Area's proximity to many potentially active faults, and its location on relatively unstable alluvial material, it is susceptible to severe shock from seismic events.

Earthquakes are characterized by moment magnitude, which is a quantitative measure of the strength of the earthquake based on strain energy released during the event. The magnitude is dependent on several factors, including the type of fault, rock-type, and stored energy. Moderate to severe ground shaking will be experienced in the Plan Area if a large magnitude earthquake occurs on one of the potentially active faults discussed above.

The number or frequency of large magnitude earthquakes that may occur during the life of the proposed Master Plan cannot be predicted reliably. However, according to the CGS Probabilistic Seismic Hazards Mapping Ground Motion program (California Department of Conservation 2008), the horizontal peak ground acceleration having a 10 percent probability of being exceeded in 50 years in the Plan Area is approximately 0.571 g, where "g" is the acceleration of gravity.

The potential hazards or adverse effects of ground-shaking would depend on several factors, including the severity of ground shaking; the nature, depth, and extent of the seismic event; the type of structures involved; and the local topography.

Secondary Seismic Effects

Potential hazards resulting from the secondary effects of ground-shaking include liquefaction, subsidence, and earthquake-induced landslides. Soil-disturbing activities such as grading, soil compaction, and cut and fill activities can create or exacerbate conditions that increase the chance of such effects during or independent of seismic activity. According to the City of La Verne's General Plan (City of La Verne 1998), most of the potentially active

faults that cross the community are in the areas above Baseline Road, making the north of the city susceptible to potential geologic hazards in the form of landslides, liquefaction, and groundwater. The Plan Area is in the southern portion of the city, south of Baseline Road.

Liquefaction

Soil liquefaction results from the temporary buildup of excess pore pressures, which can result in a condition of near zero effective stress and temporary loss of strength. Several factors influence a soil's potential for liquefaction during an earthquake. These factors include: magnitude and proximity of the earthquake; duration of shaking; soil types; grain size distribution; clay fraction content; density; angularity; effective overburden; location of groundwater table; cyclic loading; and soil stress history. Liquefaction is more likely in poorly-graded, saturated, low-density sands. With increasing overburden, density, and increasing clay-content, the likelihood of liquefaction decreases. Figure 14, taken from the Department of Conservation Division of Mines and Geology's seismic hazard zones map for the San Dimas quadrangle, shows that Campus West is in an area where historic occurrences of liquefaction, local geological, or geotechnical and groundwater conditions indicate a potential for permanent ground displacements.

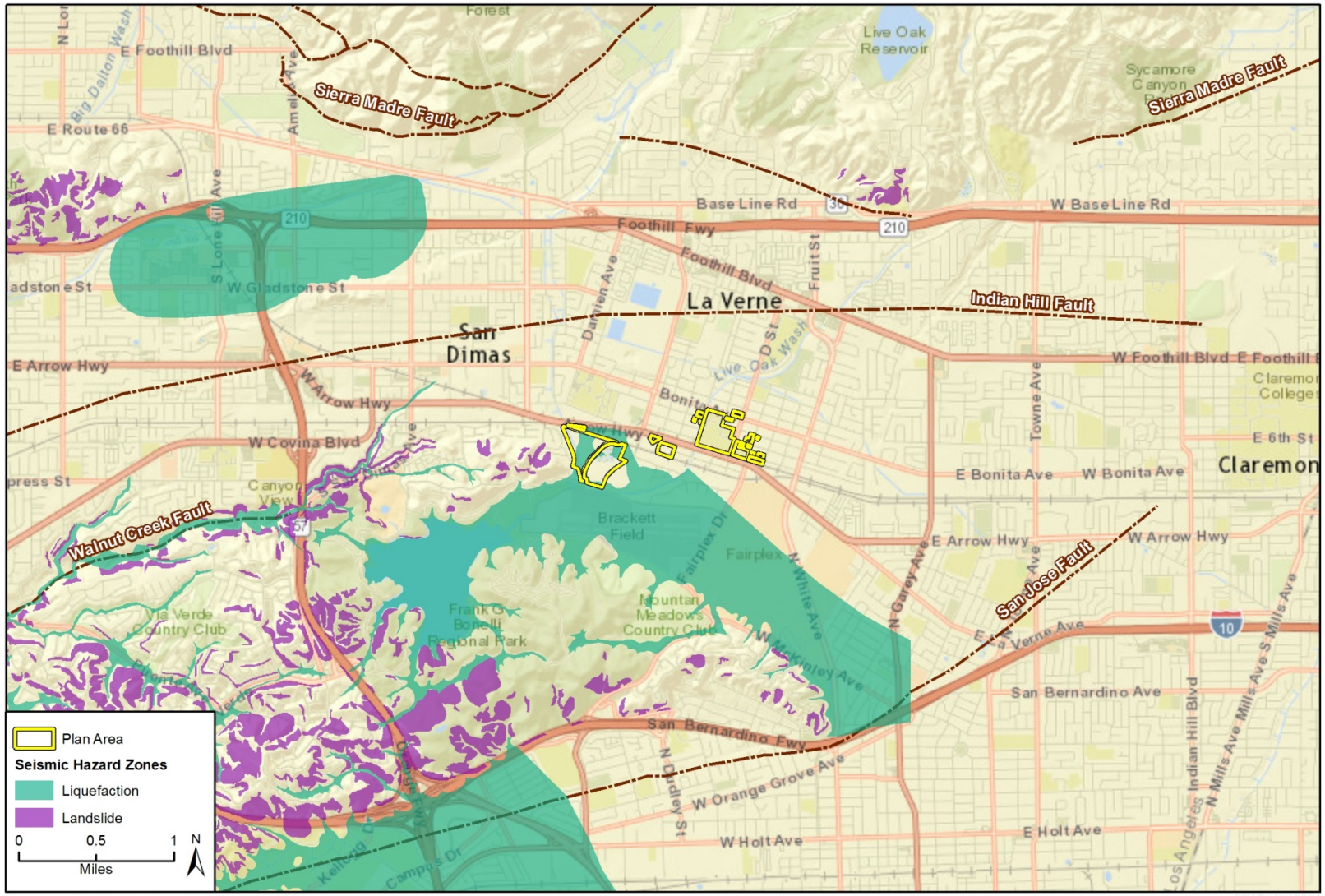
Subsidence

Subsidence is the sinking of the ground surface caused by the compression of soil layers. This compression is caused by deep-seated settlement of these soil layers, which in turn is caused by human activities or natural effects such as extraction of groundwater, oil and gas withdrawal, oxidation of organics, and the placement of additional fill over compressible layers. Seismically-induced subsidence occurs in loose to medium density unconsolidated soils above groundwater. These can compress when subject to seismic shaking, causing subsidence. This subsidence is exacerbated by increased loading, such as from the construction of structures onsite. This hazard can be mitigated prior to development through removal and re-compaction of loose soils. According to the City of La Verne General Plan (1998), the canyon bottom areas and flatter, southerly portion of the City, including the Plan Area, is most likely to have settlement occur with an earthquake event.

Landslides and Slope Instability

Seismic ground shaking can also result in landslides and other slope instability. Landslides occur when slopes become unstable and masses of earth material move downslope. Landslides are usually rapid events, often triggered during periods of rainfall or by earthquakes. Mudslides and slumps are a more shallow type of slope failure. They typically affect the upper soil horizons rather than bedrock features. Usually mudslides and slumps occur during or soon after periods of rainfall, but they can be triggered by seismic shaking. Figure 14 shows that the Plan Area is not subject to seismically-induced landslides.

Figure 15 Liquefaction and Landslide Map



Imagery provided by Google and its licensors © 2016;
Additional Data provided by California Geological Survey, 2002; University of La Verne Facilities and Technology Master Plan, September 2016.

Other Geotechnical Hazards

Some of the geotechnical hazards discussed above, such as subsidence, landslides and slope instability, can be triggered by or occur independently of seismic events. Others, such as expansive soils and hydroconsolidation, occur independently of seismic events and are discussed in the following sub-sections.

Expansive Soils

Expansive soils swell or heave with increases in moisture content and shrink with decreases in moisture content. These soils usually contain high clay content. Foundations for structures constructed on expansive soils require special design considerations. Because expansive soils can expand when wet and shrink when dry, they can cause foundations, basement walls and floors to crack, causing substantial structural damage. As such, structural failure due to expansive soils near the ground surface is a potential hazard. As explained in the City of La Verne Municipal Code, 15.04.110 *Expansive soils*, all foundation systems in the city of La Verne are considered to be on expansive soil unless otherwise specified by a registered geotechnical engineer (City of La Verne 2016).

Hydroconsolidation

Hydroconsolidation occurs when soil layers collapse, or settle, as water is added under loads. Natural deposits susceptible to hydroconsolidation are typically aeolian, alluvial, or colluvial materials, that have a high apparent strength when dry. The dry strength of the materials may be attributed to the clay and silt constituents in the soil and the presence of cementing agents (i.e., salts). Capillary tension may tend to act to bond soil grains. Once these soils are subjected to excessive moisture and foundation loads, the constituency including soluble salts or bonding agents is weakened or dissolved, capillary tensions are reduced and collapse occurs resulting in settlement. Existing alluvium within the Plan Area may be susceptible to collapse and excessive settlements, which could create the risk of hydroconsolidation if these soils were exposed to excessive moisture.

4.4.2 Regulatory Setting

Federal

International Building Code

The International Building Code (IBC) is published by the International Code Council (ICC). The scope of this code covers major aspects of construction and design of structures and buildings. The IBC has replaced the Uniform Building Code (UBC) as the basis for the CBC and contains provisions for structural engineering design. The 2015 IBC addresses the design and installation of structures and building systems through requirements that emphasize performance. The IBC includes codes governing structural as well as fire- and life-safety provisions covering seismic, wind, accessibility, egress, occupancy, and roofs. The IBC is updated every three years.

State

California Building Code

The CBC, Title 24, Part 2 provides building codes and standards for design and construction of structures in California. The 2013 CBC is based on the 2012 IBC with the addition of more extensive structural seismic provisions. Chapter 16 of the CBC contains definitions of seismic sources and the procedure used to calculate seismic forces on structures. Updates to the CBC 2016 will reflect the 2015 IBC. Further updates will occur every three years.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 was passed into law following the destructive February 9, 1971 M6.6 San Fernando earthquake. The Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (the Act) of 1990 was passed into law following the destructive October 17, 1989 M6.9 Loma Prieta earthquake. The Act directs the CGS to delineate Seismic Hazard Zones. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards. Cities, counties, and state agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects in seismic hazard zones.

Local

City of La Verne General Plan

The City of La Verne *General Plan Public Safety Chapter* (City of La Verne 1998) contains goals, policies, and implementation measures to limit the exposure to potential natural and man-made hazards, including seismic hazards, as well as discussing readiness to cope with emergencies. If the proposed project is implemented, the policies and actions in the City of La Verne's General Plan would apply. These goals and policies require all development to comply with the provisions of the latest CBC, including provisions related to proper design and engineering to minimize potential impacts from seismic events. Relevant goals and policies related to the geologic hazards in the Master Plan are as follows:

- Goal 2: Protect our residents from geologic hazards

- Policy 2.1: Reduce the risk of geologic and groundwater hazards
  - Implementation Measure b: Adhere to Chapter 70 of the UBC regulating earthwork and grading during construction, and hillside grading guidelines to minimize erosion.
  - Implementation Measure d: Limit acreage of bare soils exposed at any one time.
  - Implementation Measure e: Restrict grading to the dry season and require immediate revegetation.
  - Implementation Measure g: Encourage turf block decomposed granite, grasscrete or similar permeable surfaces rather than conventional pavement.
  - Implementation Measure h: Provide opportunities for aquifer recharge.
  - Implementation Measure i: Encourage developers to minimize paved areas in new developments and require these areas to be interspersed with landscaping.
  - Implementation Measure j: Require that all new development be connected to sewers.
- Policy 2.2: Minimize personal and property damage from earthquakes.
  - Implementation Measure d: Require special site-specific studies in areas potentially subject to liquefaction to determine the nature and extent of possible liquefaction and to identify engineering and development siting measures to permit development to occur.
  - Implementation Measure g: Require that water heaters be bolted to the wall in all new residential construction. Encourage owners of existing homes to bolt water heaters to the wall and encourage the use of tankless water heaters.

City of La Verne Municipal Code

The City of La Verne *Municipal Code*, adopted the Los Angeles County versions of the CBC as its code for reference, except for certain codes explained in Chapter 15 *Buildings and Construction* (City of La Verne 2016). The following code excerpts apply to geology and soils:

- 15.04.110 Expansive soils, Section 1809.4 of the California Building Code is amended to read as follows:
  - 1809.4 Foundations on expansive soil. Unless otherwise specified by a registered geotechnical engineer, foundation systems within the City of La Verne are considered to be on expansive soil and shall be constructed in a manner that will minimize damage to the structure from movement of the soil. Slab-on-grade and mat-type footings for buildings located on expansive soils may be designed in accordance with the provisions of Section 1808.6.2 or such other engineering design based upon geotechnical recommendation as approved by the Building Official. Where such an approved method of construction is not provided, foundations and floor slabs shall comply with the following requirements:
    (i) Depth of foundations below the natural and finish grades shall be not less than 24 inches for exterior and 18 inches for interior foundations.

(ii) Exterior walls and interior bearing walls shall be supported on continuous foundation.
(iii) Foundations shall be reinforced with at least two continuous one-half-inch diameter deformed reinforcing bars top and bottom. Two bars shall be placed within four inches of the bottom of the foundation and two within four inches of the top of the foundation.
(iv) Concrete floor slabs on grade shall be cast on a four-inch fill of coarse aggregate or on a moisture barrier membrane. The slabs shall be at least three and one-half inches thick and shall be reinforced with welded wire mesh or deformed reinforcing bars. Welded wire mesh shall have a cross-sectional area of not less than five-hundredths square inch per foot each way. Reinforcing bars shall have a diameter of not less than three-eighths inch and be spaced at intervals not exceeding 24 inches each way.
(v) The soil below an interior concrete slab shall be saturated with moisture to a depth of 18 inches prior to casting the concrete.

4.4.3 Methodology and Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines (also used by the City of La Verne as its own CEQA checklist), impacts would be significant if the proposed Master Plan would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction
  - Landslides
- Result in substantial soil erosion or the loss of topsoil
- 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 offsite landslide, lateral spreading, subsidence, liquefaction, or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water

As discussed in Section 4.4.1, the Plan Area is not directly on a known earthquake fault or fault zone and therefore does not expose people or structures to substantial adverse effects of rupture. As explained above in Section 4.4.2, the proposed Master Plan would have no impact related to the issue of septic tanks and alternative wastewater treatment systems due to the policies in the City of La Verne's General Plan requiring all new development be connected to a sewer system. Additionally, the impact of substantial soil erosion or the loss

of top soil is described in detail in Section 4.7, Hydrology and Water Quality. Therefore, these issues are not discussed further in this section of the EIR.

4.4.4 Project Impacts and Mitigation Measures

IMPACT GEO-1. EXPOSURE TO SEISMIC HAZARDS

Implementation of the proposed Master Plan would lead to an increase in the number of built facilities in the Plan Area that could expose people and structures to both localized and regional seismic hazards, including strong ground shaking and secondary seismic effects such as liquefaction and landslides. However, with modern construction techniques and adherence to applicable California Building Code provisions, impacts would be Class III, less than significant.

Full implementation of the proposed Master Plan would lead to a net increase of 403,577 gross square feet (GSF) over the life of the Master Plan (2035). This development could be exposed to seismic ground shaking and its secondary effects, which in turn could lead to loss of or damage to life and property.

As discussed in Section 4.4.1 above, active and/or potentially active faults exist in the Plan Area and are capable of producing major earthquakes and significant ground shaking. The closest of these is the Sierra Madre fault. As indicated in Figure 13, this fault runs from west to east through the northern portion of the city of La Verne, approximately two miles north of the Plan Area. The Sierra Madre Fault Zone encompasses essentially all major faults in the foothill area of La Verne, including major surface traces in bedrock as well as sub-parallel faults in alluvial areas immediately to the south (City of La Verne 2012).

Grading and construction of buildings and support structures in the Plan Area would be required to adhere to City of La Verne development review requirements as defined in City of La Verne Municipal Code Chapter 15.04, Building Codes Adopted, which incorporates, by reference, the design and construction standards of the most current edition of the CBC, which in turn incorporates and amends the most current edition of the IBC. Design and construction of future improvements called for under the proposed Master Plan would be required to adhere to the recommendations listed in the standard procedures of the CBC, to reduce any potential impacts from seismic related activity. The regulations and standards in the CBC are designed to specifically ensure that buildings are engineered to reduce seismic hazards to structures, including secondary seismic hazards such as liquefaction, and would reduce potential impacts from ground shaking. Also, because the proposed Master Plan would be implemented over a 20-year time frame, construction plans would be subject to review by the City for compliance with the most current edition of the CBC at the time of construction, as modified by the City, and require preparation of site-specific geological, geotechnical, or structural design studies if required by the City. Therefore, impacts would be less than significant.

MITIGATION MEASURES

No mitigation measures are required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT GEO -2. EXPANSIVE SOILS

Implementation of the proposed Master Plan would include development on potentially expansive soils. Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils. Impacts would be Class III, less than significant.

The City of La Verne Municipal Code includes the adopted Building Code, which based on the most current version of the CBC. A number of widely used treatments are available to address expansive soil hazards, including soil grouting, re-compaction, and replacement of expansive soil with a non-expansive material. CBC Section 1808.6 requires special foundation design for buildings constructed on expansive soils. If soil is not removed or stabilized, then foundations must be designed to prevent uplift of the supported structure, to resist forces exerted on the foundation due to soil volume changes or isolated from the expansive soil. Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils. Furthermore, Municipal Code Section 15.04.110, *Expansive soils*, states that unless otherwise specified by a registered geotechnical engineer and accompanying geotechnical report, with recommendations, foundation systems in the city of La Verne are considered to be on expansive soil and shall be constructed in a manner that will minimize damage to the structure from movement of the soil. Impacts would be less than significant.

MITIGATION MEASURES

No mitigation measures are required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

4.4.5 Cumulative Impacts

As discussed in Section 3, Environmental Setting, cumulative development in and around the Plan Area, including development proposed under the Master Plan, would add residential and non-residential units to the area. Cumulative impacts related to seismically induced ground shaking and other geotechnical hazards would be similar to what is described above where impacts specific to the Master Plan are addressed. Impacts would be assessed and mitigated on a project-by-project basis through compliance with existing building codes and site-specific mitigation measures for individual projects. Geologic hazards are specific to individual sites and hazards present on one site do not add to the hazards present on another site. Compliance with applicable code requirements and the recommendations of site-specific geotechnical evaluations on a case-by-case basis would reduce cumulative impacts relating to geologic hazards to a less than significant level.

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4.5 Greenhouse Gas Emissions

This section discusses the contribution of human activities to global climate change, and provides a summary of existing greenhouse gas (GHG) emissions both globally and locally. This section also describes the criteria for determining significance and analyzes the proposed Master Plan's potential impacts related to GHG emissions, including generation of GHG emissions and consistency with plans, policies, and regulations related to GHGs.

4.5.1 Setting

Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC 2013), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC 2013).

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

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the

extent of the earlier IPCC projections. The recently observed increases in CH_4 and N_2O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (California Environmental Protection Agency [CalEPA] 2006). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (IPCC 2007).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34 degrees celcius (°C) cooler (CalEPA 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of those that occur naturally. The following discusses the primary GHGs of concern.

Carbon Dioxide

The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [U.S. EPA] 2014). CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements made in the second half of the twentieth century. Concentrations of CO_2 in the atmosphere have risen approximately 40 percent since the industrial revolution. The global atmospheric concentration of CO_2 has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC 2007; Oceanic and Atmospheric Administration [NOAA] 2010). The average annual CO_2 concentration growth rate was larger between 1995 and 2005 (average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA 2010). Currently, CO_2 represents an estimated 74 percent of total GHG emissions (IPCC 2007). The largest source of CO_2 emissions, and of overall GHG emissions, is fossil fuel combustion.

Methane

Methane (CH_4) is an effective absorber of radiation, though its atmospheric concentration is less than that of CO_2 and its lifetime in the atmosphere is limited to 10 to 12 years. It has a GWP approximately 25 times that of CO_2. Over the last 250 years, the concentration of CH_4 in the atmosphere has increased by 148 percent (IPCC 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH_4 include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (EPA 2014).

Nitrous Oxide

Concentrations of nitrous oxide (N_2O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA 2010). Microbial processes in soil and water produce N_2O. These include reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N_2O emissions. The GWP of nitrous oxide is approximately 298 times that of CO_2 (IPCC 2007).

Fluorinated Gases (HFC, PFC, and SF_6)

Fluorinated gases, such as HFC, PFCs, and SF_6, are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and are phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF_6 emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but these compounds have much higher GWPs. SF_6 is the most potent GHG the IPCC has evaluated.

Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT, or gigatonne) CO_2e in 2010 (IPCC 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, carbon dioxide was the most abundant accounting for 76 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while nitrous oxide and fluorinated gases account for six and two percent respectively (IPCC 2014).

Total GHG emissions were 6,525.6 MMT CO_2e in 2012 (U.S. EPA 2014). Total U.S. emissions have increased by 4.7 percent since 1990. Emissions decreased by 3.4 percent from 2011 to 2012 (U.S. EPA 2014). The decrease from 2011 to 2012 was due to a decrease in the carbon

intensity of fuels consumed to generate electricity due to a decrease in coal consumption, with increased natural gas consumption. Additionally, relatively mild winter conditions, especially in regions of the United States where electricity is important for heating, resulted in an overall decrease in electricity demand in most sectors. Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2012, the transportation and industrial end-use sectors accounted for 28.2 percent and 27.9 percent of CO_2 emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16.3 percent and 16.4 percent of CO_2 emissions, respectively (U.S. EPA 2014).

Based upon the California Air Resources Board (CARB) California Greenhouse Gas Inventory for 2000-2013, California produced 459.3 MT CO_2E in 2013 (CARB 2015). The major source of GHG in California is transportation, contributing 37 percent of the state's total GHG emissions. Industrial sources are the second largest source of the state's GHG emissions (CARB 2015). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The ARB has projected statewide unregulated GHG emissions for the year 2020 will be 509.4 MT CO_2e (CARB 2014). These projections represent the emissions that would be expected in the absence of any GHG reduction actions.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT and sea surface temperatures have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2013).

According to the CalEPA's *2010 Climate Action Team Biennial Report*, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA 2010). Below is a summary of some of the potential effects that could be experienced in California due to of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Energy Commission [CEC] 2009).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varied hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR] 2008; CCCC 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2008).

Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. According to The Impacts of Sea-Level Rise on the California Coast, prepared by the California Climate Change Center (CCCC) (CCCC 2009), climate change has the potential to induce substantial

sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea–level rise of 11-38 inches by 2100. This prediction is more than 50 percent higher than earlier projections of 7-23 inches, when comparing the same emissions scenarios and time periods. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC 2006).

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan, 2006).

Local Effects of Climate Change

While the above discussion identifies the possible effects of climate change at a global and potentially statewide level, current scientific modeling tools are unable to predict with a similar degree of accuracy what local impacts may occur with a similar degree of accuracy. In general, regional and local predictions are made based on downscaling statewide models (CalEPA April 2010).

4.5.2 Regulatory Setting

The following regulations address both climate change and GHG emissions.

International

United Nations Framework Convention on Climate Change

The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was produced in 1992. The UNFCCC is an international environmental treaty with the objective of, "stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." This is generally understood to be achieved by stabilizing global GHG concentrations between 350 and 400 ppm, in order to limit the global average temperature increases between 2 and 2.4°C above pre-industrial levels (IPCC 2007). The UNFCCC itself does not set limits on GHG emissions for individual countries or enforcement mechanisms. Instead, the treaty provides for updates, called "protocols," that would identify mandatory emissions limits.

Kyoto Protocol

Five years later, the UNFCCC brought nations together again to draft the *Kyoto Protocol* (1997). The Kyoto Protocol established commitments for industrialized nations to reduce their collective emissions of six GHGs (CO_2, CH_4, N_2O, SF_6, HFCs, and PFC) to 5.2 percent below 1990 levels by 2012. The United States is a signatory of the Kyoto Protocol, but Congress has not ratified it and the United States has not bound itself to the Protocol's commitments (UNFCCC 2007). The first commitment period of the Kyoto Protocol ended in 2012. Governments, including 38 industrialized countries, agreed to a second commitment period of the Kyoto Protocol beginning January 1, 2013 and ending either on December 31, 2017 or December 31, 2020, to be decided by the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its seventeenth session (UNFCCC 2011).

Durban Platform for Enhanced Action

In Durban (17th session of the Conference of the Parties in Durban, South Africa 2011), governments decided to adopt a universal legal agreement on climate change. Work began on that task immediately under a new group called the Ad Hoc Working Group on the Durban Platform for Enhanced Action. Progress was also made regarding the creation of a Green Climate Fund, for which a management framework was adopted (UNFCCC 2011; United Nations 2011).

Paris Agreement

In December 2015, the 21st session of the Conference of the Parties (COP21) adopted the Paris Agreement. The deal requires all countries that ratify it to commit to cutting greenhouse gas emissions, with the goal of peaking greenhouse gas emissions "as soon as

possible" (Worland 2015). The agreement includes commitments to (1) achieve a balance between sources and sinks of greenhouse gases in the second half of this century; (2) to keep global temperature increase "well below" 2 degrees Celsius (C) or 3.6 degrees Fahrenheit (F) and to pursue efforts to limit it to 1.5 C; (3) to review progress every five years; and (4) to spend $100 billion a year in climate finance for developing countries by 2020 (UNFCCC 2015). The agreement includes both legally binding measures, like reporting requirements, as well as voluntary or non-binding measures while, such as the setting of emissions targets for any individual country (Worland 2015).

Federal

The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act.

The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 tons CO_2e per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010, the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 tons CO_2e per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time new sources were subject to GHG Title V permitting if the source emits 100,000 tons CO_2e per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 tons CO_2e per year.

On July 3, 2012 the U.S. EPA issued the final rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

State

California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. California has a numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

Assembly Bill 1493

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires ARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (ARB 2011).

Executive Order S-3-05

In 2005, the governor issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (CalEPA, 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In April 2015 the governor issued EO B-30-15, calling for a new target of 40 percent below 1990 levels by 2030.

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in AB 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires

ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by ARB on December 11, 2008, and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted over the last five years. Implementation activities are ongoing and ARB is currently the process of updating the Scoping Plan.

In May 2014, ARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines ARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (ARB 2014).

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

Air Resources Board Resolution 07-54

ARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill 375

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

was assigned the target of eight percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

In April 2011, the governor signed SB 2X requiring California to generate 33 percent of its electricity from renewable energy by 2020.

On April 29, 2015, the governor issued an executive order to establish a statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030. According to CARB, reducing GHG emissions by 40 percent below 1990 levels in 2030 ensures that California will continue its efforts to reduce carbon pollution and help to achieve federal health-based air quality standards. Setting clear targets beyond 2020 also provides market certainty to foster investment and growth in a wide array of industries throughout the State, including clean technology and clean energy. CARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The updated Scoping Plan is expected to be completed and adopted by CARB in 2016 (CARB 2015).

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

Local Regulations

While the City of La Verne does not yet have a Climate Action Plan, the University of La Verne has adopted one. The *University of La Verne Climate Action Plan* outlines goals which directly relate to GHG emissions. According to the Plan, the University must decrease emissions by 20 percent of 2005 levels by 2020 and 80 percent by 2050. Major areas of emission reductions are identified as transportation and energy consumption emissions.

4.5.3 Impact Analysis

Methodology and Significance Thresholds

Based on Appendix G of the State CEQA Guidelines, impacts related to GHG emissions from the proposed project would be significant if the project would:

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

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). However, the SCAQMD has not yet adopted GHG emissions thresholds that apply to land use projects where the SCAQMD is not the lead agency and no GHG emissions reduction plan or GHG emissions thresholds have been adopted in La Verne. Therefore, the proposed Master Plan is evaluated based on the SCAQMD's proposed threshold for all land use types, including residential, of 3,000 MT CO_2E per year (SCAQMD 2010).

The potential development associated with the proposed Master Plan would have a significant impact related to GHG emissions if it would result in more than 3,000 MT of CO_2E per year. In addition, in order to determine whether or not the proposed Master Plan's GHG emissions are "cumulatively considerable," this analysis considers the proposed Master Plan's consistency with applicable GHG emission reductions strategies.

Study Methodology

Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume (IPCC 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, because the project is a Master Plan for a predominantly educational development, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs are converted into their equivalent GWP in terms of CO_2 (CO_2e). Minimal amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would be emitted; however, these other GHG emissions would not substantially add to the total calculated CO_2e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (CAPCOA 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009).

GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 (see Appendix B for calculations).

Operational Emissions

CalEEMod provides operational emissions of CO_2, N_2O, and CH_4. Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42, (*Compilation of Air Pollutant Emissions Factors*) and CCAR. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour. The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from ARB, U.S. EPA, and emission factor values provided by the local air district.

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste. Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for northern and southern California.

For mobile sources, CO2 and CH4 emissions were quantified in CalEEMod. Because CalEEMod does not calculate N2O emissions from mobile sources, N2O emissions were quantified using the California Climate Action Registry General Reporting Protocol (CAPCOA 2009) direct emissions factors for mobile combustion (see Appendix B for calculations). The estimate of total daily trips associated with the proposed project was based on trip generation rates from the project Traffic Impact Analysis (Linscott Law and Greenspan Engineers 2016) and was calculated and extrapolated to derive total annual mileage in CalEEMod. Emission rates for N2O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol.

A limitation of the quantitative analysis of emissions from mobile combustion is that emission models, such as CalEEMod, evaluate aggregate emissions, meaning that all vehicle trips and related emissions assigned to a project are assumed to be new trips and emissions generated by the project itself. Such models do not demonstrate, with respect to a regional air quality impact, what proportion of these emissions are actually "new" emissions, specifically attributable to the project in question. For most projects, the main contributor to regional air quality emissions is from motor vehicles. However, the quantity of vehicle trips appropriately characterized as "new" is usually uncertain as traffic associated with a

project may be relocated trips from other locales. Because the trips associated with the proposed Master Plan in this analysis are associated with an increase in enrollment and staffing at the University, all trips are assumed to result in new emissions and not emissions associated with relocated trips.

Construction Emissions

Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the CEQA and Climate Change white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA 2008). Nevertheless, air districts such as the SCAQMD (2011) have recommended amortizing construction-related emissions over a 30-year period in conjunction with the proposed project's operational emissions.

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment onsite as well as from vehicles transporting construction workers to and from the project site and heavy trucks to export earth materials offsite. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. CalEEMod provides an estimate of emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment-use during construction.

Construction emissions quantified in this analysis represent a conservative "worst case" scenario of all projects under the proposed Master Plan occurring concurrently. However, projects would not occur concurrently, and would instead be staggered throughout the 20 year life of the Master Plan. Therefore, construction activity emissions calculated in CalEEMod represent a conservative estimate.

4.5.4 Project Impacts and Mitigation Measures

IMPACT GHG-1. TOTAL EMISSIONS

Development under the proposed Specific Plan would generate additional greenhouse gas (GHG) emissions beyond existing conditions due to construction activity and long-term operations. Total estimated GHG emissions would exceed the efficiency threshold. Impacts related to GHG emissions would Class II, less than significant with mitigation incorporated.

As stated above, GHG emissions for potential buildout of the Master Plan were calculated using the SCAQMD's CalEEMod computer model based on the increase of 971 total new students, demolition of approximately 147,773 square feet of existing buildings, construction of approximately 72,000 square feet of general office space, 89,200 square feet of retail/commercial space, up to 170 apartments, and one single family residence. The estimated 971 new students is consistent with the project traffic study and represents a worst case scenario of trips generated by all new students, including part time and online students, as well as the 782 full time equivalent students. The following summarizes the

proposed Master Plan's overall GHG emissions, which include construction and operational emissions (see Appendix B for full CalEEMod worksheets).

Construction Emissions

As discussed above under Methodology and Significance Thresholds, CalEEMod calculations represent a "worst case" scenario assuming all projects would occur concurrently. However, planned construction and demolition activities would be spread out throughout the 20 year lifespan of the proposed Master Plan. Therefore CalEEMod model results present a conservative estimate for construction activity emissions. Construction activity occurring under the proposed Master Plan would generate an estimated 2,323 MT of CO_2E (as shown in Table 20). Amortized over a 30-year period as per SCAQMD recommendations, construction facilitated by the proposed Master Plan would generate an estimated 77 MT of CO_2E per year.

Table 20 Estimated Construction Emissions of Greenhouse Gases

Emission Source	Annual Emissions
Construction	2,323 MT CO_2e
Amortized over 30 years	77 MT CO_2e/year

See Appendix B for calculations and for GHG emission factor assumptions

Operational Indirect and Stationary Direct Emissions

Operational indirect and stationary direct emissions resulting from energy use, mobile emissions, area emissions, and water use were calculated for the total number of new students, square footage, and residential units under the proposed Master Plan. Existing GHG emissions from the buildings that would be demolished under the proposed Master Plan were then calculated in CalEEMod and subtracted from the emissions associated with proposed new development. A college land use and a similar trip generation as the University land use was assumed for the existing structures in order to calculate emissions based on total removed square footage since no students would be removed from the demolition.

Area Source Emissions

The CalEEMod model was used to calculate direct sources of GHG emissions located within the Plan Area (See Appendix B for calculations). This includes consumer product use, architectural coatings, and landscape maintenance equipment. However, per SCAQMD Rule 1113, no wood burning hearths would be allowed in the new development. As shown in Table 21, total net emissions from the project would be approximately 3.0 MT CO_2e per year.

Table 21 Estimated Annual Area Related Greenhouse Gas Emissions

Emission Source	Annual Emissions CO2e (metric tons)
Architectural Coating	<0.01
Consumer Products	<0.01
Landscaping	3.0
Total	3.0
Emissions from Buildings to be Demolished	<0.01
Net Emissions	3.0

See Appendix B for calculations and for GHG emission factor assumptions

Energy Use

Operation of the proposed new buildings would consume both electricity and natural gas (see Appendix B for calculations). The generation of electricity through combustion of fossil fuels typically yields CO_2, and to a smaller extent, N_2O and CH_4. As discussed above, annual electricity and natural gas emissions can be calculated using default values from the CEC sponsored CEUS and RASS studies which are built into CalEEMod.

As shown in Table 22, electricity consumption associated with the proposed Master Plan would generate approximately 1,818MT CO_2E per year. Natural gas use would generate approximately 349 MT CO_2E per year. Thus, overall energy use within the Master Plan, at full buildout, would generate approximately 2,167 MT CO_2E per year. However, the existing buildings on campus that would be demolished under the proposed Master Plan would account for approximately 700 MT CO_2E per year. Therefore, net emissions from energy consumption would be 1,467 MT CO_2E per year.

Table 22 Estimated Annual Energy Related Greenhouse Gas Emissions

Emissions Source	Annual Emissions CO_2e (metric tons)
Electricity	1,818
Natural Gas	349
Total	2,167
Emissions from Buildings to be Demolished	700
Net Emissions	1,467

See Appendix B for calculations and for GHG emission factor assumptions

Solid Waste Emissions

It is anticipated that development facilitated by the proposed Master Plan would generate approximately 417.3 tons of solid waste per year according to the CalEEMod output. As shown in Table 23, based on this estimate, solid waste generated through Master Plan implementation would generate approximately 190 MT CO_2E per year. However, incorporating the emissions from existing buildings to be demolished, total net emissions from solid waste would be approximately 103 MT CO_2e per year.

Table 23 Estimated Annual Solid Waste Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2e (metric tons)
Solid Waste	190
Emissions from Buildings to be Demolished	87
Net Emissions	103

See Appendix B for calculations and for GHG emission factor assumptions

Water Use Emissions. It is estimated that the proposed Master Plan would use approximately 38 million gallons of water per year based on the land use type and number of students. Based on the amount of electricity used to supply this amount of water, as shown in Table 24, this aspect of the proposed Master Plan would generate approximately 233MT CO_2E per year. Existing buildings to be demolished would account for approximately 72 MT CO_2e per year of GHG emissions. Therefore, as shown in Table 24 net emissions would be approximately 161 MT CO_2e per year.

Table 24 Estimated Annual Water Use Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2e (metric tons)
Water Use	233
Emissions from Buildings to be Demolished	72
Net Emissions	161

See Appendix B for calculations and for GHG emission factor assumptions

Transportation Emissions

Mobile source GHG emissions were estimated using the traffic study for the proposed Master Plan prepared by LLG (2016), and included in Appendix E, and by the total vehicle miles traveled (VMT) estimated in CalEEMod. Based on the CalEEMod model estimate, the potential increase of up to 782 additional full-time equivalent students, 72,000 square feet of general office space, 89,200 square feet of retail/commercial space, 170 apartments and one single family residence would generate approximately 9,748,622 VMT annually. Trip estimates account for transit/walk reductions, pass by reductions, internal capture reduction, and student housing reductions as defined in the project traffic study (LLG 2016).

Table 25 shows the estimated mobile emissions of GHGs for the proposed Master Plan based on the estimated annual VMT. As noted above, the CalEEMod model does not calculate N_2O emissions related to mobile sources. As such, N_2O emissions were calculated based on the proposed Master Plan's VMT using calculation methods provided by the California Climate Action Registry General Reporting Protocol (2009). As shown in Table 25, full implementation of the proposed Master Plan would result in approximately 4,013 MT CO_2E associated with mobile emissions. Trips generated by the proposed buildings to be demolished under the proposed Master Plan would account for approximately 345 MT CO_2e per year of GHG emissions. Therefore, as shown in Table 25, the net GHG emissions from mobile sources would be approximately 3,668 MT CO_2e per year.

Table 25 Estimated Mobile Source Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2e (metric tons)
Mobile Emissions (CO_2 and CH_4)	3,785
Mobile Emissions (N_2O)	228
Subtotal	4,013
Emissions From Buildings to be Demolished	345
Total	3,668

See Appendix B for calculations and for GHG emission factor assumptions

Combined Construction, Stationary and Mobile Source Emissions

Table 26 combines the construction, operational and mobile GHG emissions projected to occur as a result of the proposed Master Plan. As noted above, construction emissions associated with construction activity (approximately 2,377 MT CO_2E) are amortized over 30 years. For the proposed Master Plan, the combined annual emissions would total approximately 1,381 MT CO_2E. These emission projections indicate that the majority of the proposed Master Plan's GHG emissions are associated with electricity generation (71 percent).

Table 26 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions CO_2e (metric tons)
Construction	77
Operational	
Area	3
Energy	1,467
Solid Waste	103
Water Use	161
Mobile	3,668
Total	5,479
Threshold	3,000
Threshold Exceeded	YES

See Appendix B for calculations and for GHG emission factor assumptions

As shown in Table 26 the combined annual emissions would total approximately 5,479 MT per year of CO_2e. These emissions would exceed the applicable threshold of 3,000. Therefore, GHG emissions from buildout of the proposed Master Plan would result in a potentially significant impact.

MITIGATION MEASURES

The following Mitigation Measures shall be implemented as part each individual project within the Plan Area:

MITIGATION MEASURE GHG-1 REDUCTION PLAN

Prior to grading permit issuance for each phase of development, projects in the Plan Area shall develop a GHG Reduction Plan to reduce emissions by 2,479 MT CO2e per year to ensure that project-related emissions are below the 3,000 MT CO2e per year threshold over the operational life of the project. The plan shall be implemented on site by the project applicant and may include, but is not be limited to, the following components:

- Energy Use - Onsite GHG reduction measures shall be implemented during each phase of development and shall be reflected on and incorporated into all applications for development within La Verne Campus, Park Campus, and Campus West. Onsite GHG reduction measures may include, but are not be limited to, the following components:
  - Exceed adopted 2013 Title 24 energy requirements by a minimum of 10 percent through implementation of energy reduction measures (or meet current CBC if it provides more energy savings), including the following:
    - Use locally made building materials for construction of the Project and associated infrastructure when such materials are available
    - Use materials that are resource efficient, recyclable, with long life cycles
    - Install energy-reducing shading mechanisms for windows, porches, patios, walkways, etc.
    - Install energy reducing day lighting systems (e.g., skylights, light shelves, transom windows)
    - Use water efficient landscapes;
    - Use tankless water heaters or solar water heaters
    - Use low-energy interior lighting
    - Use low-energy street lights and parking lot lights (e.g., sodium)
    - Use light colored water-based paint and roofing materials.
  - Onsite renewable energy production, including wind-generated energy or installation of solar photovoltaic (PV) panels or other onsite renewable energy that generates a minimum of 30 percent of the Project's total energy demand (based on the individual projects being developed, not entire Master Plan)
  - Vehicle Trip Reduction (based on SCAQMD Transportation Demand Management measures), including the following:
    - Provide preferential carpool/vanpool parking spaces
    - Add a location for tour and shuttle buses to pick up passengers near the amenity center and assisted living facility (e.g., bus duck out for residents living on the Project Site), or other shuttle/mini bus service
    - Provide bicycle storage/parking facilities for onsite employees
    - Provide shower/locker facilities for onsite employees
    - Provide child care centers for onsite employees
    - Provide an onsite park-and-ride lot
    - Employ a transportation/rideshare coordinator
    - Implement a rideshare program for onsite residents and employees
    - Provide incentives to employees to rideshare or take public transportation
    - Implement compressed work schedules

The Project applicant shall be responsible for ensuring that the GHG Reduction Plan quantifies emissions reductions achieved by all GHG reduction measures included in the GHG Reduction Plan. The GHG Reduction Plan shall include all necessary evidence to facilitate review and approval of the emissions reductions by the City of La Verne Community Development Department.

MITIGATION MEASURE GHG-2 CARBON OFFSETS

The GHG emissions reduction achieved through implementation of onsite GHG reduction measures would depend on the specific mix of measures available for each development application in the Plan Area. Because it is not yet possible to know with certainty which onsite GHG reduction measures would be feasibly incorporated into each future development project, or to quantify the reduction in GHG emissions that these measures would achieve, onsite GHG reduction measures may not be sufficient to reduce Project GHG emissions by the required 2,479 MT CO_2e per year.

If GHG emissions cannot be reduced below threshold levels through compliance with the Project GHG Reduction Plan described in Mitigation Measure GHG-1, the University of La Verne shall purchase a fair share of carbon offsets that meet approved offset protocols through the California Cap-and-Trade Program to reduce GHG emissions below threshold levels. Carbon offsets reduce GHG emissions globally through funding offsite projects that eliminate new GHG emissions and/or sequester existing GHGs in the atmosphere.

The GHG Reduction Plan shall be approved by City of La Verne prior to the issuance of initial grading permit. Applicable elements of the GHG Reduction Plan shall be reflected on development plans prior to permit approval. If GHG emissions cannot be reduced through compliance with such a plan, purchased carbon offsets shall be approved by Planning and Building staff prior to building permit approval.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant with mitigation incorporated.

IMPACT GHG-2. GHG REDUCTION MEASURES

The Master Plan would be consistent with the Climate Action Team GHG reduction strategies, the 2008 Attorney General Greenhouse Gas Reduction Measures, and the University of La Verne Climate Action Plan. As a result, the proposed Specific Plan would not conflict with an applicable plan, policy, or regulation adopted for reducing GHG emissions. Impacts would be Class III, less than significant.

The proposed Master Plan would be generally consistent with applicable regulations or plans addressing GHG reductions. As indicated above, the CAT published the Climate Action Team Report to Governor Schwarzenegger and the Legislature (the “2006 CAT Report”) in March 2006. The 2006 CAT Report identifies a recommended list of strategies that the state could pursue to reduce GHG emissions at a statewide level to meet the goals of EO S-3-05. These are strategies that could be implemented by various state agencies to ensure that the Governor’s targets are met and can be met within the existing authority of the state

agencies. In addition, in 2008 the Office of the California Attorney General published, The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level. This document provides information that may be helpful to local agencies in carrying out their duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming-related impacts of a project. In addition, the University of La Verne Climate Action Plan establishes a framework in which the University can achieve its vision of becoming a model campus.

Table 27 and Table 28 offer a side-by-side comparison demonstrating that the proposed Master Plan would be consistent with the GHG reduction strategies set forth by the 2006 CAT Report, the 2008 Attorney General's GHG Reduction Measures and the University of La Verne Climate Action Plan. As described in Tables 25 and 26, the proposed Master Plan already incorporates similar measures that would achieve energy efficiency, water conservation and efficiency and reduction of solid waste. Master Plan features that reduce emissions included in the CalEEMod analysis include the use of low VOC paints, dust mitigation measures as required by SCAQMD Rule 403, high efficiency irrigation systems, and a recycling program that will divert at least 50 percent of the generated waste.

Table 27 Master Plan Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	Master Plan Consistency
California Air Resources Board	
Vehicle Climate Change Standards AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the CARB in September 2004.	Consistent Of approximately 258 million total vehicles in the U.S., 17.5 million (6.8 percent) were new in 2015. Near complete replacement of U.S. vehicle stock in operation is statistically estimated to be achieved every 20 years. The current average age of U.S. vehicles is 11.5 years . Based on an anticipated 5 percent replacement rate of vehicles per year and the current stock of 120 million cars between 6 to 14 years old (46.5 percent), it is anticipated that 75 percent of the vehicles in operation by 2020 would meet the 2004 CARB standards . By 2025, nearly all of the U.S. vehicle stock would comply with AB 1493 (Pavley).
Diesel Anti-Idling The CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling in July 2004.	Consistent Current state law restricts diesel truck idling to five minutes or less. Diesel trucks operating from and making deliveries to the campus are subject to this state-wide law. Construction vehicles are also subject to this regulation.
Hydrofluorocarbon (HFC) Reduction 1) Ban retail sale of HFC in small cans. 2) Require that only low GWP refrigerants be used in new vehicular systems. 3) Adopt specifications for new commercial	Consistent This strategy applies to consumer products. All applicable products would be required to comply with the regulations in effect at the time of manufacture.

Strategy	Master Plan Consistency
refrigeration. 4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs. 5) Enforce federal ban on releasing HFCs.	
Alternative Fuels: Biodiesel Blends The CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.	Consistent Diesel vehicles such as construction vehicles that travel to and from the campus on public roadways could utilize this fuel once it is commercially available.
Alternative Fuels: Ethanol Increased use of E-85 fuel.	Consistent Students and faculty of the college could choose to purchase flex-fuel vehicles and utilize this fuel once it is commercially available regionally and locally.
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy duty vehicles and an education program for the heavy duty vehicle sector.	Consistent Heavy-duty construction vehicles that travel to and from the Plan Area on public roadways would be subject to all applicable CARB efficiency standards that are in effect at the time of vehicle manufacture.
Achieve 50 percent Statewide Recycling Goal Achieving the state's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Consistent With existing University recycling programs, it is estimated that the University of La Verne is currently diverting approximately 47 percent of their waste (Robert Beebe, Personal Communication 2016). The University of La Verne Climate Action Plan contains the goal to further reduce waste by 25 percent by 2020 and 50 percent by 2050. The Climate Action Plan is intended to be implemented as part of the proposed Master Plan.
Zero Waste – High Recycling Efforts to exceed the 50 percent goal would allow for additional reductions in climate change emissions.	Consistent As discussed above the University of La Verne's Climate Action Plan contains goals to reduce waste from the campus by 25 percent by 2020 and 50 percent by 2050. The Climate Action Plan is intended to be implemented as part of the proposed Master Plan.
Department of Forestry	
Urban Forest A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs**.**	Consistent Landscaping for new structures would result in additional planted trees throughout the Plan Area.
Department of Water Resources	
Water Use Efficiency Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use	Consistent The new proposed structures would be required to be consistent with CalGreen standards. As such, such structures would be equipped with low-flow

Strategy	Master Plan Consistency
water and wastewater In CA. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	plumbing fixtures, reducing water use.
Energy Commission (CEC)	
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	Consistent The proposed Master Plan would need to comply with the standards of Title 24 that are in effect at the time of development.
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the California Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	Consistent Under state law, appliances that are purchased for projects carried out under the proposed Master Plan - both pre- and post-development – would be consistent with energy efficiency standards that are in effect at the time of manufacture. Furthermore, the University has an Energy Star purchasing policy in effect for appliances.
Fuel-Efficient Replacement Tires & Inflation Programs State legislation established a statewide program to encourage the production and use of more efficient tires.	Consistent Tires on all University vehicles would comply with State programs. Residents of and visitors to the Plan Area would be able to purchase tires for their vehicles that comply with State programs for increased fuel efficiency.
Municipal Utility Energy Efficiency Programs/Demand Response Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	**Not applicable**, but development under the proposed Master Plan would not preclude the implementation of this strategy by municipal utility providers.
Municipal Utility Renewable Portfolio Standard California's Renewable Portfolio Standard (RPS), established in 2002, requires that all load serving entities achieve a goal of 20 percent of retail electricity sales from renewable energy sources by 2017, within certain cost constraints.	**Not applicable**, but development under the proposed Master Plan would not preclude the implementation of this strategy by Southern California Edison.
Municipal Utility Combined Heat and Power Cost effective reduction from fossil fuel consumption in the commercial and industrial sector through the application of onsite power production to meet both heat and electricity loads.	**Not applicable** since this strategy addresses incentives that could be provided by utility providers such as Southern California Edison and The Gas Company.
Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	**Not applicable**, but development under the proposed Master Plan would not hinder the use of non-petroleum fuels.

Strategy	Master Plan Consistency
Green Buildings Initiative Green Building EO S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. The EO and related action plan spell out specific actions state agencies are to take with state-owned and -leased buildings. The EO and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20 percent target.	Consistent As discussed previously, development under the proposed Master Plan would be required to be constructed in compliance with the standards of Title 24 that are in effect at the time of development. The 2013 Title 24 standards are approximately 30 percent more efficient than those of the 2008 standards. The Master Plan also includes an objective to design a plan that demonstrates a commitment to sustainability and environmental conservation and engages and tests new ideas. The Master Plan would adhere to the University's Climate Action Plan which is used as a planning tool to develop strategies for reducing energy use and GHG emissions.
Business, Transportation and Housing	
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services. The Governor is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through state investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity and a quality environment. Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include: promoting jobs/housing proximity and transit-oriented development; encouraging high density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	Consistent At buildout of the proposed Master Plan, approximately 40% of students would be able to live on campus. Thus pedestrian connectivity is vital to the campus. In addition, bicycles are an important part of life on the campus. The benign climate and compact, bike-friendly community encourages the year-round usage of bikes by students, faculty and staff. Class II bike paths linking to the larger community are accessible from the campus. Bike parking/racks are provided at points of destination around campus and rental bikes are available for free as well as a fleet of free folding bikes for use on public transit. The campus is linked to the larger community by public transportation via bus service provided by Foothill Transit and rail service provided by Metrolink and Amtrak. Bus stops are provided on the north side of campus on Bonita Avenue. Bus access to the Ontario International Airport provides global connectivity. Metrolink and Amtrak stations may be reached by bus, bike or foot. Metrolink connects the campus through a commuter rail system to metropolitan Los Angeles while Amtrak connects riders to a national rail system. The planned expansion of the Metro Gold Line will provide added rider access.

Strategy	Master Plan Consistency
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33 percent renewable in the state's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33 percent goal.	**Not applicable**, but Master Plan implementation would not preclude the implementation of this strategy by energy providers.
California Solar Initiative The solar initiative includes installation of 1 million solar roofs or an equivalent 3,000 MW by 2017 on homes and businesses, increased use of solar thermal systems to offset the increasing demand for natural gas, use of advanced metering in solar applications, and creation of a funding source that can provide rebates over 10 years through a declining incentive schedule.	Consistent The University of La Verne's Climate Action Plan identifies solar electricity as one of the primary sources of renewable energy available to the campus. Currently, active proposals for solar energy installations include the Arts and Communication Building, the Campus Center and the School of Law. Further, the Climate Action Plan recommends that all new construction include renewable energy elements as appropriate to the nature of the facility.

Table 28 Master Plan Consistency with Applicable Attorney General Greenhouse Gas Reduction Measures

Strategy	Master Plan Consistency
Transportation-Related Emissions	
Diesel Anti-Idling Set specific limits on idling time for commercial vehicles, including delivery vehicles.	Consistent Currently, the CARB Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling restricts diesel truck idling to five minutes or less. Diesel trucks operating from and making deliveries to the Plan Area are subject to this state-wide law. Construction vehicles are also subject to this regulation.
Transportation Emissions Reduction Provide shuttle service to public transportation.	Consistent Shuttle service to public transportation would be unnecessary as the bus stops are currently provided on the west side of the campus on Bonita Avenue.
Solid Waste and Energy Emissions	
Solid Waste Reduction Strategy Project construction shall require reuse and recycling of construction and demolition waste.	Consistent Construction waste shall be reused and/or recycled to the extent feasible.
Water Use Efficiency Require measures that reduce the amount of water sent to the sewer system – see examples in CAT standard above. (Reduction in water volume sent to the sewer system means less water has to be treated and pumped to the end user, thereby saving energy.	Consistent The proposed Master Plan would be consistent with the University's Climate Action Plan, which establishes campus water usage and conservation planning recommendations such as, installing water efficient plumbing fixtures, efficient building system usage, and water efficient landscaping.

Strategy	Master Plan Consistency
Land Use Measures, Smart Growth Strategies and Carbon Offsets	
Smart Land Use and Intelligent Transportation Systems Require pedestrian-only streets and plazas within the project site and destinations that may be reached conveniently by public transportation, walking or bicycling.	Consistent At full buildout of the proposed Master Plan, approximately 40% of University of La Verne Students would be able to live on campus. Thus pedestrian connectivity is vital to the campus. In addition, bicycles are an important part of life on the campus. The benign climate and compact, bike-friendly community encourages the year-round usage of bikes by students, faculty and staff. Class II bike paths linking to the larger community are accessible from the campus. Bike parking/racks are provided at points of destination around campus and rental bikes are available for free as well as a fleet of free folding bikes for use on public transit. The campus is linked to the larger community by public transportation via bus service provided by Foothill Transit and rail service provided by Metrolink and Amtrak. Bus stops are provided on the north side of campus on Bonita Avenue. Bus access to the Ontario International Airport provides global connectivity. Metrolink and Amtrak stations may be reached by bus, bike or foot. Metrolink connects the campus through a commuter rail system to metropolitan Los Angeles while Amtrak connects riders to a national rail system. The planned expansion of the Metro Gold Line will provide added rider access.

As indicated in Tables 25 and 26, the proposed Master Plan would be consistent with the CAT strategies and 2008 Attorney General Greenhouse Gas Reduction Measures. Further, the University of La Verne's Climate Action Plan establishes goals and strategies for reducing the University's emissions and water use and is intended to be implemented as part of the Campus Master Plan. The Climate Action Plan establishes the goal of reducing campus wide emissions 17 percent from 2005 levels by 2020 and 80 percent by 2050. The proposed Master Plan would be consistent with the goals and strategies established in the University's Climate Action Plan. Therefore, the proposed Master Plan would be consistent with the objectives of AB 32, SB 97, and SB 375, and their contribution to cumulative GHG emissions would not be significant.

Mitigation Measures

No mitigation is required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

4.5.5 Cumulative Impacts

As discussed in Section 3, Environmental Setting, cumulative development in La Verne, and the nearby cities of San Dimas, Pomona, Claremont and Upland, including development facilitated by the proposed Master Plan, would add dwelling units and non-residential development within these cities that would generate GHG emissions from vehicle trips and other sources. Analyses of GHG emissions are cumulative in nature, as they affect the accumulation of GHG in the atmosphere. Projects falling below the impact thresholds discussed above are therefore considered to have a less than significant impact, both individually and cumulatively. As indicated above in Impact GHG-1, GHG emissions associated with the proposed Master Plan would be less than significant after mitigation, and the Master Plan's impacts are therefore cumulatively less than significant.

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4.6 Hazards and Hazardous Materials

This section evaluates potential impacts related to hazards and hazardous materials resulting from implementation of the proposed Master Plan, including the potential presence of lead and asbestos in buildings proposed for demolition, soil and groundwater contamination, and effects on existing emergency management plans. Historical aerial photographs and topographic maps were reviewed for the project area. Additional historical information was provided in the 2008 Historical/Archaeological Resources Survey Report completed for the University of La Verne Athletic Complex (CRM TECH 2008), the 2011 Phase I ESA that was completed for the Former Graphics Property (CDM 2011), the 2004 PIC Environmental Services Phase I and Phase II ESA for the former Metropolitan Water District Parcels, and the 2008 Campus West Draft EIR.

4.6.1 Setting

La Verne Campus

Based on the historic documents reviewed, by 1928 La Verne Campus appears to have been developed with several buildings with areas of vacant land on the easternmost and northernmost portions of the campus. Additional development is visible on the easternmost portion of the property by 1938 and a second additional development is visible on the northernmost portion of the property by 1948. The property appears to have been completely developed by 1964. Portions of the campus are shown as under construction or reconstruction in 1972. From at least 1980, La Verne Campus appears to resemble its present-day configuration and generally consists of numerous educational buildings and sports fields on the central portion of the property with several small buildings on the eastern portion of the property, and paved parking and small buildings on the western portions of the property.

Park Campus

Based on the historic aerial photographs and topographic maps reviewed, it appears that the eastern portion of Park Campus was mostly vacant with a few small agricultural buildings in 1928. The area appears to have been redeveloped with a few residences on the northeastern corner from 1938 through 1948 and graded in 1952. By 1964, the area was developed with a commercial building (on the southeastern corner of the property) and paved parking on the northeastern corner of the property. Additional commercial buildings are visible on the northeastern corner of the property in 1972. The area seems to have been redeveloped with one large commercial property on the southern portion and paved parking and several small commercial buildings on the northeastern portion from at least 1980 through 2005. Park Campus has resembled its present-day configuration as paved parking with a small commercial building on the northeastern corner from at least 2014 through present day.

The western portion of Park Campus was mostly vacant with some agricultural use in 1928, used for agricultural purposes from at least 1938 through 1952, vacant from approximately

1964 through 1994, and has been in its current configuration with a commercial building from 2005 through present day.

Campus West

Based on the historic aerial photographs and topographic maps reviewed, the Campus West area appears to have been vacant, graded land from 1928 through 1953 and developed with a small building in the northwest corner of the property in 1964. The small building appears to have been replaced by a larger building, several small buildings, and parking from at least 1972 through present day, with additional parking visible in 1994.

The baseball fields and adjacent parking area have been present on Campus West from 2014 through present day. Several ponds were present on the east-central portion of the Campus West, east of Wheeler Avenue, from at least 1954 through 1980. These ponds were a series of sludge basins that were created by the Metropolitan Wastewater District (MWD) of Southern California and reportedly received discharge wastewater from the F.E. Weymouth Treatment Plant at various times between 1940 and 1970 (CRM TECH 2008).

The Campus West EIR indicates that MWD contracted for and obtained an environmental soil investigation in 1999 for the property surrounding the sludge basins. The investigation reportedly found that historic sludge discharge may have contained elevated concentrations of heavy metals, including copper and aluminum, and high pH (alkaline) liquids. However, no elevated concentrations of federally regulated contaminants were identified.

The 2004 Phase I and Phase II ESA report (PIC, 2004), completed for a portion of Campus West, indicated that a Phase II ESA was completed in the former sludge ponds area. Nine soil samples from soil borings were collected and analyzed for total petroleum, pH, total metals (including aluminum and boron), sulfate, chemical oxygen demand (COD), surfactants, PCBS, ammonia, nitrate and volatile organic compounds. The 2004 report indicates that “no significant subsurface soil contamination has resulted from historic waste discharges by MWD.”

A 1999 Report of Soil Sampling for the Weymouth Plant parcel was completed by Hart Crowser in 1999. The sampling was conducted based on research that concluded wastewater or sludge from the eastern adjacent sludge basins overflowed onto the property in 1953. The sampling assessment included collection of 15 shallow soil samples that were analyzed for Title 22 metals and pH. The metals analytical results were reportedly below regulatory standards or non-detect, with the exception of beryllium which is believed to be naturally occurring. Additionally, pH was reported to range between 5.68 and 7.7.

Although not visible on the aerial photographs reviewed, online agency documents indicate that a landfill may have been present at Campus West prior to the construction of Arrow Highway. According to the document reviewed (CDM 2011), two municipal landfills were historically operated onsite from 1946 to 1958. The landfill was reportedly located south of the AT&SFRR, north of the Southern Pacific Railroad, and west of Carrion Road. The 2004 Phase I & II ESA states that the “La Verne Dump” was also formerly located at Carrion Road

and Palomares Avenue. It is unclear if the La Verne Dump is the same landfill mentioned in the 2011 CDM report.

The northern portion of the property was historically used as municipal landfills from 1946 through 1958, the northwestern portion of Campus West may have been used for agricultural purposes from approximately 1948 through 1953, and wastewater sludge basins were formerly present onsite in the vicinity of the current athletic fields from at least 1954 through 1980.

4.6.2 Summary of Historic Uses

Railroad

Two sets of railroad tracks have been in place adjacent to the portions of the Campus since 1943. The northern railroad tracks (AT&SFRR) are currently in use by BNSF for freight transportation and future Gold Line Metro for passenger transportation; and the southern railroad tracks (Southern Pacific Railroad) are currently utilized by Metrolink for passenger travel. In addition to these railways, portions of the Project also border various high-volume roadways which could be used for the transport of hazardous wastes and materials. The east –west trending Metrolink/Southern Pacific Railroad tracks extend through the northern portion of Campus West and along the southern boundary of Park Campus. The Metro/ AT&SFRR tracks travel along the northern boundary of Campus West and Park Campus, and along the southern boundary of La Verne Campus. Truck and train accidents could result in spills of hazardous materials throughout the Project.

Educational Facilities

Based on our review the California Department of Education (CDE) website, it appears that there are two K-12 educational facilities within 0.25 mile of Campus West and one K-12 educational facility within one quarter mile of La Verne Campus. There are no K-12 educational facilities within 0.25 mile of Park Campus. Information regarding each of the educational facilities identified are shown below in Table 29.

Table 29 Educational Facilities within 0.25 Mile of the Project

Facility Name	Facility Address	Distance from La Verne Campus (miles)	Distance from Park Campus (miles)	Distances From Campus West (miles)
J Marion Roynon Elementary	2715 E Street	0.11	0.59	0.86
Damien High School	2280 Damien Avenue	0.69	0.44	0.06
Joan Macy School	1350 Third Street	0.39	0.61	0.18

Source: www. http://www.cde.ca.gov

Airports

Brackett Field Airport is located approximately 350 feet south of the southern boundary of Campus West, approximately 0.4 miles south of Park Campus and La Verne Campus. The

primary hazard associated with land uses near the airport is the risk of aircraft incidents on approach and take-off. The Airport Land Use Compatibility Plan (ALUCP) identifies Brackett Field Airport as a County owned and operated airport located to the south of the project at 1615 McKinley Avenue. The Los Angeles County Department of Regional Planning website includes a Geographic Information System (GIS) that was used to determine that the entire Plan Area is located within the Brackett Field Airport Influence Area (AIA). Therefore, the Project is subject to the ALUCP.

In addition, there is a private heliport, Pomona Police Heliport located approximately 2,000 feet south of Campus West that is also present within the Brackett Field Airport of Influence. There are no other private heliports or airstrips located in the vicinity of the project.

Per the ALUCP, Campus West and Park Campus are located in Zone D (with site-specific exceptions), which includes Helicopter Flight Training and Primary Traffic Patterns. There are moderate noise impacts in this area and a low to moderate risk level with regard to safety and airspace protection factors. La Verne Campus is located in Zone E, other airport environs, with a low noise impact and low risk level with regard to safety and airspace protection factors.

Oil and Gas Wells, Pipelines, and Facilities

Based on review of the National Pipeline Mapping System, it appears that there are no natural gas transmission lines or hazardous liquid pipelines (liquid fuel) in the vicinity of the Project. The nearest Liquid Fuel Pipeline is located south of Interstate 10, in Pomona. Based on review of the Division of Oil, Gas, and Geothermal Resources website, there are no oil & gas wells or facilities located within the Project.

Wildlands

The Plan Area is not located within the City's designated Very High Fire Hazard Severity Zone (VHFHSZ) based on the City of La Verne VHFHSZ map as established by the California Department of Forestry and Fire Protection.

Asbestos Containing Materials

Asbestos was used as insulation in walls or ceilings or as a component in adhesives in older buildings (pre-1979). Asbestos can pose a health risk when very small particles become airborne. Historical aerial photographs show that many of the buildings present onsite were constructed prior to 1979. Therefore these structures may contain asbestos containing materials (ACM).

Naturally Occurring Asbestos

Naturally occurring asbestos includes fibrous minerals found in certain types of rock formations, such as serpentine rock. Natural weathering or human disturbance can break naturally occurring asbestos down to microscopic fibers that are suspended easily in air.

When airborne asbestos is inhaled, these thin fibers irritate tissues and resist the body's natural defenses.

La Verne Campus and Park Campus contain surficial sediments. Campus West contains surficial sediments, older dissected surficial sediments, and Glendora Volcanic rocks, including rhyolitic-dacitic flows.[1] However, none of the Project areas are present in areas where naturally occurring asbestos is expected.

Lead-Based Paint

Lead is a highly toxic metal that was used for many years in products found in and around homes, including paint. Lead-based paint (LBP) was commonly used in residential construction prior to the enactment of federal regulations limiting its use in the late 1970s. Exposure to lead can cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. The primary source of lead exposure in residential settings is deteriorating LBP. Lead dust can form when LBP is dry scraped, dry sanded, or heated. Dust also forms when painted surfaces bump or rub together. LBP that is in good condition is usually not a hazard. Historical aerial photographs show that many of the buildings present onsite were constructed prior to 1970; therefore, these structures may contain LBP.

4.6.3 Regulatory Setting

The management of hazardous materials and hazardous wastes is regulated at federal, state, and local levels, including through programs administered by the US EPA; agencies that are part of the California Environmental Protection Agency (CalEPA), such as the Department of Toxic Substances Control (DTSC); federal and state occupational safety agencies; and the Los Angeles County Certified Unified Program Agency (CUPA) Health Hazardous Materials Division (HHMD).

Definition of Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the CCR as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (CCR, Title 22, Section 66261.10).

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[1] http://ngmdb.usgs.gov/maps/mapview/
San Dimas and Ontario Map United States Geological Survey Website

Chemical and physical properties cause a substance to be considered hazardous. Such properties include toxicity, ignitability, corrosiveness, and reactivity. CCR, Title 22, Sections 66261.20 through 66261.24 defines the aforementioned properties. The release of hazardous materials into the environment can contaminate soils, surface water, and groundwater supplies.

Regulatory Environment

Federal

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA)

These acts established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. Among other things, the use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (enacted 1980), amended by the Superfund Amendments and Reauthorization Act (SARA) (1986)

This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Among other things, CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled revision of the National Contingency Plan (NCP), which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List (NPL).

Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations (CFR)

Regulations for lead-based paint (LBP) are contained in the Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations (CFR) 33, governed by the U.S. Housing and Urban Development (HUD), which requires sellers and lessors to disclose known LBP and LBP hazards to perspective purchasers and lessees. Additionally, all LBP abatement activities must be in compliance with California and Federal OSHA and with the State of California Department of Health Services requirements. Only LBP trained and certified abatement personnel are allowed to perform abatement activities. All lead LBP removed from structures must be hauled and disposed of by a transportation company licensed to transport this type of material at a landfill or receiving facility licensed to accept the waste.

State

Department of Toxic Substances Control (DTSC)

As a department of the California EPA, DTSC is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code.

DTSC also administers the California Hazardous Waste Control Law (HWCL) to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until the U.S. EPA approves the California program, both state and federal laws apply in California. The HWCL lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

Government Code Section 65962.5 requires the DTSC, the State Department of Health Services, the SWRCB, and CalRecycle to compile and annually update lists of hazardous waste sites and land designated as hazardous waste sites throughout the state. The Secretary for Environmental Protection consolidates the information submitted by these agencies and distributes it to each city and county where sites on the lists are located. Before the lead agency accepts an application for any development project as complete, the applicant must consult these lists to determine if the site at issue is included.

If any soil is excavated from a site containing hazardous materials, it would be considered a hazardous waste if it exceeded specific criteria in Title 22 of the CCR. Remediation of hazardous wastes found at a site may be required if excavation of these materials is performed, or if certain other soil disturbing activities would occur. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous waste, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking jurisdiction.

Local

Los Angeles County Department of Public Works

The Los Angeles County Department of Public Works is a Unified Program Agency and a Participating Agency (PA) to the Los Angeles County CUPA, which is managed by the Los Angeles County Fire Department Health Hazardous Materials Division. The Los Angeles County CUPA has jurisdiction in the City of La Verne.

The following agencies provide hazardous material services to the City of La Verne:

- The Los Angeles County Fire Department Health Hazardous Materials Division (HHMD) provides underground storage tank (UST), aboveground storage tank, hazardous waste

generator, and unauthorized release assessment and reporting services. The HHMD also provides emergency response services to the City of La Verne.
- The Los Angeles County Department of Public Health provides groundwater monitoring well permitting services to the City of La Verne.

Los Angeles County Brackett Field Airport Land Use Plan (ALUCP)

The ALUCP sets forth land use compatibility policies that are intended to ensure that future land uses in the surrounding area will be compatible with potential long-range aircraft activities at the airport, and that the public's exposure to airport safety hazards and noise impacts are minimized. The ALUCP provides the basis by which the ALUC and local agencies located within the Airport Influence Areas carry out land use development review responsibilities in accordance with State Law. The ALUC retains land use development review of applicable projects until the affected local agencies' general and specific plans have been deemed consistent with the ALUCP (December 2015).

4.6.4 Records Research

Known Onsite Hazardous Material Sites

The following databases were searched in September 2016 for records relating to any known hazardous materials contamination within the San Luis Ranch Specific Plan Area:

- The State Water Resources Control Board (SWRCB) Geotracker database
- Department of Toxic Substances Control's (DTSC) Envirostor database
- The Cortese List

The online Cortese List and the online DTSC Envirostor database did not identify any release sites in the Plan Area. The search of the online SWRCB Geotracker database identified two sites within the project's Campus West site that are listed as open Spills, Leaks, Investigation and Cleanup (SLIC) cases. The two cases include Former Victor Graphics at 1330 Arrow Highway and United Production Service/Occidental Petroleum at 1855 Carrion Road, as shown in Figure 15.

Additionally, during our review of the online agency documents concerning former Victor Graphics facility, it appears that a landfill may have been present at Campus West prior to the construction of Arrow Highway. According to the document reviewed (CDM 2011), two municipal landfills were historically operated onsite from 1946 to 1958. The landfill was reportedly located south of the AT&SFRR, north of the Southern Pacific Railroad, and west of Carrion Road. Additional information is reportedly available in a 1981 document prepared by James M. Montgomery, Consulting Engineers: *Final Report La Verne Study Site, Occidental Research Corporation*, September 1981.

Former Victor Graphics, 1330 Arrow Highway, La Verne - Open SLIC Case

From 1973 to 1993 the facility was occupied by the Victor Rubber Stamp Company (Victor Graphics). A clarifier/septic tank system with four seepage pits used for waste disposal was

installed in 1973. The pit extended vertically up to 32 feet below ground surface (bgs). The structure was reportedly cleaned out and sealed in 1979.

In 1977 a spill was reported, and a dark floor stain was observed during a property inspection. In 1998 the Water Board issued a directive for a subsurface investigation. During a 1998 site visit by the water board the facility was observed to be connected to a septic with seven seepage pits. It was reported that Victor Graphics had shared a septic system with the adjacent Occidental Research Facility in the 1970s, which occupied the western half of the building.

In 2001, a soil gas survey and groundwater investigation was conducted. Relatively low levels of volatile organic compounds (VOC) were detected in soil gas in the vicinity of dry wells associated with the septic system. Tetrachloroethylene (PCE) was detected at low concentrations in soil and groundwater. The assessment concluded that concentrations detected did not indicate a significant release had occurred (CDM 2011).

In August 2001, four groundwater monitoring wells, MW-1 through MW-4, were installed by Gaston. From September 2001 through November 2002 quarterly groundwater monitoring was conducted (CDM 2014).

In April 2010, a site investigation was conducted by Langan at the Occidental Research Facility, which included an investigation at the Victor Graphics property. Four cone penetrometer test/membrane interface probes (CPT/MIP) were installed, two soil borings were drilled, and one groundwater monitoring well, MW-5, was installed at the Victor Graphics facility, and one well, MW-6, was installed in the LACMTA/SCRRA right-of-way (CDM 2014).

In February 2014, CDM Smith installed two groundwater monitoring wells, MW-7 and MW-8, and 12 multi-depth soil vapor probes, and conducted an aquifer pump test (CDM 2014). In 2014 CDM developed a Conceptual Site Model for the facility. Based on soil, soil gas, and groundwater data, VOCs, including PCE and trichloroethylene (TCE), are present in soil, soil gas, and groundwater beneath the facility, as well as offsite.

Two potential source areas were identified, based on concentrations detected in soil: near a loading dock at the southeast corner of the building, and near the east side of the southern property boundary. The conceptual site model indicates that soil data shows two fairly localized potential source areas with steep drop-offs in concentrations away from each potential source. Soil gas data indicated that higher concentrations of VOCs are present beneath the building, as opposed to the potential source areas identified. The adjoining Occidental Research Facility was identified as a potential offsite source, as multiple areas of concern were identified for the property (CDM 2014). The facility is discussed further below.

In 2015, CDM developed an Interim Remedial Action Plan (IRAP), which proposed implementing a dual-phase extraction (DPE) system, utilizing two DPE wells and focusing on the south and southwest portions of the property (CDM 2015). No documents exist on GeoTracker indicating that remedial action has been implemented, and a response from the LARWQCB regarding the IRAP is not listed on GeoTracker.

Figure 16 Location of Known Hazardous Materials Sites

Imagery provided by Google and its licensors © 2016;
Additional Data provided by University of La Verne Facilities and Technology Master Plan, September 2016.

According to the most recent groundwater monitoring report, the VOC plume in groundwater may be commingled with the adjacent Occidental Research Facility. Therefore, groundwater monitoring activities are coordinated for the two facilities. Groundwater flows towards the southwest. The groundwater VOC plume at the former Victor Graphics facility is confined to the southeastern portion of the property. According to the groundwater monitoring report, the plume is defined and is relatively stable. Therefore, CDM requested a reduced monitoring schedule to semi-annual (CDM 2016).

Lastly, it should also be noted that a landfill may have been present at the property prior to the construction of Arrow Highway. According to the 2011 Phase I Report, a landfill was historically located south of the AT&SFRR, north of the Southern Pacific Railroad, and west of Carrion Road and operated from 1946 to 1958 (CDM 2011).

United Production Service (Occidental Petroleum), 1855 Carrion Road, La Verne - Open SLIC Case

According to information provided on GeoTracker, the Occidental Research Corporation (ORC), a subsidiary of Occidental Petroleum Corporation, operated a research facility at the property from approximately 1966 to 1986. ORC conducted research and development of various chemicals, synthetic fuel, coal gasification, municipal waste incineration, fertilizer processing, mineral processing, etc. Available documents indicate that chlorinated solvents such as TCE and PCE were stored at the property and used in research. Various buildings, pilot plants, sumps, septic tanks, evaporation ponds, seepage pits, wash tanks, a clarifier, and a UST were present. ORC terminated operations in 1979. Approximately 4,000 drums of chemical waste were removed, of which 1,300 drums contained hazardous waste. An additional 42,000 gallons of diluted liquid waste was removed from the site (GeoTracker 2016).

Prior to 1972, the facility was not connected to the municipal sewer system and waste discharge seeped into the ground from evaporation pond. Four 1,000-gallon septic tanks were present, and associated seepage pits were situated below the water table. Site assessment commenced in 1979 following termination of ORC operations and continued through 1981. The LARWQCB granted case closure in 1982. In November 1989, as part of the Well Investigation Program (WIP), the LARWQCB reactivated the case to investigate groundwater contamination in the Pomona Valley and required the property owner to conduct additional assessment after VOCs were detected in production wells located approximately three miles downgradient from the property. Therefore, additional assessment was conducted from 1990 through 1994. In 2000, the LARWQCB issued a No Further Requirements letter to the property owner; however, a letter was also issued to Occidental Petroleum Corporation to investigate portions of the property not adequately assessed during previous investigations. After a review of data collected from 1990 through 2001, the LARWQCB reopened the case to investigate historical operations and to perform remediation (LARWQCB, 2008).

According to a 2010 site assessment report prepared by Langan Engineering and Environmental Services (Langan), previous assessments have identified VOCs in soil and

groundwater. TCE was determined to be the primary constituent. During LARWQCB site walks several five-gallon containers and 55-gallon drums containing 1,1,1 trichloroethane (TCA) were observed, and paint and cleaning supplies were improperly stored on the ground. In addition, oils, solvents and paint wastes were observed to be improperly stored and disposed of (Langan 2010).

Site assessment reports for work conducted prior to 2010 were not available on GeoTracker. According to the 2010 Langan site assessment report, soil, groundwater, and soil gas investigations were completed in September 1980, April 1981, January 1990, October 1994, February 1995, October 2001, February 2002, May 2002, August 2002, December 2004, February 2009, and August 2009. In addition, Langan noted a 2007 DTSC document which mentioned the former landfill at the adjacent Victor Graphics facility (Langan 2010).

From January to August, 2010, Langan conducted site assessment activities, including soil, soil vapor, and groundwater sampling, groundwater monitoring well installation, and aquifer testing. Based on the findings of the site assessment activities, Langan concluded that VOC is the primary contaminant of concern, and that the contamination originated from an upgradient, offsite source. Langan indicated that PCE was not detected at elevated concentrations in soil vapor at shallow intervals, nor in soil collected from the vadose zone (Langan 2010).

In November, 2013, GeoSyntec Consultants (GeoSyntec) conducted additional site assessment activities, including soil and soil gas sampling. Soil samples were analyzed for one or more of the following: VOCs, semi-volatile organic compounds (SVOC), polyaromatic hydrocarbons (PAH), Title 22 metals, and/or chromium VI (CR VI). Concentrations detected in soil were generally below regulatory screening levels, with the exception of one sample containing CR VI and one sample containing arsenic, both above Regional Screening Levels set forth by the USEPA, Region 9. Soil vapor analytical results indicated the presence of VOCs in soil vapor above regulatory screening levels for residential properties (GeoSyntec 2014a).

In 2014 GeoSyntec conducted a Human Health Risk Assessment using previously collected site data. GeoSyntec identified vapor intrusion as the primary pathway of concern. GeoSyntec concluded that VOC concentrations do not pose an unacceptable health risk or hazard for commercial or industrial workers. However, certain areas contain VOC concentrations that may potentially pose an unacceptable health risk or hazard for future residents if slab-on-grade construction is utilized (GeoSyntec 2014b).

In 2016 GeoSyntec developed a Remedial Action Plan (RAP) for the facility. The RAP recommended excavation of shallow soils containing arsenic and chromium VI above background and screening levels, respectively. The RAP further recommended enhanced in-situ bioremediation (EISB) in areas having elevated PCE concentrations with a two-year performance monitoring period, followed by a second round of EISB injections and two-year monitoring period. At the conclusion of the second round of remediation activities, GeoSyntec recommended evaluating the property to determine whether additional

remediation is necessary to achieve cleanup goals within a reasonable time period (GeoSyntec 2016a).

The most recent semi-annual groundwater monitoring event was conducted in May 2016 and was coordinated with groundwater monitoring for the Victor Graphics facility, as discussed above. Groundwater flow direction was determined to be towards the south-southwest. The VOC groundwater plume flows offsite onto southern and western properties, with highest concentrations detected along the southern property boundary and at the northeast corner, adjacent to the Victor Graphics facility (GeoSyntec, 2016b).

Known Adjacent Hazardous Material Sites

The Cortese list did not identify any release sites in the vicinity of the Project. The search of the SWRCB Geotracker database identified seven release sites located adjacent to the Project. All of these release sites are shown on Figure 15 and discussed below.

Four are located adjacent to Campus West: DPI Labs (Adjacent SLIC facility), Synthane Taylor, (Adjacent Open LUST Case), Brackett Field – Pomona Police Heliport (Open LUST Case), and Brackett Field, (Closed LUST Case). Three are located adjacent to the La Vern Campus: La Verne Public Safety Facility (Closed LUST Case), Paper Pak/ Private Residence (Closed LUST Case), and Shell Oil gas station (Adjacent Open LUST Case).

La Verne Public Safety Facility, 2061 Third Street, La Verne - Closed LUST Case

The leaking underground storage tank case for the facility was closed in 1999. GeoTracker indicates that the facility had a release of gasoline affecting groundwater. No files are available on GeoTracker.

Brackett Field, Pomona Police Heliport, 1905 McKinley Avenue, La Verne - Open LUST Case

The facility is listed as an open LUST case as of 2002. In April 2016 the LARWQCB issued a directive letter to the City of Pomona Public Works Department to take action regarding UST release to ensure protection of ground and surface water quality for all beneficial uses within Los Angeles County. Several reports are listed on GeoTracker for the facility but are not available for download. This facility is located over 0.5 mile south of improvements planned for Campus West.

Brackett Field Airport, 1615 McKinley Avenue - Closed LUST Case

The Brackett Field fueling facility is located approximately 1,900 feet southeast of the subject property. Based on groundwater monitoring events previously conducted at the facility, groundwater is expected to flow towards the west-northwest.

Site assessment activities were initiated in 1987, after a review of inventory revealed that approximately 2,000 gallons of fuel had been released. In May 1987 the Los Angeles County Department of Public Works (LADPW) drilled three borings in the vicinity of two USTs at the fueling facility. Hydrocarbon odors and sheen were observed during drilling (Earth Technology Corporation [Earth Technology] 1988).

In February 1988 Earth Technology installed six groundwater monitoring wells. Depth to groundwater was determined to be approximately 16 feet. Soil and groundwater samples were collected. Earth Technology concluded that the fuel release was confined to the sand backfill around the tanks, and therefore recommended that the USTs be removed. Earth Technology recommended no further site investigation or groundwater monitoring (Earth Technology, 1988).

In November, 1988, International Technology Corporation (IT) oversaw the removal of two 10-000-gallon USTs from the facility. Soil samples were collected within the excavation. Detected hydrocarbons were below levels of regulatory concern. Stockpiled soil was returned to the excavation. IT recommended case closure (IT, 1991).

In October, 1991, a 500-gallon diesel UST and 1,000-gallon unleaded UST were removed from a location to the south of the terminal/administration building. No information was provided pertaining to the condition of the USTs upon removal, and no soil analytical data was reported (LADPW, 1996).

In August, 1994, 600 gallons of aviation fuel spilled onto the asphalt surrounding the fueling facility. The spill flowed west about 210 feet and collected in a grassy area at the edge of the asphalt surface. Contaminated soil was subsequently excavated down to groundwater, and three groundwater monitoring wells were installed. Soil and groundwater analytical data was not provided (LADPW, 1996).

Additional soil borings were drilled in July 1996 by LADPW, with three converted to groundwater monitoring wells. Results of the assessment indicated that aviation fuel and related contaminants were not present at levels of regulatory concern in soil or groundwater. Due to the presence of trace concentrations of toluene, additional groundwater monitoring was recommended (LADPW, 1996).

Following four quarters of groundwater monitoring, it was determined that groundwater beneath the facility had not been impacted by aviation fuel, therefore, case closure was requested (LADPW, 1997). According to Geotracker, closure was granted in August 1997.

Paper Pak/ Private Residence (mapped adjacent to subject property on GeoTracker), 2321 Arrow Highway and 1943 White Avenue, La Verne - Closed LUST Case

In 1984 a 203,664 gallon diesel/fuel oil UST and possibly other smaller USTs were removed from the facility. Soil sampling was not conducted at the time of removal. In May, 2006 Geocon Consultants (Geocon) drilled three soil borings. Significant concentrations of diesel fuel were detected in two of the soil borings, thus causing a potential purchaser of the property to cease additional assessment. A formal report was not generated for the assessment. Additional assessment was initiated by the owner in March, 2007, and included the installation of seven groundwater monitoring wells. Diesel fuel was detected in soil and groundwater during the 2007 assessment activities. Based on the findings, a Remedial Action Plan (RAP) was prepared by PIC Environmental Services (PIC). The RAP proposed to use in situ hot air injection and extraction (PIC 2007).

In March, 2008 two soil borings were drilled within a warehouse building and midway between a former concrete UST and historical fuel dispensing area. Additional contamination was encountered during the 2008 assessment, and the remediation plans were enlarged (PIC 2009).

Feasibility testing was conducted in June 2007, and remediation was conducted from April 2008 until March 2009. Approximately 5,957 pounds of hydrocarbons were removed. Three confirmation borings were subsequently advanced. Although diesel fuel remained in soil, analytical results indicated that concentrations had been significantly reduced. Groundwater monitoring results indicated no impact to groundwater. Therefore, case closure was requested (PIC 2009). According to Geotracker, closure was granted in November 2009.

Synthane Taylor, 1440 Arrow Highway, La Verne - Adjacent Open LUST Case

The Synthane Taylor facility is listed as an open and inactive SLIC case. No additional information is provided on GeoTracker.

Shell Oil Gas Station, 1947 North D Street, La Verne - Adjacent Open LUST Case

The Shell Oil gas station is listed as an open LUST case on GeoTracker. Assessment activities commenced in March 2003, when elevated concentrations of Methyl tertiary butyl ether (MTBE) were detected in shallow soil samples collected beneath dispensers and product piping. Limited remedial excavation was conducted to remove contaminated soil to depths of five to six feet below ground surface (bgs) by Geo Environ (Encon 2008). The 2003 site assessment report was not available for review. In 2007 Encon installed three groundwater monitoring wells, MW-1 through MW-3. Groundwater was encountered at a depth of 65 feet bgs and rose to 52 feet bgs (Encon 2008). In February and March, 2011, Encon advanced eleven soil borings in order to define the extent of soil contamination and the dissolved-phase plume in the vicinity of the USTs. Petroleum hydrocarbons were not detected in soil collected from the surface to a depth of 35 feet bgs, therefore it was determined that the USTs were not likely to be the source of the contamination. The highest concentrations were detected in soil previously collected in the vicinity of the southeast portion of the product piping and northeast fuel dispenser (Encon 2016).

Two wells, MW-4 and MW-5, were installed in March 2011, and two wells, MW-6 and MW-7, were installed in May 2014. Based on groundwater monitoring data, groundwater flows towards the south-southeast. During the most recent groundwater monitoring event, conducted on June 13, 2016, monitoring wells MW-1 through MW-5 were dry, as groundwater levels had dropped significantly. Therefore, the groundwater gradient was determined based on 2012 data (Encon 2016).

The closest groundwater monitoring well to the subject property is MW-2. At the time of installation, total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), and MTBE were not detected in soil samples collected. Based on groundwater monitoring data collected from October, 2007 through August, 2011, TPHg,

BTEX, and tertiary butyl alcohol (TBA) have not been detected. MTBE was detected during the September 2008 groundwater monitoring event; no other detections were reported. The monitoring well has been dry since September 2011 (Encon 2016).

In December 2009, the last groundwater monitoring event during which all wells were sampled, the hydrocarbon plume appeared to be present in the vicinity of the USTs on the southern portion of the site, and extended southward. The hydrocarbon plume did not extend offsite to monitoring wells MW-6 and MW-7 during the most recent groundwater monitoring event. Encon submitted a request for closure in July 2016.

Based on the data reviewed for the facility, it appears that the groundwater plume is limited to the southeastern portion of the property and may extend slightly offsite to the southeast. The edge of the plume is greater than 100 feet from the subject property. Therefore, the facility is unlikely to impact the subject property.

DPI Labs, 1350 Arrow Highway - Adjacent SLIC facility

The facility is mentioned in a 2010 Langan site assessment report for the ORC property as an open SLIC case, however, the facility does not appear on Geotracker or Envirostor. The facility manufactured switches, switch panels, lighting and air distribution systems, and entertainment systems for aircraft. Photochemicals and photoprocessing waste were identified as waste streams.

4.6.5 Impact Analysis

Methodology and Thresholds of Significance

Assessment of impacts is based on environmental conditions on each campus, as well as other applicable laws and regulations related to hazards and hazardous materials issues.

The following thresholds are based on Appendix G of the *State CEQA Guidelines*. A significant impact related to hazards and hazardous materials would occur if the project would do any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- 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
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- 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, result in a safety hazard for people residing or working in the project area
- 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, create a significant hazard to the public or the environment

- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- 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

Project Impacts and Mitigation Measures

IMPACT HAZ-1. POTENTIAL FOR UPSET CONDITIONS DURING CONSTRUCTION

Implementation of the Master Plan may create the potential for upset conditions involving the release of hazardous materials into the environment. However, compliance with existing regulations and on-campus programs would ensure potential impacts would be Class III, less than significant.

The uses envisioned under the proposed Master Plan are essentially an expansion of existing college campus uses. Campus operations and maintenance currently utilize relatively small amounts of hazardous materials, such as chemicals associated with laboratory research, heating and cooling system fluids, fuel for maintenance equipment, solvents, cleaning products, pesticides/fertilizers, asbestos used in building materials, and other similar chemicals. These materials would not be substantially different from household chemicals and solvents already in general and wide use throughout the City and in the vicinity of the project site.

The protocols established for current and future campus operational and maintenance activities adhere to applicable local, state, and federal laws regulating the use and transport of hazardous materials. For example, the Los Angeles County Fire Department and the State of California Occupational Safety and Health Administration (Cal OSHA) regulate the use, storage, and handling of hazardous materials within the University of La Verne campuses. The Los Angeles County Fire Department is also responsible for the enforcement of all local, state, and federal codes related to the safe occupancy of buildings. These codes inherently safeguard life and property from the hazards of fire, the fire/explosion hazards arising from the storage, handling, and use of hazardous substances, materials, and devices, as well as hazardous conditions due to the use or occupancy of buildings. Cal OSHA protects workers and the public from occupational safety hazards through its Occupational Safety and Health program and provides consultative assistance to employers to help ensure a safe working environment.

Chemical safety training is required for all students who work with chemicals, in order to minimize the occurrence of accidental chemical releases and ensure that, when one does occur, it is handled in a safe manner. Material Safety Data Sheets (MSDS), which outline procedures to address spills and leaks for individual chemicals, are reviewed during training conducted under the federal Hazard Communication Standard (29 CFR 1910.1200) and the Laboratory Standard (29 CFR 1910.1450). Copies of MSDSs are received with shipments of

new materials and are maintained in each applicable work location. The University of La Verne website (http://sites.laverne.edu/risk-management/emergency-procedures/) also publicizes procedures to follow in the event of an emergency, including hazardous material spills or release of chemicals and solvents.

The proposed campus, residential and commercial land uses would not involve the transport, use, or disposal of substantial amounts of hazardous substances. Therefore, this impact would be less than significant.

MITIGATION MEASURES

No mitigation would be required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT HAZ-2. POTENTIAL FOR UPSET CONDITIONS DURING IMPLEMENTATION

Implementation of the proposed Master Plan would not 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. Compliance with existing regulations would ensure potential impacts would be Class III, less than significant.

The project site is adjacent to the Metrolink passenger railroad tracks, the AT&SFRR freight line tracks, and various roads, on which accidents that involve hazardous materials could occur. Such accidents could potentially create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. However, compliance with applicable regulations related to the handling and storage of hazardous materials would minimize the risk of the public's potential exposure to these substances, resulting in a less than significant impact.

The proposed project is located adjacent to railroad tracks and numerous high and low volume roadways. Additionally, vehicles that service the site during construction may transport contaminated soil or other wastes away from the site for disposal.

Additionally, during site operation, vehicles may transport fuels, pesticides, fertilizers, cleaners, classroom chemicals, or other chemicals routinely used on campus at classrooms, offices, food service facilities, residences, and at athletic fields. These vehicles, along with other commercial vehicles transporting hazardous materials near the site would utilize Arrow Highway, Puddingstone Drive, Wheeler Avenue, B Street, D Street, E Street and other nearby roadways.

In the unlikely event of an accident involving the transport of hazardous wastes and materials on roadways abutting the site, the health of construction workers, residents in the community, or University students could be adversely affected. However, local agencies must respond to the incident in accordance with the assignment of duties and procedures in the City of La Verne General Plan (City of La Verne, 1998). Additionally, the City of La Verne General Plan utilizes hazardous materials information provided by the State Office of

Emergency Services. The U.S. EPA and U.S. Department of Transportation (DOT) laws and regulations have also been promulgated to track and manage the safe interstate transportation of hazardous materials and waste.

U.S. EPA administers permitting, tracking, reporting, and operations requirements established by the Resource Conservation and Recovery Act (RCRA). DOT regulates the transportation of hazardous materials through implementation of the Hazardous Materials Transportation Act (HMTA). HMTA administers container design, and labeling and driver training requirements. State and local agencies enforce the application of these Acts and provide coordination of safety and mitigation responses in the case that accidents involving hazardous materials occur.

Enforcement of these acts and rapid response by local agencies would ensure that hazards to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would remain less than significant.

MITIGATION MEASURES

No mitigation would be required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT HAZ-3. HAZARDOUS MATERIALS WITHIN 0.25 MILE OF AN EDUCATION FACILITY

Implementation of the proposed Master Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Compliance with existing regulations would ensure potential impacts would be Class III, less than significant.

Three K-12 educational facilities are located within 0.25 mile of the project site. Compliance with existing federal, State, and local regulations would ensure that hazardous materials impacts to schools would remain Class III, less than significant.

The J. Marion Roynon Elementary School (2715 E Street) is located within 0.25 mile of La Verne Campus. The Damien High School (2280 Damien Avenue) and the Joan Macy School (1350 Third Street) are located within 0.25 mile of Campus West. There are no known K-12 educational facilities within one quarter mile of Park Campus.

Potential impacts associated with the transport, use, or disposal of hazardous materials are discussed in Impact HAZ-1, above. As described therein, proposed campus, residential and commercial land uses would not involve the transport, use, or disposal of substantial amounts of hazardous substances. In addition the nearest school would be a minimum of 300 feet from the project site.

Potential impacts associated with reasonably foreseeable upset and accident conditions are discussed in Impact HAZ-2, above. As described therein, DOT regulates the transportation of hazardous materials through implementation of the Hazardous Materials Transportation Act. Therefore, enforcement of federal, state, and local regulations would ensure that

impacts associated with hazardous emissions or materials near schools would remain less than significant.

MITIGATION MEASURES

No mitigation would be required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT HAZ-4. AIRPORT USES COMPATIBILITY

Implementation of the proposed Master Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Compliance with existing regulations would ensure potential impacts would be Class III, less than significant.

The Project is located within the Brackett Field Airport Influence Area (AIA). Therefore, the Project is subject to the Los Angeles County Brackett Field Airport Land Use Compatibility Plan (ALUCP). The primary hazard associated with land uses near the airport is the risk of aircraft incidents on approach and take-off. The ALUCP identifies Brackett Field Airport as a County owned and operated airport located to the south of the Project at 1615 McKinley Avenue, La Verne in Los Angeles County.

The ALUCP allows for development in Zones D and E, including residential development, educational facilities, athletic fields, and conference facilities, however, certain restrictions for development is these areas would apply (i.e., height of structures). Therefore, the project does not introduce incompatible uses within safety zones established in the Airport Land Use Compatibility Plan. However, the project would be required to comply with applicable ALUCP requirements. For additional analysis of the Master Plan's consistency with applicable ALUCP policies, refer to Section 4.8, Land Use and Planning. Impacts would be less than significant.

MITIGATION MEASURES

No mitigation would be required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT HAZ-5. DEVELOPMENT NEAR HAZARDOUS MATERIALS SITES

Implementation of the proposed Master Plan would potentially locate development near hazardous materials sites. Therefore, future development as envisioned in the Master Plan could create a hazard to the public and the environment. Impacts would be Class II, less than significant with mitigation incorporated.

Although there are no Cortese listed sites within the project boundaries or in the vicinity of the project, two hazardous material release sites have been identified on Campus West. Both of these releases cases remain open and under investigation by RWQCB. There are

known soil and groundwater releases at these facilities and Remedial Plans have been prepared for both facilities (Geosyntec, 2016a; CDM Smith, 2015). Additionally, there are numerous groundwater monitoring wells present on Campus West that are utilized as part of the site monitoring that is required by RWQCB. In addition, the former use of a portion of Campus West for wastewater sludge basins for over 30 years may have resulted in an accumulation of heavy metals, polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCBs), and pesticide contaminants in the onsite soils. Therefore, impacts would be potentially significant, unless mitigation is incorporated.

Several properties adjacent to La Verne Campus also have historically experienced known releases of hazardous materials. However, records for all of the adjacent release cases were not available online for review. Therefore, the planned development on La Verne Campus could potentially expose toxic substances to the environment and the public. Impacts could be significant unless mitigation is incorporated.

Based on our limited review, Park Campus did not have any onsite or adjacent releases of hazardous materials and no new construction is proposed within this area. Therefore, impacts would be less than significant.

Although not considered a hazardous waste while in use as part of a structure, the demolition of onsite structures could result in the generation of lead based paint and asbestos containing material wastes. Demolition of these structures without proper assessment and abatement of lead based paint and asbestos containing materials could create a significant hazard to the public or environment.

Mitigation Measures

The following Mitigation Measures shall be implemented as part each individual project within the Plan Area:

Mitigation Measure HAZ-1. Phase I Environmental Site Assessment (ESA) and Agency Review

Prior to development of Campus West, Park Campus or La Verne Campus, a Phase I environmental site assessment (ESA) shall be completed related to the portion of the campus being developed. The Phase I ESA shall be performed per the ASTM International (ASTM) 1527E Standard Practice for Environmental Site Assessments: Phase I ESA Process (ASTM 2013) guidelines and shall include a review of all environmental release case agency records, unless a more stringent standard applies at the time of the assessment.

Mitigation Measure HAZ-2. Lead-based Paint and Asbestos Containing Material Surveys

A lead-based paint (LBP) and asbestos containing material (ACM) survey shall be completed for structures planned for renovation or demolition. Based on the results of the LBP and ACM surveys, abatement may be required prior to demolition or renovation. All recommendations of the survey shall be followed.

MITIGATION MEASURE HAZ-3. SOIL, GROUNDWATER, AND SOIL VAPOR REMEDIATION

Additional soil, groundwater, or soil vapor sampling shall be conducted if a release of hazardous materials is suspected on a site. Samples shall be collected under the supervision of a professional geologist or environmental professional to determine the presence or absence of contaminated soil, soil vapor, and/or groundwater. The goal of the sampling investigation would be to identify and possibly delineate potential onsite releases of hazardous materials prior to development. If sampling indicates the presence of contaminants exceeding applicable environmental screening levels, a Remediation Action Plan or Soil and Groundwater Management Plan shall be prepared prior to development. Cleanup may include excavation, disposal, bio-remediation, or any other treatment of conditions subject to regulatory action. The contaminated materials shall be remediated under the supervision of an environmental consultant licensed to oversee such remediation and under the direction of the lead oversight agency. The remediation program shall also be approved by a regulatory oversight agency, such as the Los Angeles County DPW, the Regional Water Quality Control Board (RWQCB), or DTSC. Alternatively, engineering controls may be utilized in some situations to limit the public and environmental exposure to a hazard. This shall be determined on a case by case basis with oversight of an environmental regulatory agency. All recommended remediation shall be followed.

MITIGATION MEASURE HAZ-4. RECEIPT OF "NO FURTHER ACTION" LETTER

Prior to the issuance of grading permits, in those locations where environmental regulatory agencies have identified the need for remediation of a known release, the applicant shall obtain a letter of "no further action" from the RWQCB and any other agency with regulatory authority over the cleanup and the letter(s) shall be submitted to the City. Additionally, the applicant shall contact the regulatory agencies prior to the issuance of building permits to confirm no further action is required, as some residual contaminants may remain onsite and the release case may be reopened if there is a change in the proposed land use. Written confirmation of this consultation and determination of no further action shall be submitted to the City.

SIGNIFICANCE AFTER MITIGATION

With implementation of Mitigation Measure HAZ-1 through HAZ-4, impacts related to exposure to hazardous material releases would be reduced to a less than significant level.

IMPACT HAZ-6. CONSISTENCY WITH AIRPORT LAND USE COMPATIBILITY PLAN

The Proposed Master Plan is located inside the Brackett Field Airport Influence Area. Therefore, if future development is consistent with the land use policies and development standards contained in the Airport Land Use Compatibility Plan, then full buildout of the Master Plan would not create significant safety hazards for people residing or working in the project area. Therefore, impacts would be Class III, less than significant.

The Brackett Field Airport, a general aviation airport, is located immediately south of Campus West. However, the take-off and landing flight paths for the airport are located considerably south and east of the site and the Plan Area is not in a designated fly zone. The

Master Plan does propose to locate residential uses within 100 feet of the airport. However, the maximum building height for the residential units would be up to 35 feet above the finish floor elevation. This range in building height would be similar to the existing industrial uses located immediately north and east and the project site and would therefore not create a structural hazard with respect to airport operations. Consequently, potential hazard impacts to airports and/or airstrips resulting from either project option would be less than significant. For further discussion, see Section 4.8, Land Use and Planning and Section 4.9, Noise.

MITIGATION MEASURES

No mitigation would be required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT HAZ-7. EMERGENCY RESPONSE AND EVACUATION PLAN

Implementation of the proposed Master Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts would be Class III, less than significant.

The University of La Verne maintains an Emergency Operation Plan (University of La Verne, 2015) that includes a comprehensive set of procedures to ensure a proper response in the event of a wide range of on-campus incidents, including civil disorder, earthquakes, fire, flood, utility failures, terrorism, aircraft incidents, and hazardous material incidents. These campus emergency operation procedures are available on the University of La Verne website (http://sites.laverne.edu/campus-safety/files/2012/10/Emergency-Operation-Plan-2015.pdf).

The City of La Verne General Plan indicates that the police and fire department are the City's first responders for emergency situations. The General Plan also states that the City works closely with the State Office of Emergency Services to provide effective and uniform emergency responses. The General Plan emergency evacuation routes near the Plan Area include the following east-west trending roads: Arrow Highway, Bonita Avenue and Foothill Boulevard; and the following north-south trending roads: Wheeler Avenue, Fairplex Drive, and White Avenue. The streets proposed for closure through implementation of the Master Plan are not used as part of an evacuation plan.

In addition, the Los Angeles County CUPA HHMD Emergency Operations Section provides 24-hour emergency services in response to hazardous materials spills or releases in the HHMD CUPA jurisdiction areas, including the City of La Verne. The existing University of La Verne Emergency Operation Plan combined with support from the Los Angeles CUPA HHMD Emergency Operations Section programs would ensure adequate emergency response and/or emergency evacuation. Therefore, impacts on emergency services would be less than significant.

MITIGATION MEASURES

No mitigation would be required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT HAZ-8. EXPOSURE TO RISK INVOLVING WILDLAND FIRES

Implementation of the proposed Master Plan would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, impacts would be Class III, less than significant.

La Verne Campus and Park Campus areas are fully built out and are located within an area surrounded by urban development and urban land uses. Although Campus West contains scattered vegetation, it is also surrounded by existing development and urban land uses. The Public Safety Element of the General Plan does not identify risk of wildland fires as a concern within the Plan Area, or the immediately surrounding areas. However, there is the potential risk of localized wildland fire on the undeveloped portions of Campus West. The design of the buildings proposed on any of the campus areas must conform to La Verne Fire Code (Section 15.32.10 of the La Verne Municipal Code), which requires compliance with the International Fire Code. Compliance would be verified as part of building plan check prior to issuance of building permits. Therefore, impacts would be less than significant.

MITIGATION MEASURES

No mitigation would be required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

4.6.6 Cumulative Impacts

Cumulative development in La Verne will have the potential to expose future area residents, employees, and visitors to hazards and hazardous materials by developing and redeveloping areas that may have previously been contaminated. However, implementation of the proposed Master Plan is expected to assist in the remediation of hazards and improvement of the overall campus environment.

The magnitude of hazards for individual projects were found to be less than significant based upon existing environmental conditions and compliance with existing standard operating procedures. Hazard evaluations for other cumulative projects would need to be completed on a case-by-case basis. If lead and asbestos are found to be present in buildings planned for demolition or renovation, or in the case that soil and groundwater contamination are discovered on sites of planned and future development, these conditions would require appropriate mitigation and compliance with existing applicable local, state and federal regulations. Compliance with applicable regulations and implementation of appropriate mitigation measures, including remedial action on contaminated sites, as well

as rules, regulations, would avoid potential cumulatively significant hazards and hazardous materials impacts associated with cumulative development in the city.

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4.7 Hydrology and Water Quality

This section analyzes the proposed Master Plan's potential to adversely affect hydrology and water quality, including potential water quality impacts from construction and operation of new, renovated, and remodeled facilities under the Master Plan; and potential flooding impacts from alteration of existing drainage patterns or increasing the rate or amount or surface runoff.

4.7.1 Setting

The city of La Verne is located in the Pomona Valley approximately 27.8 miles northeast of downtown Los Angeles. The proposed project lies entirely within the Peninsular Ranges geomorphic province. This geomorphic province occupies the southwestern corner of California and contains the Laguna Mountains, the San Jacinto Mountains, the Santa Ana Mountains, and the Santa Rosa Mountains. The northern portion of the province includes the Los Angeles Basin and is bound on the east by the Colorado Desert and on the north by the transverse ranges, including the San Gabriel Mountains (CGS 2002).

The city of La Verne lies in the San Gabriel River Basin between the San Jose Hills to the south and the San Gabriel Mountains to the north. Elevations in the city range from 1,700 feet to 1,000 feet (City of La Verne 2012: 27). La Verne is surrounded by creeks, washes, and drainages flowing southward off the northern mountains. The three main drainages, San Dimas Wash, [Live] Oak Creek, and San Jose Wash [Creek Reach 2], collect in a small basin at the northeast of the San Jose Hills, which contains Puddingstone Reservoir. Walnut Creek was dammed to form the reservoir in the late 1800's. The Live Oak Flood Control Channel runs along the western boundary of the University, along "B" Street.

The Plan Area experiences a Mediterranean climate, generally dry in the summer with mild, wet winters. Winter days are moderately warm with an average high temperature in December and January of 68°F, and an average December low temperature of 41°F . Summer weather in La Verne is hot, with an average high temperature in July and August of 89°F, and an average low temperature in July and August of 59°F. During the hottest months, daytime temperatures in La Verne can exceed 100 degrees (intellicast.com 2016). Most rainfall occurs between November and March, with an average annual rainfall of 17 inches. The wettest months of the year are January and February, with an average rainfall of 4.02 and 4.05 inches, respectively (Idcide.com 2015).

Surface Water

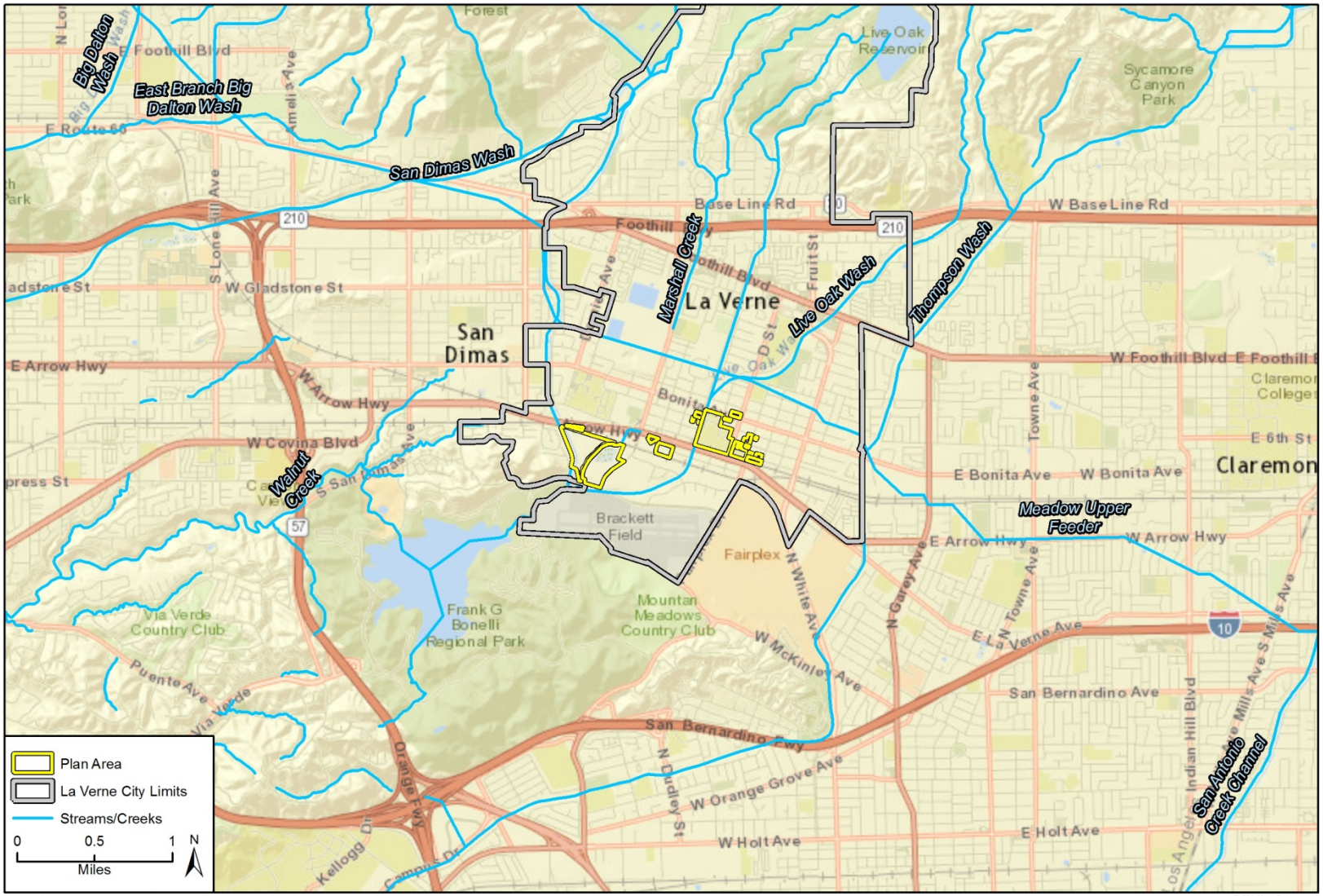
The California Department of Water Resources (DWR) divides surface watersheds in California into 10 hydrologic regions. The city of La Verne lies within the South Coast Hydrologic Region (HR), a large coastal watershed in southern California (DWR 2003: 148). The South Coast HR spans approximately 6.78 million acres and is bounded on the west by the Pacific Ocean, on the north by the Transverse Ranges, on the east by the Colorado River HR, and on the south by the international boundary with Mexico (DWR 2003: 148). The DWR subdivides Hydrologic Regions into Hydrologic Units (HU), and further into Hydrologic

Areas (HA) and Hydrologic Subareas (HSA). Within the South Coast HR, the city of La Verne is located within the San Gabriel River HU (USGS 2016). The Los Angeles Regional Water Quality Control Board (LARWQCB) governs basin planning and water quality within the San Gabriel River HU (LARWQCB 1994: 1-5). Within the San Gabriel River HU, the city is located within three HAs: Upper San Gabriel Valley HA in the southwestern portion of the city; San Gabriel Valley HA in the northwestern portion of the city; and the Spadra HA in the northeastern and southern portions of the city (USGS 2016). The city is further divided into three HSAs: the northwest portion of the city is in the Foothill HSA; the northeast portion of the city is in the Live Oak HSA; and the southern portion of the city is in the Pomona HSA (USGS 2016).

The city of La Verne, including the Plan Area, lies in the San Gabriel River Watershed. The watershed drains into the San Gabriel River from the San Gabriel Mountains flowing 58 miles south until its confluence with the Pacific Ocean. Major tributaries to the San Gabriel River include Walnut Creek, San Jose Creek, Coyote Creek, and numerous storm drains entering from the 19 cities that the San Gabriel River passes through. Channel flows pass through different sections in the San Gabriel River, diverting from the riverbed into four different spreading grounds, held behind several rubber dams for controlled flow and ground water recharge, and controlled through 10 miles of concrete channel bottom from below Whittier Narrows Dam to past Coyote Creek (Los Angeles Flood Control District). Figure 16 depicts the rivers and major tributaries of the city.

The La Verne Campus and Park Campus portions of the Plan Area are largely developed with university facilities and associated landscaped areas, with the exception of the approximately 40 acres currently undeveloped within Campus West. Surface flow in the Plan Area would naturally sheet flow to the southwest across the alluvial fan on which it is located; however, as the area has urbanized, surface flows have generally been diverted to City storm drains, although many parts of the Plan Area also contain permeable areas that allow for some storm water to soak into the ground and recharge groundwater. The University is planning to cross the Marshall Canyon storm water channel to provide access to the currently undeveloped land of Campus West (University of La Verne 2016: 6).

Figure 17 Major Drainages



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Additional Data provided by University of La Verne Facilities and Technology Master Plan, September 2016; USGS, 2016.

4.7.2 Groundwater

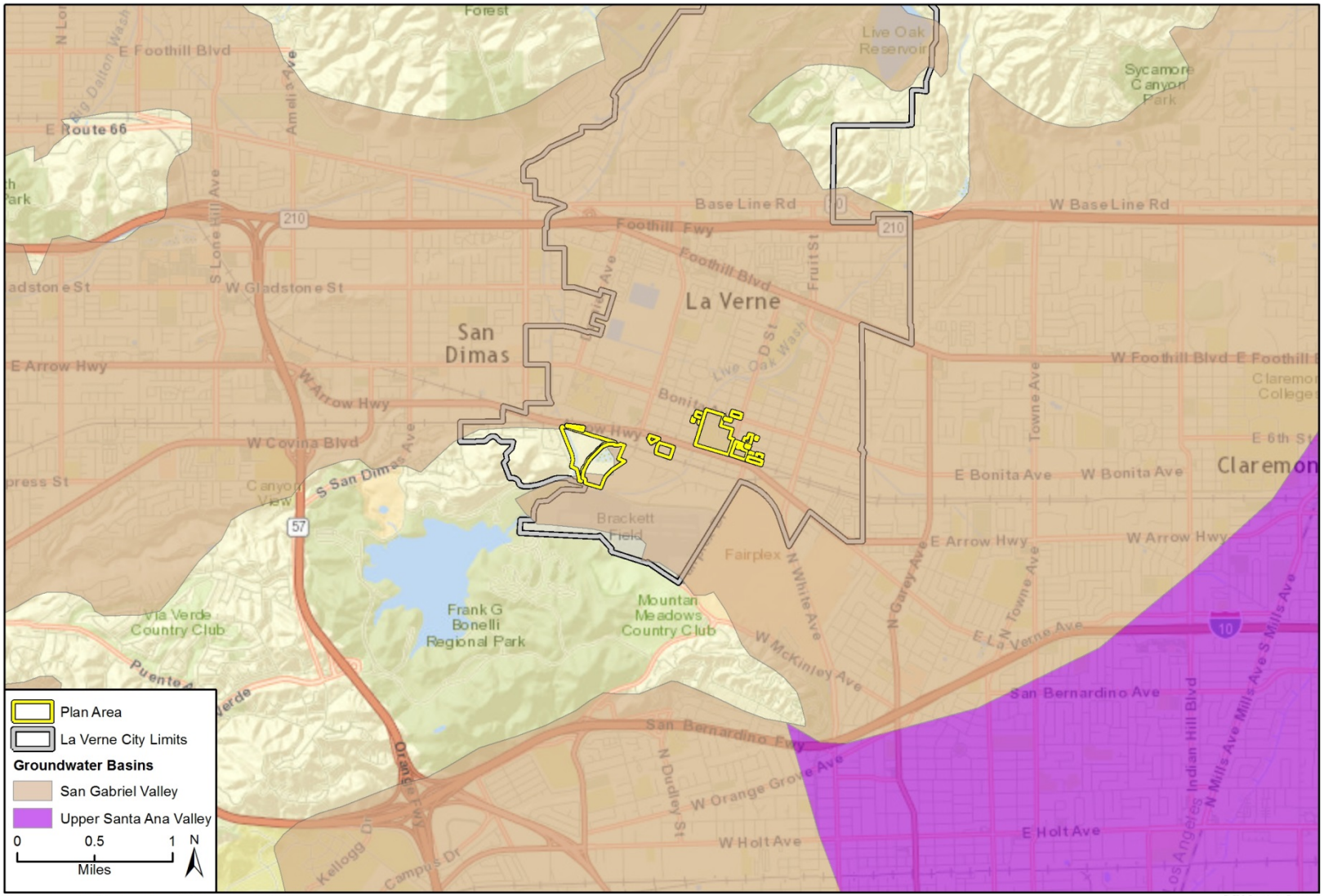
The City of La Verne is underlain by the San Gabriel Valley Groundwater Basin (LARWQCB 1994: 2-48). The extent of the underlying groundwater basin within the City is shown in Figure 17, *Groundwater Basins*. The basin includes water-bearing sediments that underlie most of the San Gabriel Valley and a portion of the upper Santa Ana Valley (DWR 2004). The northern boundary for the basin includes the Raymond fault and the San Gabriel Mountains. The basin is bound on the south and the west by the Repetto, Merced, and Puente Hills (DWR 2004). The Chino and San Jose faults form the eastern boundary of the basin (DWR 2004).

The San Gabriel Valley Groundwater Basin covers a surface area of 255 square miles and has an estimated storage capacity of approximately 10.7 million acre-feet (DWR 2004). Groundwater levels in the basin have fluctuated historically more than 95 feet in elevation. In 1999, groundwater levels were within approximately 10 feet of their 200-year mean (DWR 2004). Concerns about the sustainability of groundwater supply in the basin led to the adjudication of water rights and the establishment of a Main San Gabriel Basin Watermaster in 1973. At that time, the Watermaster estimated that the basin contained approximately 7.85 million acre-feet of water in storage (MSGBW 2015: 2). The Watermaster estimated the amount of water in storage in 2015 at 7.45 million acre-feet, and attributed the decline compared to historic levels to the effects of the current drought (MSGBW 2015: 2). Groundwater contamination is widespread throughout the basin. Volatile organic compounds (VOC) are the most prevalent form of contamination (EPA 2014: 3). Groundwater quality in the basin is discussed in more detail below. Depletion of groundwater supplies and interference with recharge are not anticipated due to the Master Plan, however specific projects within the Master Plan would be subject to the City of La Verne Development Review process which would ensure that project development does not adversely impact groundwater supplies, interfere with groundwater recharge, and other site hydrology.

Water Supply

Campus water is purchased from the City of La Verne. The City buys water from Three Valleys Water Company and the Metropolitan Water District, who in turn imports water supplies to Southern California from two main sources: the Sacramento and San Joaquin Rivers through the State Water Project and the Colorado River via the Colorado River Aqueduct. (Source: Metropolitan Water District of Southern California, website 2016). The City has eight municipal wells that pump water from two ground basins: Pomona and Live Oak. Water from these underground wells is pumped into booster stations where it is blended with imported water. The underground water is blended with local groundwater and is then pumped to residents and businesses throughout La Verne, including the University (La Verne Water and Utility Division).

Figure 18 Groundwater Basins



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Water Quality

Storm Water and Urban Runoff

A variety of surface water management providers in Los Angeles County manage water quality and storm water runoff from new development. La Verne's storm drain system was designed to prevent flooding by transporting excess rainwater from City streets. Since the storm drain system contains no filter, untreated storm water is released into various water bodies. Storm Water pollution occurs when untreated contaminated water (urban runoff) drains from city streets into the rivers and oceans. Urban runoff is the largest source of unregulated pollution to the waterways and coastal areas of the United States. The most common pollutants released into storm drains are fuel and motor oil leaking from cars, household cleaning products, improperly disposed paint and paint thinners, paper, cups and other litter, yard waste and fertilizers, and animal waste left from household pets. These pollutants are transported into the City's storm drain system by various sources such as rain, hoses and sprinklers, which drain from streets, parking lots, and lawns to enter various catch basins that lead to rivers and oceans (City of La Verne 2012: 8-22).

Water quality in the city is governed by the Los Angeles Regional Water Quality Control Board (LARWQCB), which sets water quality standards in the Water Quality Control Plan for the Los Angeles Region (Basin Plan). The Basin Plan identifies beneficial uses for surface water and groundwater and establishes water quality objectives to attain those beneficial uses. The identified beneficial uses and the water quality objectives to maintain or achieve those uses are together known as water quality standards. Within La Verne, the LARWQCB Basin Plan identifies beneficial uses for San Dimas Wash, Live Oak Creek, and San Jose Creek Reach 2 (LARWQCB 1994: 2-24). Table 30 presents the beneficial uses for the three main drainages in the city.

Table 30 Basin Plan Beneficial Uses

Waterbody	Beneficial Uses
San Dimas Wash (lower)	Municipal and Domestic Supply (MUN)[b], Ground Water Recharge (GWR)[c], Warm Freshwater Habitat (WARM)[c], Wildlife Habitat (WILD)[a], Rare, Threatened, or Endangered Species (RARE)[a]
San Dimas Wash (upper)	MUN[b], GWR[a], WARM[c], WILD[a]
Live Oak Creek	MUN[a], GWR[c], Freshwater Replenishment (FRSH)[c], WARM[c], WILD[a]
San Jose Creek Reach 2	MUN[b], GWR[c], WARM[c], WILD[a]

Source: LARWQCB Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, 1994, Table 2-1.
a Existing beneficial use.
b Potential beneficial use.
c Intermittent beneficial use.

The Clean Water Act (CWA) 303(d) list is a register of impaired and threatened waters which the CWA requires all states to submit for Environmental Protection Agency approval. The list identifies all waters where the required pollution control measures have so far been unsuccessful in reaching or maintaining the required water quality standards. Waters that are listed are known as "impaired." CWA Section 303(d) lists one water body within the City. San Jose Creek Reach 2, identified above, is listed as impaired by coliform bacteria (SWRCB 2010). A Total Maximum Daily Load (TMDL) for this impairment is required but none has been established yet.

Storm water runoff may play a role in the water quality impairments described above. Runoff that occurs as overland flow across yards, driveways, and public streets is intercepted by the storm water drainage system and conveyed to local drainages before eventually being routed to the Pacific Ocean via the San Gabriel River. This storm water can carry pollutants that can enter the local waterways and result in the types of water quality impairments described above. Common sources of storm water pollution in the City include litter, trash, pet waste, paint residue, organic material (yard waste), fertilizers, pesticides, sediments, construction debris, metals from automobile brake pad dust, air pollutants that settle on the ground or attach to rainwater, cooking grease, illegally dumped motor oil, and other harmful fluids.

The Master Plan proposes development on previously developed land; therefore, long-term impacts to surface water quality are not anticipated. Future Master Plan development would be required by the City to demonstrate adequate drainage systems, and would be conditioned to comply with applicable NPDES (National Pollution Discharge Elimination System) and SUSMP (Standard Urban Storm Water Mitigation Plan for Municipal Storm Water and Urban Runoff Management Programs In Los Angeles County) requirements to ensure that water quality Is maintained to federal, state and local standards, including temporary and long-term impacts.

Drinking Water

According to the City of La Verne Water Quality Report for 2016, the city's water supply meets or exceeds the state and federal water quality standards. Nitrate levels were recorded as possibly being above the maximum contaminant level (MCL) at the well sites, but the City states that the levels are below the MCL by the time it reaches the tap (City of La Verne 2016a).

Flood Hazards

Almost 40 percent of the area in the city of La Verne is characterized by impermeable surfaces that either collect water or concentrate the flow of water in unnatural channels. During periods of urban flooding, streets can become swift moving rivers. Storm drains can back up with debris causing additional, localized flooding. The City has the storm drains inspected and cleaned annually before the storm season (November – April) (City of La Verne 2012: 8-10).

There is no history of any significant flooding or damage caused by any of the main creeks in the city of La Verne. Creeks flow through the city in canyons, then into debris basins, which outlet into concrete channels and from there into a reservoir/lake with a controlled outlet structure. A secondary creek in the West Marshall Canyon has experienced some flooding and debris flows. To date, damages have been minor and are generally confined to 2 to 3 rear yards, public street right-of-way, and a private golf course built in the flood plain (City of La Verne 2012: 8-4). As shown in Figure 18, La Verne's location on sloping land prevents slow-rise flooding hazards; however, eight properties within the City are located within a 100-year or 500-year Federal Emergency Management Agency (FEMA) designated flood hazard zone (FEMA 2008). These eight properties are in the northwestern portion of the city. The University campuses are not in a 100-year or 500-year, FEMA-designated flood hazard zone. A 100-year flood represents the level of flood water expected to be equaled or exceeded every 100 years on average, and can also be described as a one percent annual exceedance probability flood, since it is a flood that has a one percent chance of being equaled or exceeded in any single year. Similarly, a 500-year flood has a 0.2 percent chance of being equaled or exceeded in any single year.

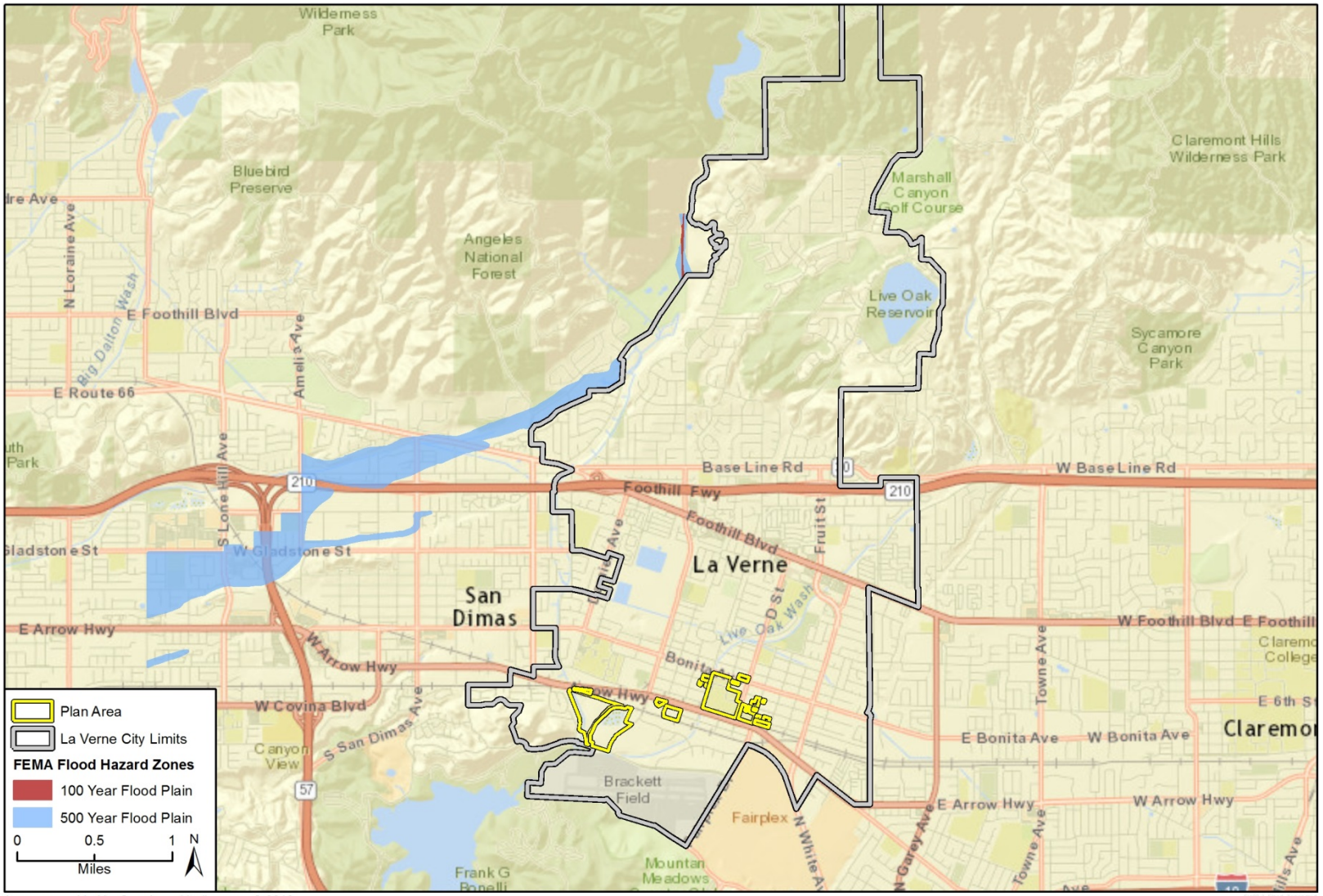
Dam Inundation

The city of La Verne could be affected by five dam failures: the Puddingstone Diversion Dam, the San Dimas Dam, the Weymouth Memorial Reservoir, the Live Oak Reservoir, and the Live Oak Dam. As depicted in Figure 19, the three dams that would affect the Plan Area are Live Oak Reservoir, Live Oak Dam, and Weymouth Memorial Reservoir.

The Puddingstone Diversion Dam, owned by the County of Los Angeles Public Works (Los Angeles County Water Resources Division), is an earth embankment dam with four-inch concrete facing slab, constructed in 1928 by the Flood Control District and functions as a flood risk management, water conservation, and water diversion facility. Its original storage capacity is 239,000 Cubic Yards (CY). Water impounded during the storm season behind the dam is gradually released and diverted into the downstream spreading facilities to recharge groundwater (Los Angeles County Flood Control District [LACFCD] 2013: 9-41). The dam is located on the San Dimas Creek, in the City of La Verne, approximately 2.2 miles northwest of the Plan Area. The main purpose of Puddingstone Diversion Dam is to divert the flow to Puddingstone Dam to alleviate San Dimas Wash (LACFCD 2013: 9-45). If the dam were to fail, the flow of water would affect the western edge of the City, north of the 210 Freeway.

The San Dimas Dam, owned by the County of Los Angeles Public Works (Los Angeles County Water Resources Division), is a concrete gravity arch dam that was constructed in 1922 by the Flood Control District and functions as a flood risk management and water conservation facility. Its original storage capacity is 2.4 million CY. Water impounded during the storm season behind the dam is gradually released and diverted into the downstream spreading facilities to recharge groundwater (LACFCD 2013: 8-91). The dam is located on the San Dimas Creek, at the southern end of San Dimas Canyon in the San Gabriel Mountains, in Los Angeles County, approximately 4.0 miles north of the Plan Area. All flows from the San Dimas Dam watershed are tributary to the San Gabriel River (LACFCD 2013: 8-94). If the

Figure 19 Flood Hazard Zones



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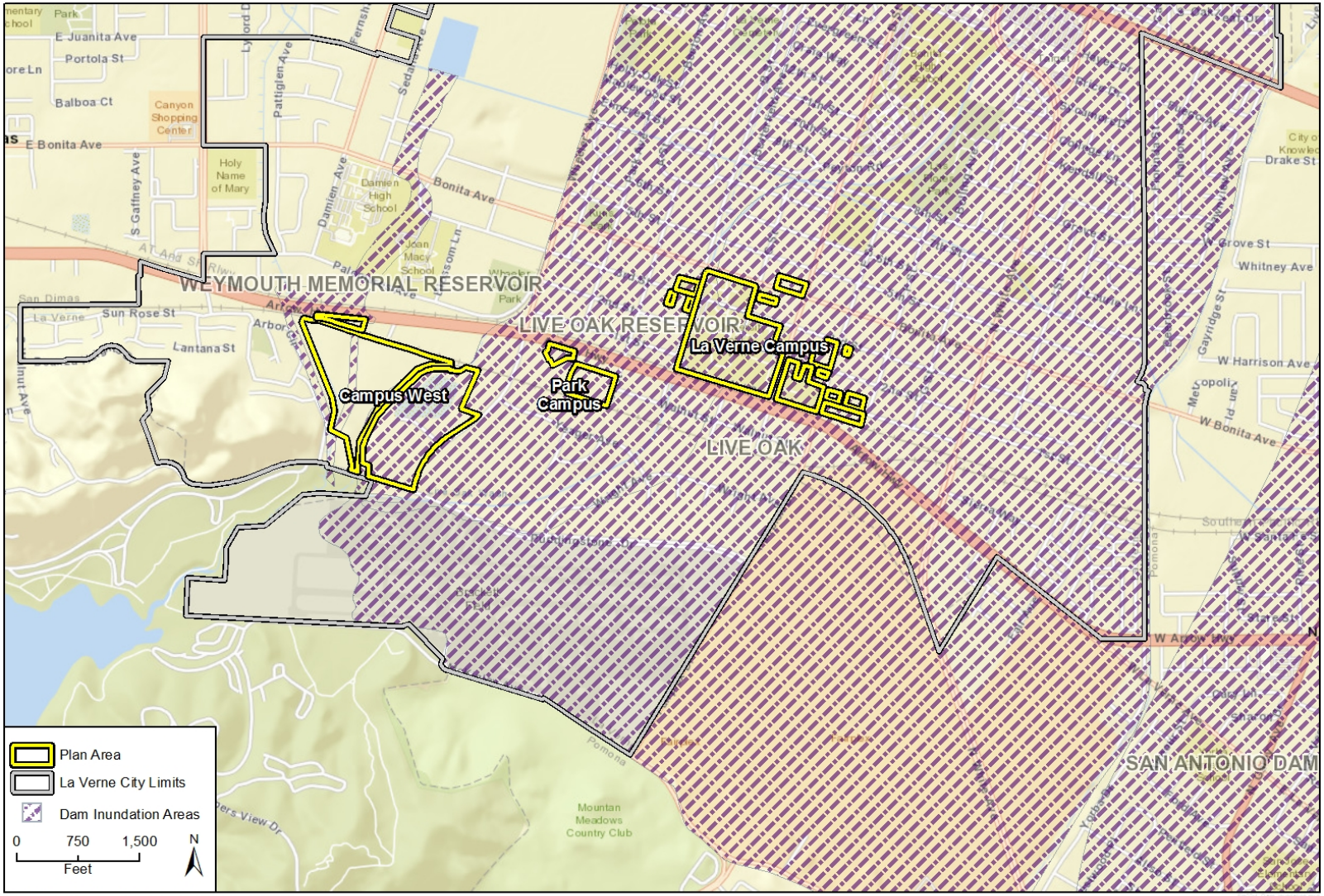
dam were to fail, the flow of water would affect the western edge of the City, north of the 210 Freeway.

The Weymouth Memorial Reservoir, owned by the MWD, is utilized by the F.E. Weymouth Treatment Plant in the City of La Verne. Constructed in 1940, as MWD's first Treatment Plant, Weymouth has a treatment capacity of 520 million gallons a day (MWD 2015b), and its main purpose is water supply (National Performance of Dams Program [NPDP] 2015). The reservoir is located approximately 1.0 mile northwest of the Plan Area. If the reservoir were to fail, the flow of water would affect the south-western edge of the City, and the western edge of the Plan Area.

The Live Oak Reservoir, owned by the MWD, is located in the City of La Verne, approximately 2.8 miles northeast of the Plan Area. The reservoir is 105-feet high, 3,000-feet long, and has a capacity of approximately 4.03 million CY (MWD 2015a). Its main purpose is water supply (NPDP 2015). If the reservoir were to fail, the flow of water would affect the central and southern areas of the city, including the Plan Area. However, the probability of dam inundation is low, because of the distance of the reservoir from the Plan Area.

The Live Oak Dam, owned by the County of Los Angeles Public Works (Los Angeles County Water Resources Division), is an arched concrete gravity dam that was built by the Flood Control District in 1922 and functions as a flood risk management and water conservation facility. Its original storage capacity is 400,000 CY. Water impounded during the storm season behind the dam is gradually released and diverted into the downstream facilities to recharge groundwater (LACFCD 2013: 9-29). The dam is located on the Live Oak Creek, in an Unincorporated Area of the County of Los Angeles, approximately 2.5 miles northeast of the City of La Verne; and approximately 2.8 miles northeast of the Plan Area. The dam is part of the initial flood control components in Live Oak Canyon. Water that passes through Live Oak Dam travels along a watercourse through private properties, and then flows through the Live Oak Debris Basin, which is adjacent to the Live Oak Spreading Grounds. Live Oak Wash eventually discharges into the Puddingstone Reservoir, which is tributary to Walnut Creek and then the San Gabriel River (LACFCD 2013: 9-32). If the dam were to fail, the flow of water would affect the central-southern area of the city, including the Plan Area. However, the potential danger due to dam failure is relatively low, since the primary function is flood control and large quantities of water are not stored there except during periods of heavy rain.

Figure 20 Dam Inundation



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Additional Data provided by University of La Verne Facilities and Technology Master Plan, September 2016; LA County, 2016.

4.7.3 Regulatory Setting

Federal

Clean Water Act

Congress enacted the Clean Water Act (CWA), formerly the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to surface water. NPDES permit process regulates those discharges (CWA Section 402). NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB). The Plan Area is in a watershed administered by the LARWQCB.

Individual projects in the city that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMP) the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Section 401 of the CWA requires that any activity that would result in a discharge into waters of the U.S. be certified by the RWQCB. This certification ensures that the proposed activity does not violate State and/or federal water quality standards. Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. Discharges to waters of the U.S. must be avoided where possible, and minimized and mitigated where avoidance is not possible. Section 303(d) of the CWA requires states to establish TMDL programs for streams, lakes and coastal waters that do not meet certain water quality standards.

National Flood Insurance Act/Flood Disaster Protection Act

The National Flood Insurance Act of 1968 made flood insurance available for the first time. The Flood Disaster Protection Act of 1973 made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas. These laws are relevant because they led to mapping of regulatory floodplains and to local management of floodplain areas according to guidelines that include prohibiting or restricting development in flood hazard zones.

State

California Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act of 1967 requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for State waters within the City are contained in the Water Quality Control Plan for the Los Angeles Region (LARWQCB 1994: 7-3). The Water Quality Control Plan, or Basin Plan, protects designated beneficial uses of State waters through the issuance of Waste Discharge Requirements (WDR) and through the development of TMDL. Anyone proposing to discharge waste that could affect the quality of the waters of the State must make a report of the waste discharge to the RWQCB or SWRCB as appropriate, in compliance with Porter-Cologne.

California Streambed Alteration Agreement

Sections 1600–1616 of the California Fish and Game Code require that any entity that proposes an activity that would substantially divert or obstruct the natural flow of any river, stream or lake; 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, must notify the California Department of Fish and Wildlife (CDFW). The CDFW would require a Lake or Streambed Alteration Agreement if the Department determines that the alteration may adversely affect fish and wildlife resources. The Agreement includes conditions necessary to protect those resources. The Agreement applies to any stream, including ephemeral streams and desert washes.

Local

The City of La Verne is required to implement procedures with respect to the entry of non-storm water discharges into its municipal storm water system. The City of La Verne regulates storm water discharge in accordance with the NPDES permit through Chapter 13.50 of the La Verne Municipal Code, *Storm water and Urban Runoff Pollution Control* (City of La Verne 2016b).

Erosion protection measures, as described in Section 13.50.090, *Urban Storm Water Runoff Mitigation for Construction Activity*, of the La Verne Municipal Code, are required during all construction activities and/or as part of the applicant's legal requirements to obtain coverage under the applicable NPDES General Construction Activities Storm Water Permit and State Water Board 401 Water Quality Certification. The NPDES permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) identifying BMPs to control surface runoff, erosion, and sedimentation. Section 13.50.150 requires that all BMPs required as a condition of any approval for construction activity shall be maintained in full force and effect during the term of the project, unless otherwise

authorized by the authorized enforcement officer, the community development director or building official.

BMPs are defined in Chapter 13.60.040 of the La Verne Municipal Code as:

> *…practices or physical devices or systems designed to prevent or reduce pollutant loading from storm water or non-storm water discharges to receiving waters, or designed to reduce the volume of storm water or non-storm water discharged to the receiving water.*
>
> *BMPs are also defined in Chapter 13.50.010 of the La Verne Municipal Code as*
>
> *…storm water and urban runoff pollution control practices designed to reduce the pollutants contained in discharges to receiving waters or subsurface groundwaters.*

Section 13.60.110, *Maintenance covenant*, states that:

> *…a maintenance covenant is required for all projects on private property and shall be submitted to the city for review by the city engineer and designee, and if necessary, city attorney. The designers may select any combination of storm water BMPs which meet the performance standards provided in this section and identified in the Los Angeles County Municipal Storm Water Permit No. R4-2012-0175 and any amendment, revision, or reissuance thereof. A formal maintenance plan shall be included in the maintenance covenant.*

Discharge of pollutants from construction sites is restricted by provisions set by the SWRCB and the LARWQCB. All developers are required to ensure that pollutants are not discharged from a site unless the discharge is in compliance with the General Construction Activities Storm water Permit issued to the City of La Verne by the Board in compliance with the requirements of the NPDES program. Developers are also required to obtain State Water Board 401 Water Quality Certification, and comply with all provisions of Chapter 13.50, *Storm water and Urban Runoff Pollution Control*, of the La Verne Municipal Code.

Under the NPDES permit, developers are required to control pollutant discharge by utilizing BMPs such as the Best Available Technology Economically Achievable (BAT) and the Best Conventional Pollutant Control Technology (BCT) in order to avoid discharging pollutants into waterways. BMPs are required during general operation of projects to avoid the discharge of polluted storm water runoff to the maximum extent practicable.

Section 13.50.093 of the La Verne Municipal Code requires a SUSMP for the following applicable categories:

1. Ten or more unit homes including single family homes, multifamily homes, condominiums, and apartments
2. A one hundred thousand or more square feet of impervious surface area industrial/commercial development
3. Restaurants
4. Parking lots five thousand square feet or more of surface area or with twenty-five or more parking spaces

5 Redevelopment projects that results in the creation, addition, or replacement of five thousand square feet or more of impervious surface area on an already developed site
6 Projects located in or directly adjacent to or discharging directly to an environmentally sensitive area if the development would create two thousand five hundred or more square feet of impervious area and would discharge storm water or urban runoff likely to impact a sensitive biological species or habitat

4.7.4 Impact Analysis

Methodology and Thresholds of Significance

This section describes the potential environmental impacts of the proposed project relevant to hydrology and water quality. The impact analysis is based on an assessment of baseline conditions for the proposed project area, including climate, topography, watersheds and surface waters, groundwater, and floodplains, as described in Section 4.7.1, Setting. This analysis identifies potential impacts based on the predicted interaction between the affected environment and construction, operation, and maintenance activities related to the predicted development that would occur under the proposed Master Plan. This section describes impacts in terms of location, context, duration, and intensity, and recommends mitigation measures, when necessary, to avoid or minimize impacts.

The following thresholds of significance are based on Appendix G to the CEQA Statute and Guidelines. For the purposes of this EIR, implementation of the proposed project may have a significant adverse impact if it would:

- Violate any water quality standards or waste discharge requirements
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)
- 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 which would result in substantial erosion or siltation on or offsite
- 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 offsite
- 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
- Otherwise substantially degrade water quality
- 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
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows

- 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
- Expose people or structures to inundation by seiche, tsunami, or mudflow

As discussed above, the proposed Master Plan would have no impact related to placing housing or structures within a 100-year flood zone because the Plan Area is not in a 100-year flood zone. The proposed Master Plan would have a less than significant impact related to exposing people or structures to risks from flooding, including flooding as a result of seiche, tsunami, or mudflow. Water supply, including depletion of groundwater is further discussed in Section 4.7, Utilities and Service Systems. This section concluded that growth demand, with campus growth considered, and the available water supplies are adequate to meet future demand. These impacts are therefore not discussed further in this section.

Project Impacts and Mitigation Measures

IMPACT HWQ-1. CONSTRUCTION AND OPERATION-CREATED RUNOFF

Implementation of the Master Plan would involve construction activities and operation of new facilities that would have the potential to create polluted runoff and violate water quality standards. However, existing regulations would reduce potential adverse effects and impacts would be Class III, less than significant.

Implementation of the proposed Master Plan would involve demolition and construction of several buildings and facilities including residential halls, dining facilities, and lecture halls. A total of approximately 150,282 gross square feet (GSF) of building removal, as shown in Table 5 La Verne Campus: All Buildings plus Demolition and Renovations, All Phases in Section 2.0, Project Description. Table 6 and Table 9 show that implementation of the proposed Master Plan would involve construction of up to 475,577 net square feet of facilities for academic, campus life, athletic, open space, and residential growth over the life of the Master Plan. Excavation and grading associated with these activities could result in erosion of onsite soils and sedimentation, with consequent temporary impacts to surface water quality. Construction of individual projects may require temporary onsite storage of excavated soils. During grading and soil storage, there would be potential for soil migration offsite via wind entrainment and/or water erosion. In addition, structural and concrete residue/dust from demolition of buildings could migrate offsite and adversely affect water quality.

The Master Plan is a planning document. It describes the proposed location and character of future campus development. Detailed site and construction information for specific projects within the Master Plan would be subject the City of La Verne Development Review process which requires review by the City Engineer. This review is intended to ensure that project development does not adversely impact site hydrology or water quality. Future Master Plan development would be required to demonstrate adequate drainage systems, and would be conditioned to comply with applicable NPDES, SUSMP, and Urban Runoff Management Program requirements to ensure that water quality is maintained to federal, state and local standards. Although no subterranean facilities are currently proposed as

part of the Master Plan, future development would need to demonstrate, through the Development Review process, that groundwater, existing drainage patterns and storm drain systems would not be adversely affected.

As discussed in Section 4.4, Geology and Soils, Campus West is in an area known to be subject to liquefaction, and is thus likely to be in an area where groundwater is within 30 feet of the surface. Shallow groundwater could potentially interfere with excavations for building foundations, basements, or other subterranean facilities proposed under the Master Plan and the possibility of such improvements encountering groundwater and requiring dewatering in order to ensure structural stability cannot be ruled out. Such dewatering would have the potential to produce runoff that may violate water quality standards or waste discharge requirements. However, as discussed above in Section 4.7.1f, *Regulatory Setting*, discharge of pollutants from construction and operation of individual projects carried out under the proposed Master Plan would be required to comply with NPDES permits issued to the City of La Verne by the SWRCB and/or the LARWQCB, to reduce the entry of non-storm water discharges into the municipal storm water system during construction and operation of each individual project. Dewatering discharges would be subject to this requirement.

During operation of development facilitated by the Master Plan, pollutants from parking areas and landscaping could enter the local drainage system or ground water. Impermeable surfaces in parking areas would accumulate deposits of oil, grease, and other vehicle fluids and hydrocarbons. New landscaping could introduce chemical inputs such as pesticides and herbicides. The addition of fertilizers, pesticides and other chemicals added to landscaping has the potential to include higher than natural concentrations of trace metals, biodegradable wastes (which affect dissolved oxygen levels), and excessive major nutrients such as nitrogen and phosphorus. As explained in Section 4.14, Utilities and Service Systems, the Plan Area is connected to the City of La Verne storm drain system, which would capture runoff from this area. Pollutants such as oil, grease, and pesticides could be washed via urban runoff into and through drainage systems, ultimately to the Pacific Ocean, or seep into local and regional ground water, potentially having a variety of deleterious effects. For example, oil and grease contain a number of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Heavy metals such as lead, cadmium, and copper are the most common metals found in urban storm water runoff. These metals can be toxic to aquatic organisms, and have the potential to contaminate drinking water supplies. Nutrients from fertilizers, including nitrogen and phosphorous, can result in excessive or accelerated growth of vegetation or algae, resulting in oxygen depletion and additional impaired uses of water. These pollutants can also negatively affect ground water quality, potentially making it unusable as potable water. As discussed in Section 4.14, Utilities and Service Systems, a combination of local ground water and other sources of state water are part of the Plan Area's water supply.

As stated in the proposed Master Plan, all future development on the campus would be subject to NPDES requirements and applicable water quality management programs, with new facilities requiring a SUSMP, SWPPPs, and BMPs. As discussed in Section 4.7.1 above, the City of La Verne is subject to the NPDES, and is required under the NPDES to implement

procedures with respect to the entry of non-storm water discharges into its municipal storm water system. The City regulates storm water discharges in accordance with the NPDES permit through Chapter 13.50 of the La Verne Municipal Code, *Storm Water and Urban Runoff Pollution Control*.

Because the parts of the Plan Area slated for development under the proposed Master Plan are already mostly developed, implementation of the proposed Master Plan would not substantially alter drainage patterns or degrade water quality.

As discussed above in Section 4.7.1, discharge of pollutants from construction and operation of individual projects carried out under the proposed Master Plan would be required to comply with NPDES permits issued to the City of La Verne by the SWRCB and/or the LARWQCB, to reduce the entry of non-storm water discharges into the municipal storm water system during construction and operation of each individual project. Compliance with the requirements of applicable NPDES permits would reduce potential impacts from erosion and pollutant laden storm water discharges during construction and operational activities to a less than significant level. Individual construction projects would also be required to comply with the regulations contained in the Municipal Code of the City of La Verne. With implementation of proposed Master Plan's storm water management methods and required adherence to existing regulations, water quality impacts from construction and operation of the proposed Master Plan would be less than significant.

MITIGATION MEASURES

The above-specified regulations and Master Plan elements would ensure that impacts are less than significant; therefore, no mitigation is necessary.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT HWQ-2. EROSION FROM RUNOFF

New development carried out under the proposed Master Plan could lead to or increase erosion by altering existing drainage patterns or increasing the rate or amount of surface runoff that could potentially result in flooding on or offsite. However, erosion and surface runoff from construction of individual projects carried out under the Master Plan would be governed by existing regulations designed to reduce such adverse impacts. Impacts would therefore be Class III, less than significant.

Erosion impacts from the Master Plan would be governed by existing regulations and design features described under Impact HWQ-1, including development of a SUSMP which would identify BMPs. These regulations are designed to help prevent polluted runoff and erosion. Additionally, implementation of the Master Plan would not substantially alter existing drainage patterns in or around the Plan Area.

The City of La Verne's Green Building Standards require that post-development peak runoff be equal to or less than pre-development runoff. These standards as well as existing regulations ensure that new buildings developed would be designed such that they would

not substantially impede or redirect runoff in a manner that would result in flooding on- or offsite. The design would also include construction of new storm water infiltration or drainage systems, as necessary to comply with existing regulations, such that they would not substantially impede or redirect runoff. Therefore, Master Plan impacts related to erosion and flooding on or offsite would be less than significant.

MITIGATION MEASURES

The above-specified regulations and Master Plan elements would ensure that impacts are less than significant; therefore, no mitigation is necessary.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT HWQ-3. DAM INUNDATION

Development facilitated by the proposed master plan would place housing, structures, or people within the predicted dam inundation zone of the Live Oak Reservoir, the Live Oak Dam, and the Weymouth Memorial Reservoir, but with implementation of Federal Emergency Management Act (FEMA) requirements, impacts related to dam inundation would be Class III, less than significant.

Failure of the Live Oak Reservoir, Live Oak Dam, or Weymouth Memorial Reservoir could potentially result in flooding of the Plan Area. Flooding impacts from dam failure would be most of the Plan Area, within the central and southern portions of the City of La Verne. A small western portion of Campus West would not be affected by the dam inundation zones. Development carried out under the Master Plan would not increase the risk of flooding in the City due to dam failure, but would result in the exposure of additional people and structures to the risk of flooding due to dam failure. As discussed in section 4.7.1e, *Flood Hazards*, the Live Oak Reservoir, Live Oak Dam, and Weymouth Memorial Reservoir are not associated with a high risk of failure or flooding of the Plan Area. Development carried out under the current zoning and General Plan land use designations would likely result in the placement of structures within areas that would be inundated following failure of the Live Oak Reservoir, the Live Oak Dam, or Weymouth Memorial Reservoir. Compliance with existing regulations, including FEMA requirements of dam owners developing an Emergency Action Plan for warning, evacuation, and post-flood actions (FEMA 2013: I-1), would ensure that impacts related to inundation following dam failure would be less than significant.

MITIGATION MEASURES

The above-specified regulations and Master Plan elements would ensure that impacts are less than significant; therefore, no mitigation is necessary.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

4.7.5 Cumulative Impacts

As discussed in Section 3, Environmental Setting, cumulative development in and around the Plan Area, including development proposed under the Master Plan, would add dwelling units and non-residential development to the area. Cumulative impacts related to hydrology and water quality would be similar to what is described above for impacts specific to the Master Plan, and would be addressed on a project-by-project basis through compliance with existing policies, regulations, and site-specific mitigation measures (if necessary) for individual projects. These policies, regulation, and site-specific mitigation measures would help avoid negative hydrological effects from cumulative development. Furthermore, substantial changes to the local and regional drainage systems are not anticipated given the level of urban development and associated extent of drainage improvements (including curb and gutter inlets, storm drains, retention and recharge basins, and formal flood control channels) in the Plan Area and its vicinity. Cumulative impacts related to hydrology and water quality would therefore be less than significant.

4.8 Land Use and Planning

This section analyzes potential land use compatibility impacts resulting from implementation of the proposed Master Plan, including its potential consistency with the City of La Verne General Plan land use programs and policies and other applicable Municipal Code provisions, as well as a general land use compatibility discussion.

4.8.1 Setting

Citywide Land Use Patterns

The city of La Verne is located in the San Gabriel Valley, within the eastern portion of Los Angeles County. The entire incorporated area is approximately 9.09 square miles. The city shares its boundaries with the unincorporated portion of Los Angeles County (to the north), the city of Claremont (to the east), the city of Pomona (to the south), and the city of San Dimas (to the west).

Site and Surrounding Land Uses

Land uses surrounding the project area in its entirety broadly include Old Town La Verne to the north and northeast, residential neighborhoods (primarily within the Lordsburg Specific Plan area) to the west, north, and east. Damien High School is located to the west/northwest and there is a Metropolitan Water District facility to the northwest. Bonita High School is located to the northeast. The Los Angeles County Fairplex is located southeast of the University and is primarily within the city of Pomona. Brackett Field Airport (owned and operated by Los Angeles County), Mountain Meadows Golf Course (City of Pomona) and Frank Bonelli Regional Park (City of San Dimas) are located to the south. More specific current and surrounding land uses are described below for each of the University campuses.

La Verne Campus

La Verne Campus is the primary campus of the University and primarily within the boundaries of the Old Town La Verne Specific Plan (OTLVSP) area. It consists of approximately 38 acres and is roughly bounded by Arrow Highway on the south, B Street on the west, Bonita Avenue on the north, and E Street on the east. It features academic buildings, residence halls, dining halls, recreation fields, landscaped open spaces, parking lots, and pathways. The campus contains many mature trees and other vegetation.

Along its northwest border, La Verne Campus primarily abuts single-family residential properties. There is an automotive shop to the north, beyond parking lot P, across Bonita Avenue and east of C. On its east side, across C Street and north of Third Street, La Verne Campus is bordered by an eclectic mix of land uses that are within the Old Town La Verne Specific Plan area. The City's primary Public Safety Facility abuts the University on the northeast corner of Third and C Streets. Sneaky Park is located on the southeast corner of Third and C Streets. To the east, across D Street and north of Second Street, La Verne Campus is bordered by commercial retail and restaurant land uses. There is a Circle K

convenient store located at the northeast corner of D and Second Streets. On its south side, La Verne Campus is bordered by the AT&SFRR and future Metro Gold Line railroad tracks and Arrow Highway. To the south of Arrow Highway, there is a mix of light industrial and commercial land uses, with residential properties beyond. The land west of the University is in the Lordsburg Specific Plan area and the primary land use is single-family residential.

Park Campus

Park Campus is located approximately 0.3 miles southwest of La Verne Campus and is bounded by the Metrolink Rail Line on the south, Park Avenue on the west, Arrow Highway on the north, and A Street on the east. It is part of the Arrow Corridor Specific Plan (ACSP) area. Land uses within the ACSP area include a mixture of light industrial and commercial uses with a scattering of residences to the north. The purpose of this campus is primarily for satellite parking for the main campus and additional administrative and instructional space. The University owns a 4.2 acre area comprised of two parcels. The smaller parcel contains a 3,240 square foot building (Carson Building) and the larger parcel contains 455 parking spaces. In addition, the University leases an 18,523 square foot building adjacent to the parking lot for use as additional administrative and instructional space. Park Campus is zoned Industrial within the ACSP.

Park Campus abuts a block of commercial and office land uses to the north, including a dental office, a property management company, a vehicle towing company and a cabinet making business. Single-family residential properties are located to the east.

Park Campus is also adjacent to the Metrolink rail line and the La Verne Business Park. The Business Park includes commercial, manufacturing, and industrial land uses. The Princeland La Verne Commerce Center is located to the west and includes light industrial and manufacturing land uses.

Campus West

Campus West is located approximately 0.6 miles southwest of La Verne Campus and like Park Campus, is within the boundaries of the ACSP. Campus West is located on the west side of the ACSP area and is comprised of 8 parcels, totaling 54.8 acres. The campus is roughly bounded by the Metrolink Rail Line on the north, Wheeler Avenue on the east, Puddingstone Drive on the south, and a Puddingstone Reservoir storm water channel on the west. Currently, 14 acres of Campus West are developed with the University's Athletic Complex. The Athletic Complex is comprised of ball fields and associated dugouts, locker rooms, training rooms, and restrooms. There are also 180 parking spaces available for those utilizing the facilities. All of this land is zoned Business Park (BP) and Industrial (I) within the ACSP.

The Mohawk Western Plastics, Inc. manufacturing facility and Direct Edge, a car repair and maintenance business is located north of the site. Additionally land uses to the north include a vacant industrial/manufacturing facility, a non-profit food pantry, a medical diagnostics laboratory, and a human resources company. The Gilead biopharmaceutical manufacturing facility (built in 2016), a light industrial facility (built in 2015), and the La

Verne Business Park are located to the east. Puddingstone Drive and Brackett Air Field are located to the south, with Frank G. Bonelli Regional Park located further south beyond the airport. The historic Carrion Adobe property is located adjacent to the southwest corner of the campus and the Park La Verne residential community is located to the west.

Regulatory Setting

The City of La Verne regulates the mix of land uses built within its incorporated boundaries through its General Plan, Municipal Code, and Specific Plans. These regulatory documents establish policies that apply citywide, or to specific subareas within the City. As described in Section 2.0, *Project Description*, the proposed Master Plan would require the following entitlements from the City of La Verne:

- Approval of the Master Plan
- Amendment of the General Plan, as necessary
- Specific Plan Amendments, as necessary
- Development review approval of all new construction, building relocations, and other site changes
- Removal of any street tree will require approval of a permit from the Director of Community Development
- A permit for any temporary construction trailers or other temporary construction-related uses, as applicable
- Ministerial and ancillary permits required to carry out individual projects under the Master Plan, such as landscape permits, demolition permits, buildings permits, and occupancy permit.
- Lot mergers and/or lot line adjustments, as necessary

General Plan

The Plan Area has two General Plan land use designations: Community Facilities and Commercial Business Park. The General Plan describes the Community Facilities designation as follows:

This category includes water and sewer systems, storm drains, schools and the library system. In addition, some special facilities unique to La Verne are included in this category: Brackett Field, the University of La Verne, and MWD properties. If any of the special facilities under-goes additional development or a change in use, a master plan must be prepared and approved by the city.

The General Plan describes the Commercial Business Park designation as follows:

Retail commercial, office, light manufacturing, industrial, and mixed uses are allowed on properties with this land use designation. Such uses can either be in individual buildings or in low intensity suburban centers. Maximum lot coverage of 50 percent is permitted.

The General Plan is the fundamental planning policy document of the City, providing a “blueprint” for the identification of the location of land uses, the basic design and function of circulation, open space, economic development and infrastructure policies, and public

service needs. The City of La Verne adopted a comprehensive update of its General Plan in December 1998. The document serves to guide decision makers with respect to development, resource management, public safety, community services, and the City's desired quality of life.

The La Verne General Plan includes all of the elements mandated by State law and sets forth objectives, goals, policies, and implementation measures that provide guidelines to meet the existing and future needs and desires of the community. Included within the General Plan are numerous policies pertaining to neighborhood preservation, land use compatibility, and the appropriate mixture of land uses that may be applicable to the proposed Master Plan. These guidelines are located within the following Elements of the La Verne General Plan: Land Use; Transportation; Resource Management; Noise; Cultural Resources; Community Facilities; Housing; Public Safety; Economic Development; and Community Design. A summary of each General Plan Element's goals and policies is provided below.

Land Use Element

Generally, the goals and policies in this element are meant to ensure that new development in the City of La Verne is designed with a high level of quality and preserves existing neighborhoods and their surrounding environments. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Growth Management
- Hillside Development
- Community Character, as defined by neighborhood planning areas

Transportation Element

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to developing an effective and sustainable circulation system that improves mobility. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Traffic Flow
- Neighborhood Streets
- Parking
- Safety
- Public Transportation
- Accommodating Pedestrians, Bicyclists, and Equestrians
- Aesthetics

Resource Management Element

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to open space preservation and enhancement, and natural resource conservation. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Parks and Recreation
- Open Space
- Scenic Vistas and Routes
- Biological Resources
- Air Quality
- Water Conservation
- Solid Waste Management
- Sustainability

Noise Element

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to providing a noise conscious and pleasant community. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Noise Standards
- Streets
- Railway
- Brackett Field Airport
- Fairplex

Cultural Resources

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to preserving the unique heritage of the community. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Identify, document, and preserve cultural resources
- Preserve archeological resources
- Protect cultural resources and landscapes
- Promote public art
- Integrate cultural resources into daily planning practice

Community Facilities

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to serving the needs of the community through strong buildings and modern infrastructure. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Water demand
- Groundwater quality
- Storm Drain System
- Adequate School Facilities
- Access to Library Facilities
- Promoting Brackett Field Airport

- Mutually Beneficial University and Community Relationship

Housing

The Housing Element of the General Plan identifies and analyzes the City's existing and projected housing needs and contains a detailed outline and work program of the City's goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing for a sustainable future. California State Housing Element Law (California Government Code Article 10.6) establishes the requirements for Housing Elements of the General Plan. Specifically, California Government Code Section 65588 requires that local governments review and revise the Housing Element of their Comprehensive General Plans not less than once every five years. The Housing Element institutes policies that will guide City decision-making, and establishes an implementation program to achieve housing goals through the year 2021. The following Housing Element land use policy topics are specifically applicable to the proposed Master Plan:

- Housing and Neighborhood Conservation
- Adequate Sites to Achieve a Diversity of Housing
- Opportunities for Affordable Housing
- Removal of Government Constraints, as necessary
- Promotion of Equal Housing Opportunities

Public *Safety*

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to protecting the community from preventable accidents and unpredictable disasters. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Fire Protection
- Geologic Hazards: Hillsides and Earthquakes
- Hazardous Materials
- Traffic safety
- Public Services: Police, Fire, and Medical

Economic Development

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to sustainable economic development. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Jobs-Housing Balance
- Commercial Development
- Downtown Lordsburg Revitalization

Community Design

Generally, the goals and policies in this element are meant to demonstrate the City's continuing commitment to protect and promote the La Verne's unique character. This element contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Small Town Character
- "Greening"
- Distinctive Development
- Natural Setting
- Architectural Quality
- People Oriented Design

Specific Plans

The Plan Area's zoning regulations are subject to the three Specific Plans for the area: OTLVSP, ACSP, and LSP as illustrated in Figure 20.

Old Town La Verne Specific Plan (March 2013)

The Old Town La Verne Specific Plan (OTLVSP) area includes the University of La Verne, Old Town La Verne, and existing industrial and service uses located along First Street and Arrow Highway. A new Gold Line Station is planned in the center of the OTLVSP area. The purpose of the OTLVSP is to facilitate and encourage development and improvements that help realize the community's vision for Old Town. The OTLVSP is important to the City and its residents because it reinforces Old Town as the historic heart of La Verne, enables appropriate expansion of the University of La Verne, anticipates the potentials for transit-oriented development related to the Gold Line Station and establishes appropriate relationships with the Los Angeles County Fairplex. The provisions of the OTLVSP apply to all properties included in the Old Town La Verne Specific Plan area. To ensure consistency between the OTLVSP and Chapter 18 of the City of La Verne Municipal Code, the Zoning Map was amended concurrent with the adoption of the OTLVSP to include an Old Town La Verne Specific Plan zone to replace the zoning for the area. Where land use regulations and/or development standards of the City of La Verne Zoning Code are inconsistent with the OTLVSP, the standards and regulations of the Specific Plan prevail. Any issues not specifically covered in the OTLVSP are subject to the Municipal Code.

Figure 21 Specific Plan Designations

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Additional Data provided by University of La Verne Facilities and Technology Master Plan, September 2016.

The OTLVSP incorporates the following Land Use Sectors: Historic Old Town Sector (1), University of La Verne Sector (2), Arrow Corridor/TOD Sector (3), and First Street Sector (4). The Plan Area includes portions of the Historic Old Town Sector and the University of La Verne Sector.

- Historic Old Town Sector. The Historic Old Town Sector includes key functions, structures, and fabric relating to the historic context of Old Town La Verne. Key functions include the historic retail core located between Bonita Avenue and Third Street along D Street as well as a variety of uses including retail, office, residential, and institutional. This area includes a number of important historic structures including the landmark citrus structures related to La Verne's citrus heritage. The portions of the Plan Area that are a part of this sector are designated by the following three land use zoning districts: Downtown Mixed Use District, Adaptive Reuse Mixed-Use District, and Historic Fabric Mixed Use District. These districts are regulated by the Specific Plan.
- University of La Verne Sector. The University of La Verne Sector includes a variety of educational structures and support facilities as well as significant green spaces. The majority of the Plan Area is within this sector and designated by the University of La Verne land use zoning district. This district is regulated by the University's Master Plan.

Arrow Corridor Specific Plan

The Arrow Corridor Specific Plan (ACSP) is contiguous with the Old Town La Verne Specific Plan area to the southwest and the east. The purposes of the ACSP include providing for multiple uses, integrating the project area with the surrounding area, taking advantage of the topographic and other site characteristics, and providing sufficient flexibility for future anticipated market changes. The University's Park Campus and Campus West are located within the boundary of the ACSP and are zoned as Industrial (I) and Business Park (BP), respectively.

- Business Park (BP). The area bounded by Puddingstone Wash, Fairplex Drive, the Metrolink tracks and Puddingstone Drive is developed as the San Polo La Verne Business Park, formerly the Koll Business Center. The area west of the San Polo Business Park that extends to Puddingstone channel encompasses Campus West.
- Industrial (I). The Industrial land use classification is designated for areas located adjacent to and north of Arrow Highway. This includes Park Campus and the westernmost portion of Campus West.

Lordsburg Specific Plan (September 1992; Chapter 5 updated March 2004)

The Lordsburg Specific Plan (LSP) surrounds the Old Town La Verne Specific Plan area to the west, north, and east. The Lordsburg neighborhood exhibits a straightforward division of land uses largely contained within three distinct sections of the area: single family neighborhoods; the Old Town local commercial area, and the University of La Verne (private institutional land use). The general goal of the LSP is to structure land use, circulation and urban design in a manner that captures a coherent whole, to ensure that all development is consistent with the general plan, and to revitalize and preserve the unique character of Old

Town La Verne. It is important to note that although the Plan Area generally falls with the boundaries of the Lordsburg Specific Plan, only a small number of University properties are within that boundary and no change is proposed to those properties under the Master Plan.

Municipal Code

The City of La Verne Municipal Code codifies regulations implementing the City's General Plan. Title 18 of the La Verne Municipal Code includes numerous guidelines influencing land use within the City. Title 18 consists of two parts, a map dividing the city into zoning districts and text establishing development standards for each district. The Plan Area, in its entirety, is zoned SP specific plan. The SP specific plan zone is intended to provide for the classification and development of parcels of land as a coordinated, comprehensive project in order to create a superior environment resulting from site specific community planning. The uses, types of development and development standards in an area zoned specific plan are those permitted by the specific plan for that area. The Plan Area's zoning regulations are subject to three separate Specific Plans: Old Town La Verne Specific Plan (OTLVSP), Lordsburg Specific Plan (LSP), and Arrow Corridor Specific Plan (ACSP), as described above.

Brackett Field Airport Land Use Compatibility Plan (ALUCP)

Brackett Field Airport is a County owned and operated airport located at 1615 McKinley Avenue, in the City of La Verne. On December 9, 2015, the Airport Land Use Commission (ALUC) adopted the Brackett Field Airport Land Use Compatibility Plan (ALUCP). The ALUCP sets forth land use compatibility policies that are intended to ensure that future land uses in the surrounding area will be compatible with potential long-range aircraft activities at the airport, and that the public's exposure to airport safety hazards and noise impacts are minimized. The ALUCP provides the basis by which the ALUC and local agencies located within the Airport Influence Areas carry out land use development review responsibilities in accordance with State Law. The ALUC retains land use development review of applicable projects until the affected local agencies' general and specific plans have been deemed consistent with the ALUCP. The Plan Area is located within the Brackett Field Airport Influence Area ("AIA") and is therefore subject to the ALUCP. La Verne Campus is within Compatibility Zone E and Campus West is within Compatibility Zone D.

This document contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Noise
- Safety
- Airspace Protection
- Overflight

4.8.2 Impact Analysis

Methodology and Significance Thresholds

Land use impacts were assessed based upon the level of physical impact anticipated from the various Master Plan components and their potential to create conflicts between land uses. Most often, a project directly creates land use compatibility impacts by affecting aesthetics, air quality, noise, and traffic. For the evaluation of this project, cultural resources were also examined for land use compatibility concerns. Impacts are considered significant if implementation of the proposed Master Plan would do any of the following:

- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project adopted for the purposed of avoiding or mitigating an environmental effect
- Conflict with any applicable habitat conservation plan or natural community conservation plan

The proposed Master Plan would have no impact on division of an established community or habitat conservation plan or a natural community conservation plan. As such, these issues do not warrant further discussion in this EIR. Therefore, this section focuses on assessing the proposed Master Plan's consistency with applicable land use policies and regulations and, although not listed above, its effects on land use compatibility between the campus and surrounding neighborhoods.

Project Impacts and Mitigation

IMPACT LU-1 COMPATIBILITY WITH EXISTING LAND USES

With incorporation of mitigation measures included in the aesthetics, air quality, cultural resources, noise, and transportation sections of this EIR, the Master Plan would be generally compatible with existing adjacent institutional, commercial, and residential land uses. However, the demolition or significant alteration of historical structures and increased traffic congestion at the intersection of D Street and Bonita Avenue would result in significant and unavoidable impacts to the surrounding area. Therefore, land use impacts relating to the compatibility with existing land uses would be Class I, significant and unavoidable.

The Plan Area is comprised of institutional and residential buildings, open spaces, and athletic fields serving University of La Verne's student body, faculty, and administration. Land uses directly adjacent to the campus environment include residential, commercial and light industrial development. Aspects of the proposed Master Plan that would directly affect land use compatibility include those related to the built and landscaped environment, including proposed size, type, use and location of structures, and localized air quality, noise and traffic effects of operation of the projects called for under the Master Plan.

Implementation of the proposed Master Plan would primarily affect existing campus facilities within the Plan Area, and would maintain the use of the Plan Area as a college campus. The number of people on campus would increase by 914 full time students, faculty and staff, or approximately 16 percent above 2016 totals (see Section 4.10 Population and Housing), and the structural square footage would increase by 475,577 square feet, or approximately 64 percent above 2016 University building area (see Section 2.4 Project Characteristics) . Though the intensity of use and development would increase incrementally, land uses and their intensity would be consistent with that of the University and surrounding community. Increases in structural development, parking activity and associated student activity would occur primarily throughout La Verne Campus. Multi-family residential development is envisioned on Campus West and would be examined in further detail when site specific plans become available but generally this type of housing would be multi-family housing typical to what already exists in the city of La Verne. On La Verne Campus, development nearest campus edges would occur at the northern and south eastern boundaries, near residential areas along Bonita Avenue and commercial areas along D Street and Second Street.

The proposed Master Plan would not be expected to cause land use compatibility conflicts with surrounding institutional and commercial land uses, as those uses are generally similar in type and intensity, and are less sensitive to the kinds of impacts that result in incompatibility, such as those associated with aesthetics (particularly massing, shadows and light/glare), air quality, cultural resources, noise, and traffic. For example, the proposed mixed-use residence halls on La Verne Campus, bounded by D Street, Second Street, and E Street, would replace smaller and more residentially-scaled student housing buildings (The Oaks), but would be adjacent to or within a block of the existing institutional land uses, residential properties, and Old Town commercial development. The proposed student housing and commercial retail space would not conflict with these residential, institutional and commercial uses.

Implementation of the proposed Master Plan has the potential to create land use conflicts due to new construction and increased students and faculty activity in proximity to existing residential areas. These potential impacts would be somewhat reduced over most of the Plan Area by containing the proposed development within areas previously developed with institutional uses. Student residential buildings in the vicinity of the Plan Area include dormitory type housing, located throughout campus. Generally, private residential areas in the vicinity of the Plan Area are separated from La Verne Campus by at least one block of existing institutional or commercial development, which would provide a buffer from proposed Master Plan development and campus activities. Exceptions include residences along Bonita Avenue between B Street and C Street, and scattered residences along Second Street. As noted above, compatibility concerns are focused on La Verne Campus' northern and eastern edges. The extent of proposed new construction in these areas is detailed in Section 2.0 Project Description. Increases in night lighting, ambient noise levels, and traffic around these areas could result in land use compatibility impacts. Land use compatibility impacts to the surrounding residential properties would be limited to aesthetics and construction noise.

As discussed in Section 4.1, Aesthetics, development under the proposed Master Plan would include physical changes to the Plan Area that would alter its visual character and quality, and increase overall massing and intensity within the La Verne and Park Campuses. Future development carried out under the Master Plan would be required to adhere to the design and planning principles laid out in the Master Plan, the Old Town La Verne Specific Plan, the Arrow Corridor Specific Plan, the Brackett Field Airport Land Use Compatibility Plan, and the City's General Plan. All incremental development would also be required to undergo development review and precise plan review as required by the City's Municipal Code. Adherence to these policies and requirements would reduce impacts related to visual character and quality to a less than significant level. While implementation of the proposed Master Plan would lead to the removal of some trees, it would also minimize tree removal where possible and introduce new trees to the Plan Area. After Master Plan implementation, trees would continue to be distributed throughout the Plan Area. With implementation of City policies, and the guidelines and practices discussed in the Master Plan and the applicable Specific Plans, trees would remain a scenic resource within the Plan Area and impacts to scenic resources would be less than significant level.

As discussed in Section 4.2, Air Quality, neither construction nor operation of projects and uses under the proposed Master Plan would result in significant air quality impacts. However, any specific future project proposed within the Plan Area would be required to undergo site-specific CEQA review, which would include an analysis of construction emissions. If necessary, the appropriate construction-related mitigation measures would be identified at that time.

As discussed in Section 4.3, Cultural Resources, future development in the Plan Area has the potential to impact built environment resources both directly and indirectly through demolition, alteration of buildings and streetscapes, and new construction that results in changes in land use and setting. These improvements would impact historic buildings and structures and related features and cause significant adverse impacts to historical resources. While there is the potential for significant cumulative impacts to cultural resources within the University of La Verne Master Plan Area, Mitigation Measures CR-1 through CR-5 as well as CR-9 and CR-10 would help to reduce the potential impacts to archaeological and paleontological resources to less than significant levels. Mitigation Measures CR-6 through CR-8 are required to avoid and/or reduce potential historic resource impacts from future projects in the Master Plan area to the greatest extent feasible. However, impacts related to the demolition or significant alteration of historic structures would remain significant and unavoidable.

As discussed in Section 4.9, Noise, noise levels could potentially exceed City thresholds even with compliance with existing regulations governing construction hours. Mitigation Measures N-1 would reduce noise levels from construction activity; however, it may not be possible to mitigate impacts from construction noise associated with the proposed University development to a less than significant level because of the proximity of residences and other sensitive receptors to these sites. Although construction noise impacts are considered a significant and unavoidable impact related to Master Plan implementation, the effect of construction noise on neighboring uses would be temporary,

and longer-term operational noise impacts would be mitigated to less than significant levels.

As discussed in Section 4.13, Transportation and Circulation, traffic impacts would be less than significant with incorporation of Mitigation Measure T-1 for all intersections except the intersection of D Street and Bonita Avenue (during Phase II and Phase III PM peak hour conditions). Although traffic would increase around the Plan Area, the increase would not reach levels where the proposed collection of land uses would conflict with surrounding uses.

MITIGATION MEASURE

Mitigation measures identified in Sections 4.1, 4.2, 4.3, 4.9, and 4.13 of this EIR, as well as adherence to the design and planning principles laid out in the proposed Master Plan, would reduce aesthetic, air quality, cultural resources, noise, and transportation impacts to levels that would avoid significant land use compatibility impacts, with the exception of construction noise and the demolition or significant alteration of historical structures, which would remain significant and unavoidable.

SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures identified in the EIR, as well as adherence to the design and planning principles laid out in the proposed Master Plan, compatibility conflicts relating to aesthetics, air quality, cultural resources, noise, and traffic would be reduced to less than significant levels. However, construction noise, the demolition or significant alteration of historical structures, and traffic impacts created during Phase II and Phase III development would remain significant and unavoidable.

IMPACT LU-2 CONSISTENCY WITH THE GENERAL PLAN

With implementation of existing regulations and incorporation of the mitigation measures identified throughout this EIR, the proposed Master Plan would be mostly consistent with the City's adopted General Plan. However, the demolition or significant alteration of historical structures and increased traffic congestion at the intersection of D Street and Bonita Avenue would remain significant and unavoidable and therefore, would be inconsistent with the area Specific Plans. Therefore, land use impacts relating to Specific Plan consistency would be Class I, significant and unavoidable.

Consistent with the scope and purpose of this EIR, this discussion primarily focuses on those General Plan goals and policies that relate to avoiding or mitigating environmental impacts, and an assessment of whether any inconsistency with these standards creates a significant physical impact on the environment. The ultimate determination of whether the proposed Master Plan is consistent with the General Plan lies with the decision-making bodies (Planning Commission and City Council). Only policies relevant and applicable to the proposed Master Plan are included. Policies that are redundant between elements have been omitted. It is important to note that the proposed Master Plan does not include specific development plans or building details. Future development projects proposed pursuant to the proposed Master Plan would be reviewed through the City's development

review process for consistency with applicable adopted City policies. Such future development may also require additional CEQA analysis where warranted, but generally only if the scope of an individual development project exceeds the scope described in the Master Plan, or if for some other reason it would have environmental impacts not analyzed in this EIR. Development of future projects not proposed as part of the Master Plan that would require entitlements from the City of La Verne and would require stand-alone CEQA review at the time of application submittal.

Implementation of the proposed Master Plan would affect existing campus facilities within the boundaries of the existing La Verne Campus and would result in the addition of college facilities, as well as student residential development, on previously developed land. Thus, the intensity of use and development would increase. The proposed land uses and their intensity would be consistent with the Plan Area's Community Facilities and Commercial Business Park General Plan designations. The General Plan describes the Community Facilities designation as including "some special facilities unique to La Verne [such as] the University of La Verne, and MWD properties." Campus West is located on the previously named "MWD properties". Any development or a change in use of the any of the special facilities requires a master plan. The General Plan describes the Commercial Business Park allows for retail commercial, office, light manufacturing, industrial, and mixed uses. Table **31** discusses how the proposed Master Plan would be consistent with the City of La Verne's General Plan goals and policies.

Table 31 City of La Verne General Plan Policy Consistencies

General Plan Goal and Policy	Discussion
Aesthetics	
Land Use Element Goal 2: Ensure safe and subtle hillside development. ▪ Policy 2.4. Preserve our significant, native, and heritage trees. **Resource Management Element Goal 4:** Preserve our diversified plant and animal life. ▪ Policy 4.1. Preserve mature trees whenever possible. **Community Design Element Goal 2:** Promote the greening of La Verne. ▪ Policy 2.1. Enhance our treescape. ▪ Policy 2.2. Provide adequate landscaping. ▪ Policy 2.4. Preserve our existing trees.	**Potentially Consistent.** While implementation of the proposed Master Plan would lead to the removal of some trees, it would also minimize tree removal where possible and introduce new trees to the Plan Area. After Master Plan implementation, trees would continue to be distributed throughout the Plan Area. With implementation of City policies, and the guidelines and practices discussed in the Master Plan and the applicable Specific Plans, trees would remain a scenic resource within the Plan Area.
Land Use Element Goal 3: Provide comprehensive development started and guidelines citywide ▪ Policy 3.1. Preserve the distinctive character of our neighborhoods.	**Potentially Consistent.** Development under the proposed Master Plan would include physical changes to the Plan Area that could potentially degrade its visual character and quality. Future development carried out under the Master Plan would be required to adhere to the guiding principles within the

General Plan Goal and Policy	Discussion
▪ Policy 3.5 Seek variety, quality, and innovation in land use practice. **Land Use Element Goal 10:** Create a functional downtown. ▪ Policy 10.1. Preserve Lordsburg's downtown commercial character. ▪ Land Use Element Goal 11: Harmonize South La Verne's diversified land use. ▪ Policy 11.1. Preserve and protect the integrity of Puddingstone Hill. ▪ Community Design Element Goal 1: Preserve our small town character. ▪ Policy 1.1 Preserve our historically and architecturally significant sites and buildings. ▪ Policy 1.2. Ensure that new development and renovation respect the neighborhood character. ▪ Community Design Element Goal 3: Make La Verne Distinctive ▪ Policy 3.1. Revitalize downtown Lordsburg. ▪ Policy 3.2. Provide uniform entry statements distinctive to La Verne. ▪ Policy 3.3. Emphasize our existing landmarks. ▪ Community Design Element Goal 5: Improve architectural quality of La Verne development. ▪ Policy 5.1. Encourage architecture that is innovative in form and function. **Community Design Element Goal 6:** Encourage people oriented and sensitive project designs. ▪ Policy 6.1. Design people oriented project sites.	Master Plan, the City's General Plan design policies, the Old Town La Verne Specific Plan and the Arrow Corridor Specific Plan. Prior to development, the University will be required to submit Precise Plans, including landscaping plans, site plans and elevations to the City for review and approval.
Transportation Element Goal 8: Beautify our roadways. • Policy 8.1 Provide roadway view enhancements. **Resource Management Element Goal 3:** Protect and promote our scenic vistas and routes. • Policy 3.1. Preserve our scenic	**Potentially Consistent.** The City of La Verne General Plan, the Old Town La Verne Specific Plan, and the Arrow Corridor Specific Plan do not identify the Plan Area as a scenic vista or as vantage point to view the scenic vistas of the San Gabriel Mountains and the Glendora Foothills located approximately two miles to the north. Additionally, the existing dense urban fabric, extensive tree canopy of the area, and intervening topography allows the views of these mountains and foothills to be available from a limited number of locations within and immediately bordering the three campuses. These include

General Plan Goal and Policy	Discussion
vistas.	locations with large areas of unobstructed open space, such as the athletic fields in the western part of La Verne Campus and the Athletic Complex located in the center portions of Campus West. The arrangement of existing and planned buildings, built open space, pedestrian pathways, sidewalks, and internal roadways within La Verne Campus area would be configured within the existing development footprint and thus view corridors would be maintained through areas of the campus towards the foothills and mountains to the north. Similarly, views of scenic vistas from adjacent residential neighborhoods to the west and north would not be significantly impacted, as new building heights would be compatible with existing structures and would be located within the internal portions of the campus. Within the Campus West areas, where existing topography creates unique opportunities for views of the mountains to the north and south, the topography descending from Arrow Highway to Puddingstone Drive would be maintained and future development would be designed with building heights similar to the surrounding industrial and residential structures.
Air Quality	
Transportation Element Goal 2: Improve our traffic flow. ▪ Policy 2.5. Relieve congestion and improve air quality throughout our valley. **Resource Management Element Goal 5**: Improve our air quality. Policy 5.1. Reduce vehicular air pollution. ▪ Policy 5.2. Reduce energy consumption.	**Potentially Consistent** Long-term, or operational, air pollutant emission impacts are those associated with stationary sources and mobile sources involving any changes related to implementation of the proposed Master Plan. Implementation of the proposed Master Plan would result in a net increase in the number of students and built facilities on campus; therefore, it would also result in net increases in both stationary and mobile source emissions. As discussed in Section 4.2, Air Quality, overall operational emissions associated with buildout of the proposed Specific Plan would not exceed applicable SCAQMD thresholds for criteria pollutants.
Cultural Resources	
Cultural Resource Goal 1: Take inventory of our past. ▪ Policy 1.1. Identify and document our cultural resources. ▪ Policy 1.2. Maintain and update our record of local cultural resources. **Cultural Resources Goal 2:** Act now to preserve and protect our cultural resources ▪ Policy 2.1. Ensure compliance with our preservation program. ▪ Policy 2.2. Provide innovative means of preservation.	**Potentially Consistent.** The records search results indicate that the University of La Verne Master Plan area contains archaeological resources. While portions of the Plan Area have been previously studied, future development or improvements related to changes in land use could potentially impact and cause significant adverse impacts to archaeological resources. Construction of the proposed project would involve surface excavation. Although unlikely, these activities have the potential to unearth and/or impact paleontological resources. Mitigation Measures CR-1 through CR-5 and CR-9 and 10 will help to reduce the potential impacts to archaeological and paleontological resources to less than significant levels, therefore protecting the cultural resources of the City of La

General Plan Goal and Policy	Discussion
▪ Policy 2.3. Bolster our proven programs. ▪ Policy 2.5. Pursue preservation of archeological resources. ▪ Policy 2.6. Protect cultural resources through strategic use of California Environmental Quality Act provisions. ▪ Policy 2.9. Abide by adopted demolition policies to protect cultural resources from premature demolition. ▪ Policy 2.10. Protect and preserve cultural landscapes. ▪ Policy 2.11. Preserve and protect resources that are not only individually noteworthy but also collectively important. **Community Design Element Goal 1:** Preserve our small town character. ▪ Policy 1.1 Preserve our historically and architecturally significant sites and buildings. ▪ Policy 1.5. Promote neighborhood conservation.	Verne. **Potentially Inconsistent.** Twenty-five existing buildings within the University of La Verne campus would be directly impacted as a result of the proposed Master Plan, either as a result of demolition or renovation. Future development in the Plan Area has the potential to impact built environment resources both directly and indirectly through demolition, alteration of buildings and streetscapes and new construction that results in changes in land use and setting. These improvements could potentially impact historic buildings and structures and related features and cause significant adverse impacts to historical resources. There are also buildings in the Plan Area that are over 45 years old that have not been evaluated, and there also are buildings that will become over 45 years of age over the 20 year period of the University La Verne Master Plan. It is possible that additional buildings may be considered historically significant after they become 50 years of age. Future development or improvements related to changes in land use could potentially impact historic buildings and structures and cause significant adverse impacts to historical resources. If a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level. However, recordation of the resource prior to construction activities will assist in reducing adverse impacts to the resource to the greatest extent possible. Recordation shall take the form of Historic American Buildings Survey, Historic American Engineering Record, or Historic American Landscape Survey documentation, and shall be performed by an architectural historian or historian who meets the PQS. Documentation shall include an architectural and historical narrative; medium- or large-format black and white photographs, negatives, and prints; and supplementary information such as building plans and elevations, and/or historic photographs. Documentation shall be reproduced on archival paper and placed in appropriated in appropriate local, state, or federal institutions. The specific scope and details of documentation would be developed at the project level. Mitigation Measures CR-6 through CR-8 will help to reduce the impacts to historical resources to the extent possible; however, impacts to historical resources proposed to be demolished will remain significant and unavoidable.
Geology and Soils	
Public Safety Element Goal 2: Protect our residents from geologic hazards. ▪ Policy 2.1. Reduce the risk of geologic and groundwater hazards.	**Potentially Consistent.** Active and/or potentially active faults exist in the vicinity of the Plan Area and are capable of producing major earthquakes and significant ground shaking. Grading and construction of buildings and support structures within the Plan Area would be required to adhere to City of La

General Plan Goal and Policy	Discussion
▪ Policy 2.2. Minimize personal and property damage from earthquakes. ▪ Policy 2.3. Prepare our community for the event of an earthquake.	Verne development review requirements as defined in City of La Verne Municipal Code Chapter 15.04, *Building Codes Adopted*, which incorporates, by reference, the design and construction standards of the CBC, 2013 Edition, which in turn incorporates and amends the IBC, 2012 Edition. Design and construction of future improvements called for under the proposed Master Plan would be required to adhere to the recommendations listed in the standard procedures of the CBC, to reduce any potential impacts from seismic related activity.
Greenhouse Gas Emissions	
Resource Management Element Goal 5: Improve our air quality. ▪ Policy 5.1. Reduce vehicular air pollution. ▪ Policy 5.2. Reduce energy consumption. **Resource Management Element Goal 8:** Foster a healthy community. ▪ Policy 8.1. Strive for economic stability, environmental responsibility and a high quality of life.	**Potentially Consistent.** As discussed in Section 4.5 Greenhouse Gas Emissions, the Master Plan is consistent with the University of La Verne's Climate Action Plan which establishes goals and strategies for reducing the University's emissions and water use and is intended to be implemented as part of the Campus Master Plan. The Climate action plan establishes the goal of reducing campus wide emissions 17 percent from 2005 levels by 2020 and 80 percent by 2050. The proposed Master Plan would be consistent with the goals and strategies established in the University's Climate Action Plan and would therefore be consistent with the objectives of AB 32, SB 97, and SB 375, and their contribution to cumulative GHG emissions would not be significant.
Hazards and Hazardous Materials	
Public Safety Element Goal 3: Protect our community from the dangers of hazardous materials ▪ Policy 3.1. Protect the public from the dangers of hazardous waste use and transport. ▪ Policy 3.3. Promote public awareness of hazardous waste dangers.	**Potentially Consistent.** The University of La Verne maintains an Emergency Operation Plan (University of La Verne, 2015) that includes a comprehensive set of procedures to ensure a proper response in the event of a wide range of on-campus incidents, including civil disorder, earthquakes, fire, flood, utility failures, terrorism, aircraft incidents, and hazardous material incidents. Campus, residential and athletic field uses may involve use and storage of some materials that are considered hazardous. Such materials would be limited to typical solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies. These materials would not be substantially different from household chemicals and solvents already in general and wide use throughout the City and in the vicinity of the project site. The proposed campus, residential and commercial land uses would not involve the transport, use, or disposal of substantial amounts of hazardous substances. Two hazardous material release sites have been identified on Campus West. In addition, the former use of a portion of Campus West for wastewater sludge basins for over 30 years may have resulted in an accumulation of heavy metals, polycyclic aromatic hydrocarbons (PAH), polychlorinated

General Plan Goal and Policy	Discussion
	biphenyls (PCB), and pesticide contaminants in the onsite soils. However, implementation of Mitigation Measures HAZ-1 through HAZ-5, impacts related to exposure to hazardous material releases would be reduced to a less than significant level
Hydrology and Water Quality	
Community Facilities Element Goal 2: Have a clean and ample water supply. ▪ Policy 2.1. Contain our demand for water. ▪ Policy 2.2. Protect our groundwater quality. **Community Facilities Goal 3:** Prevent flooding and water conservation. ▪ Policy 3.1. Provide an efficient, attractive, environmentally sound storm drain system.	**Potentially Consistent.** Substantial changes to the local and regional drainage systems are not anticipated given the level of urban development and associated extent of drainage improvements (including curb and gutter inlets, storm drains, retention and recharge basins, and formal flood control channels) in the Plan Area and its vicinity. Since proposed development under the Master Plan would be located in areas already mostly developed, implementation would not substantially alter drainage patterns or degrade water quality. The Plan Area is located in Los Angeles County and is under the jurisdiction of the Los Angeles RWQCB. The Los Angeles RWQCB establishes requirements prescribing discharge limits and establishes water quality objectives pursuant to the NPDES and the Porter-Cologne Act. The City of La Verne is required to implement procedures with respect to the entry of non-storm water discharges into its municipal storm water system. All future development on the campus would be subject to NPDES requirements and applicable water quality management programs, with new facilities requiring a SUSMP, Storm Water Pollution Prevention Plans (SWPPPs), and BMPs. In addition, the University of La Verne's Green Building Standards require that post-development peak runoff be equal to or less than pre-development runoff. These standards, as well as existing regulations, ensure that new buildings would be designed such that they would not substantially impede or redirect runoff in a manner that would result in flooding on- or offsite. The design would also include construction of new storm water infiltration or drainage systems, as necessary to comply with existing regulations, such that they would not substantially impede or redirect runoff.
Land Use and Planning	
Community Design Element Goal 1: Preserve our small town character. ▪ Policy 1.3. Protect and plan complementary mixed uses in our older neighborhoods. **Community Design Element Goal 5:** Improve architectural quality of La Verne development. ▪ Policy 5.2. Ensure adherence to adopted specific plans and master plans of development.	**Potentially Consistent.** The primary objectives and goals of the proposed Master Plan that are consistent with the Community Design Element Goal 1, Community Design Element Goal 5, Community Design Element Goal 6, and Community Design Element 8 include: ▪ Designing a plan that demonstrates a commitment to sustainability and environmental conservation and engages and tests new ideas. ▪ Providing vehicle parking and circulation that meets the needs of the campus community and is compatible with the residential and business community adjacent to the

General Plan Goal and Policy	Discussion
Community Design Element Goal 6: Encourage people oriented and sensitive project designs. ▪ Policy 6.1. Design people oriented project sites. ▪ Policy 6.2. Emphasize people places. **Community Facilities Element Goal 8:** Mutually beneficial university and community relations ▪ Policy 8.1. Increase partnership opportunity between the City, merchants, and the University. ▪ Policy 8.2. Protect the University's place and purpose in our community. **Economic Development Element Goal 2:** Invest in development that improves our quality of life. ▪ Policy 2.2. Seek creative alternatives to typical development. **Land Use Element Goal 3:** Provide comprehensive development standards and guidelines citywide. ▪ Policy 3.2. Protect our neighborhoods from incompatible development. ▪ Policy 3.3. Protect our neighborhoods from insensitive institutional development. **Land Use Element Goal 10:** Create a functional downtown. ▪ Policy 10.1. Preserve Lordsburg's downtown commercial character. ▪ Policy 10.2. Improve Lordsburg's neighborhoods. ▪ Policy 10.3. Integrate institutional and public uses within our established neighborhoods. ▪ Policy 10.4. Protect Lordsburg from incompatible neighboring land use. **Economic development Element Goal 5:** Revitalize downtown Lordsburg. ▪ Policy 5.1. Promote and improve our downtown. **Land Use Element Goal 11:** Harmonize South La Verne's diversified land use. ▪ Policy 11.2. Integrate lad uses	main campus ▪ Creating campus coherence that emphasizes an intimate sense of place with safe pedestrian scale that promotes personal interaction, community identify and a welcoming experience for the diversity of La Verne students. ▪ Developing a campus plan that creates a positive interface between the University and La Verne community, including the support of a vibrant Old Town La Verne and the opening of the Gold Line light rail system. ▪ Developing a more pedestrian-oriented campus by closing (except or emergency access) C Street below Third Street, and Second Street in front of the Abraham Campus Center and by closing (except for emergency access) Third Street between B Street and C Street for the creation of a Pedestrian Promenade. ▪ Delineating new edges and mark key entry points to La Verne Campus by installing "Campus Entry Markers", as well as landscaping and signage features that will enhance way-finding and reinforce the University's identity. ▪ Developing the Gold Line Gateway Plaza as a pedestrian-oriented welcome center into the University and Old Town areas. A landscaped pedestrian promenade along the eastern perimeter of campus will be created to facilitate the connection between the La Verne light rail station and Old Town La Verne. The primary goals of the proposed Master Plan that are consistent with Economic Element Goal 2, Economic Element Goal 5, Land Use Element Goal 3, and Land Use Element Goal 10 include: ▪ Constructing a mixed-use academic building on the Wilson Library parking lot along D Street between Third Street and Second Street. This building will define the eastern "face" of the University. Because of its location on a major commercial retail street in Old Town La Verne, the first floor of this building facing D Street will provide retail or commercial space. ▪ Developing a student residential complex and mixed-use development along the area bounded on the west by D Street, on the north by Second Street, on the east by E Street, and on the south by the railroad tracks along Arrow Highway. The new student residential complex will involve higher density housing development, but also with extensive student recreational components, including a swimming pool. A new parking garage is expected to be built on the south portion of the block, along the railroad tracks. It

General Plan Goal and Policy	Discussion
through comprehensive planning practice. ▪ Policy 11.3. Foster contributing commercial, office, and manufacturing uses. ▪ Policy 11.4. Protect the Walnut neighborhood from encroaching commerce and industry.	is anticipated that the design and composition of the mixed-use development will be influenced by the arrival of the Gold Line Light Rail Transit Station. The primary goals of the proposed Master Plan that are consistent with Land Use Element Goal 11 include: ▪ Utilize a planning process that is inclusive and engaging of campus and community stakeholders and is guided by data as well as the aspiration to fulfill the promise of the University of La Verne. ▪ Identify a plan for utilization and development of Campus West, including a convenient and attractive linkage that integrates Campus West as part of the core campus.
Noise	
Transportation Element Goal 3: Protect our neighborhoods from traffic dangers. ▪ Policy 3.2. Decrease traffic noise, volumes, speed, and congestion. **Noise Element Goal 1:** Protect our community from excessive noise. ▪ Policy 1.1. Maintain or reduce noise levels citywide. **Noise Element Goal 3:** Protect our neighborhoods from increase traffic noise. ▪ Policy 3.1. Prevent increases in traffic-related noise. **Noise Element Goal 4:** Protect our neighborhoods from train noise. ▪ Policy 4.1. Minimize train noise. **Noise Element Goal 5:** Protect our community from increase airport noise. ▪ Policy 5.1. Maintain noise from Brackett Field at its current level.	**Potentially Consistent.** The proposed Master Plan would add University facilities, dormitories, private residences, and other non-residential development within the City of La Verne. This cumulative development would increase the amount and density of development in the City, which would incrementally increase noise and expose potentially sensitive receptors to noise. However, the level of traffic generated by development called for under the proposed Master Plan would not make a noticeable contribution to cumulative increases in operational traffic noise impacts. Other noise impacts association with operation of development called for under the proposed Master Plan would be less than significant or would require mitigation, such as Mitigation Measures N-1 and N-2, as set forth in Section 4.9, Noise. However, in order to quantify the level of noise associated with individual development projects and compare them to established thresholds, specific information regarding the size and type of development and the location of receptors would be needed. Any project proposed within the Plan Area would be required to undergo design review and any necessary CEQA review, which would include analysis of operational noise. As necessary, appropriate site specific mitigation measures would be identified at that time.
Population and Housing	
Housing Element Goal 2: Provide a variety of housing types. **Housing Element Goal 4:** Identify adequate sites to achieve housing variety. ▪ Policy 4.1. Provide a range of residential development types in La Verne, including low density single-family homes, moderate density townhouses, higher density multi-	**Potentially Consistent.** The proposed Master Plan includes the demolition of Stu-Han Residence Hall and "The Oaks" Residence Hall and the development of three new student residential complexes with higher density housing. Two of the new residential halls would be mixed-use buildings with retail amenities on the first floors. There is also the potential for renovations to Brandt Residence Hall, depending on future University needs. The commercial components of the mixed-use buildings would be accessible to the general public and

General Plan Goal and Policy	Discussion
family units, and mixed-use developments with residential components to address the City's share of regional housing needs. ▪ Policy 4.3. Encourage higher density and mixed-use projects in the form of transit-oriented development around the future LA Metro Gold Line station site.	located within walking distance of the future Gold Line station. The City of La Verne Housing Element recognizes that the City is almost completely developed, with very little vacant residential land available for development. Under the current 2014-2021 planning period, La Verne has an allocated regional housing need of 562 units. The proposed Campus West multi-family residential units could contribute approximately 170 units towards the needs of the City.
Public Services	
Community Facilities Element Goal 4: Ensure quality education for all our children. ▪ Policy 4.1. Provide adequate school facilities and curriculum.	**Potentially Consistent**. See further Public Services related discussion below.
Community Facilities Element Goal 5: Improve our library system. ▪ Policy 5.1. Expand library access and facilities through innovative means.	**Potentially Consistent.** The University of La Verne operates one library on the main campus. The Wilson Library is 30,374 square feet of facility space with over 150,000 book titles, 100,000 e-journals and numerous other resources. The City's library facility to resident ratio is approximately .92 square feet and 4.6 book volumes per capita, which increases to 7.6 titles per capita with the inclusion of e-books. The Master Plan includes possible facility renovations to Wilson's Library which could expand resources available and facility space.
Public Safety Element Goal 1: Protect our community from wildfires. ▪ Policy 1.1. Provide adequate fire protection. ▪ Policy 1.2. Minimize risk of wildfire spread. **Public Safety Element Goal 5**: Protect our community from crime, fire, and inadequate medical emergency care. ▪ Policy 5.1. Provide adequate police protection. ▪ Policy 5.4. Provide adequate fire protection. ▪ Policy 5.6. Provide adequate emergency medical care.	**Potentially Consistent.** Fire protection for the Plan Area is currently provided by the La Verne Fire Department. With the continued implementation of existing practices of the City, including compliance with the California Fire Code and Uniform Building Code, the proposed Master Plan would not significantly affect community fire protection services and would not result in the need for construction of fire protection facilities. The Plan Area is currently served by the La Verne Police Department (La Verne PD). An increase in 782 full-time equivalent students would represent a 2.3 percent increase in the City's population. Based on La Verne PD's current staffing level of 42 sworn officers, the PD's officer/resident ratio would then be 1.24 Sworn Officers per 1,000 residents. La Verne PD maintains an emergency response time of 3.30 minutes and has indicated that an increase in students is not anticipated to impact response times. It is reasonable to assume that the police department would increase the number of sworn officers over the course of the 20-year Master Plan, as needed, to meet general increased demands of the City. In addition to the La Verne Fire and Police Departments, the University operates the Campus Safety Department. Campus Safety Officers patrol campus 24 hours a day, 7 days a week,

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	including holidays. The Campus Safety Department serves as the first responders to emergencies on campus and control traffic at special events. They also monitor fire alarms and escort students on and around campus. The University Campus Safety Department consists of trained Campus Safety Officers, professional staff including an Emergency Preparedness Coordinator, and Student Assistants who are dedicated to provided security services and swift response to calls for assistance from our campus community and guests.
Recreation	
Transportation Element Goal 7: Create a comprehensive network of pedestrian, equestrian, and bicycle paths. ▪ Policy 7.1. Improve and connect our parks and trails **Resource Management Element Goal 1**: An attractive, safe and accessible parks and recreation system. ▪ Policy 1.2. Develop a connecting trail system.	**Potentially Consistent.** Pursuant to the Old Town La Verne Specific Plan, a bicycle route should be established that connects the University of La Verne, the Gold Line Station, and the Fairplex. The eastern segment would be a Class I Bike Route that would be provided off-street on the south side of Arrow Highway, starting at White Avenue in the east, and extending westward past the Fairplex to E Street. This would also connect to the Class I Bike Route within the Fairplex. A Class I Bike Route is defined by a bike route that is completely separate from traffic. The route would continue into Old Town and the University of La Verne campus via E street, Second Street, C Street, and Third Street back to E Street. As there is insufficient roadway width to stripe bike lanes on these streets and to retain on-street parking, this would be accomplished in Old Town with the designation of Class III Bike Route. The designation of these streets as Class I Bike Routes and Class III Bike Routes is consistent with the University of La Verne Campus Master Plan which proposes them as Class III Bike Routes.
Transportation and Traffic	
Transportation Element Goal 2: Improve our traffic flow. ▪ Policy 2.2. Decrease our transportation demand. ▪ Policy 2.3. Alleviate expected traffic from a developing South La Verne. ▪ Policy 2.5. Relieve congestion and improve air quality throughout our valley.	**Potentially Inconsistent.** Full implementation of the proposed Master Plan would increase traffic on the surrounding street network, contributing to increased delay at certain intersections that are projected to operate at unacceptable level of service. These impacts could be mitigated to a less than significant level for all intersections under all scenarios except the intersection of D Street and Bonita Avenue, where no feasible mitigation measure exists that would reduce the identified impact to a less than significant level. The proposed Master Plan would therefore conflict with City of La Verne standards establishing measures of effectiveness for the performance of the circulation system, and this impact would be Class I, significant and unavoidable. However, as demonstrated in Traffic Impact T-1, transportation improvement measures would be incorporated into the project which would be anticipated to reduce the project's traffic impacts to less than significant levels. Transportation improvement measures typically consist of

General Plan Goal and Policy	Discussion
	improvements such as intersection restriping and/or roadway widening to accommodate additional travel lanes, traffic signal installations/modifications, transportation demand management measures aimed at reducing overall trip generation, and enhancements to overall traffic signal coordination systems. After implementation of Mitigation Measure T-1, the impact of project-related traffic on the performance of the circulation system would be reduced to a less than significant level, except at the intersection of D Street and Bonita Avenue, where impacts would remain significant and unavoidable under the Year 2035 With Project Build-out scenario.
Transportation Element Goal 4: Improve our off-street parking. ▪ Policy 4.1. Provide adequate, attractive and safe parking areas for our businesses. ▪ Policy 4.2. Relieve parking-impacted neighborhoods ▪ Policy 4.3 Improve our downtown parking.	**Potentially Consistent.** The south portion of La Verne Campus, along the rail line, would include a parking structure, consistent with the existing Parking Structure I. The new structure (Phase III) would provide convenient parking while still encouraging a "park and walk" concept. It is anticipated that pedestrian distribution would occur along a new 1st Street promenade, funneling people to and from campus and connecting with the future Gold Line Station. The Master Plan would require a minimum parking ratio of 0.3 spaces per student. As designed, the Master Plan would maintain 0.47 spaces per student.
Transportation Element Goal 3: Protect our neighborhoods from traffic dangers. ▪ Policy 3.2. Decrease traffic noise, volumes, speed, and congestion. **Transportation Element Goal 5:** Develop a safe transportation and circulation system. ▪ Policy 5.1. Provide optimal street use and access. **Public Safety Element Goal 4:** Ensure safe transportation routes. ▪ Policy 4.1. Improve traffic safety.	**Potentially Consistent.** The proposed Master Plan does not include any roadway design features, such as sharp curves, that could result in a safety hazard. Implementation of the proposed Master Plan would not involve the use of vehicles that could cause a safety hazard due to incompatibility with on-road traffic, such as tractors. Development carried out under the proposed Master Plan would be required to comply with applicable City codes and regulations governing traffic-related design features and uses, driveways and site access. Applicable codes and regulations that may be required include the UBC, CBC, Uniform Fire Code, and final plan check by the City of La Verne Implementation of standard conditions and regulations would ensure that adequate design features, uses and sufficient access would be provided within the Plan Area. The proposed project also includes various features to encourage safe and efficient use of alternative transportation modes, as discussed in Impact T-5. Therefore, no safety hazards related to roadway design, incompatible uses, or inadequate emergency access would occur.

General Plan Goal and Policy	Discussion
Utilities and Service Systems	
Resource Management Element Goal 6: Conserve our water. ▪ Policy 6.1. Reduce wasteful use of water. **Resource Management Element Goal 7:** Extend the useful life of landfills used by La Verne. ▪ Policy 7.1. Recycle solid waste.	**Potentially Consistent.** As detailed in Section 4.13 Utilities and Service Systems, it has been found that water service is adequate to support the University's needs. All development projects will be reviewed by the City Public Works Department prior to approval to ensure all City policies are met. The proposed Master Plan includes a policy goal to transition to a dough-tolerant (native and adaptive) planting palette. Since much of the University's water usage is for landscaping, the drought-tolerant and water-conscious plan will decrease water demand, as well as water loss due to run-off. Full implementation of the proposed Master Plan would generate approximately 0.07 tons of solid waste per day that would need to be disposed of in a landfill. The Mesquite Landfill, which services the Plan Area, can receive up to 20,000 tons of waste per day and has an operating life of 100 years. The waste needs of the proposed project would be 0.00035 percent of the landfills daily capacity. Therefore, the projected solid waste generation would remain well within the capacity of the local landfill.

Mitigation Measure

Future specific development proposals pursuant to the proposed Master Plan would also be reviewed through the City's development review and CEQA processes where warranted, for consistency with applicable adopted City policies. In addition, mitigation measures identified in Sections 4.1, 4.2, 4.3, 4.9, and 4.13 of this EIR, as well as adherence to the design and planning principles laid out in the proposed Master Plan, would reduce most potentially significant impacts to aesthetic, air quality, cultural resources, noise, and transportation to less than significant levels. After mitigation, the proposed Master Plan would be consistent with most of the policies and standards contained in the General Plan. . However, impacts resulting from the demolition or significant alteration of historical structures and increased traffic congestion at the intersection of D Street and Bonita Avenue would remain significant and unavoidable.

Significance After Mitigation

With implementation of the mitigation measures identified in the EIR, as well as adherence to the design and planning principles defined in the proposed Master Plan, most General Plan consistency conflicts would be reduced to less than significant levels. However, impacts could result from the demolition or significant alteration of historical structure and increased traffic congestions at the intersection of D Street and Bonita Avenue and therefore, the proposed Master Plan would not be consistent with the General Plan policies related to cultural resource preservation and transportation management. Impacts would remain significant and unavoidable.

IMPACT LU-3 CONSISTENCY WITH THE OLD TOWN LA VERNE SPECIFIC PLAN, ARROW CORRIDOR SPECIFIC PLAN, AND THE BRACKETT FIELD AIRPORT LAND USE COMPATIBILITY PLAN

With implementation of existing regulations and incorporation of the mitigation measures identified throughout this EIR , as well as those below, the proposed Master Plan would be mostly consistent with relevant, City-adopted Old Town La Verne Specific Plan and Arrow Corridor Specific Plan, as well as the Brackett Field Airport Land Use Compatibility Plan (ALUCP). However, the demolition or significant alteration of historical structures and increased traffic congestion at the intersection of D Street and Bonita Avenue would remain significant and unavoidable and therefore, be inconsistent with the area Specific Plans. Therefore, land use impacts relating to Specific Plan consistency would be Class I, significant and unavoidable.

Consistent with the scope and purpose of this EIR, this discussion primarily focuses on the goals and policies within the Old Town La Verne Specific Plan and the Arrow Corridor Specific Plan that relate to avoiding or mitigating environmental impacts resulting from the proposed Master Plan, and an assessment of whether any inconsistency with these standards creates a significant physical impact on the environment. The ultimate determination of whether the proposed Master Plan is consistent with the Specific Plans lies with the decision-making bodies (Planning Commission and City Council). Only policies relevant and applicable to the proposed Master Plan are included.

Future development pursuant to the proposed Master Plan would be reviewed through the City's development review process for consistency with applicable adopted City policies. Development of future projects not analyzed in the Master Plan that would require entitlements from the City of La Verne would require CEQA review at the time of application for these entitlements. Table 32 contains a discussion of the proposed Master Plan's consistency with applicable goals and policies of the Old Town La Verne Specific Plan. Table 33 contains a discussion of the proposed Master Plan's consistency with applicable goals and policies of the Arrow Corridor Specific Plan. Table 34 contains a discussion of the proposed Master Plan's consistency with applicable goals and policies of the Brackett Field Airport Land Use Compatibility Plan.

Table 32 Old Town La Verne Specific Plan Consistency

Specific Plans Goals and Policies	Discussion
Aesthetics	
OTLVSP Section 4.4 Gateways and Focal Points Open Space Focal Points: The Open Space Focal Points provide passive spaces for sitting, eating, people watching, and reflection within the overall fabric of Old Town La Verne. Open Space Focal Points that are located on or adjacent to the University campus include: ▪ Library/Sneaky Park ▪ Citrus Gateway Park – which enhances the	**Potentially Consistent.** An objective of the Master Plan is to create a campus that has vitality and encourages quiet spots for conversation and reflection. For example, these quite spots could be located within the proposed pedestrian promenades and additional landscaped spaces planned throughout La Verne Campus. The new Gold Line Gateway Plaza (Packing House Plaza) would be developed as a pedestrian-oriented welcome center into the University and Old Town areas. Sneaky Park, Citrus Plaza, and Arts Plaza would be retained and upgraded with

Specific Plans Goals and Policies	Discussion
setting for the historic Fruit Exchange Building ▪ Arts Plaza – enhances the setting for the historic Lemon Association Packing House, which houses the Art and Communications department of the University of La Verne ▪ Packing House Plaza – enhances the setting for the historic Orange Association Packing Houses and a new Mixed-Use Structure	signage and new landscaping as warranted.
OTLVSP Section 6.4 Pedestrians *Directional Signage:* It is recommended that directional signage be installed in the Specific Plan area to direct pedestrians to the multiplicity of destinations in the area, particularly to/from key transportation arrival points such as from the Gold Line Station, from bus and tram stops and parking area. This signage could be integrated into a walking tour or Old Town that could demonstrate the heritage of the area.	**Potentially Consistent.** The Master Plan includes plans to delineate new campus edges and to mark key entry points to La Verne Campus and Old Town areas by installing "Campus Entry Markers," as well as landscaping and signage features that will enhance way-finding, while reinforcing the University's identity with Old Town La Verne.
OTLVSP Section 7 Open Spaces and Streetscapes The open spaces and streetscapes of Old Town La Verne are essential components of the overall environment. In combination with the historic and other structures they create the unique ambience of Old Town.	**Potentially Consistent.** See Section 4.1 Aesthetics
Cultural Resources	
OTLVSP Section 10.16 Design Standards and Guidelines for Historic Structures Demolition of any building in the Specific Plan Area that is 50 years old or older, unless it is demonstrated that it is not a significant resource or unless has been previously approved by a master plan, is prohibited.	**Potentially Consistent.** Mitigation Measures CR-1 through CR-5 and CR-9 and CR-10 will help to reduce the potential impacts to archaeological and paleontological resources to less than significant levels, therefore protecting the cultural resources of the City of La Verne. See Section 4.3 Cultural Resources.
OTLVSP Section 10.17 Protection of Archaeological and Paleontological Resources Should prehistoric or historic subsurface cultural resources be discovered during construction, a qualified archaeologist will be contact to assess the significance of the find.	**Potentially Inconsistent.** If a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level. However, recordation of the resource prior to construction activities will assist in reducing adverse impacts to the resource to the greatest extent possible. Recordation shall take the form of Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation, and shall be

Specific Plans Goals and Policies	Discussion
	performed by an architectural historian or historian who meets the PQS. The specific scope and details of documentation would be developed at the project level. Mitigation Measures CR-6 through CR-8 will help to reduce the impacts to historical resources to the extent possible; however, impacts to historical resources proposed to be demolished will remain significant and unavoidable.
Greenhouse Gas Emissions	
OTLVSP Section 6.7 Circulation and Parking Sustainability Elements Circulation and Parking in the Specific Plan incorporates measures, in accordance with LEED-ND guidelines, to promote walkable streets and reduced automobile dependence. The Specific Plan designs continuous sidewalks for walking on both sides of 90 percent of the streets inside the [Specific Plan] Area. Automobile dependence is reduced by locating 50 percent of residential and non-residential buildings within a ½ mile walking distance of bus rapid transit stop or the Metro Gold Line Station. The compact design of Old Town La Verne presents an ideal opportunity to reduce automobile traffic and parking and to encourage bicycling and walking.	**Potentially Consistent.** See Section 4.5, Greenhouse Gas Emissions. Development under the proposed Master Plan would be required to be constructed in compliance with the standards of Title 24 that are in effect at the time of development. The 2013 Title 24 standards are approximately 30 percent more efficient than those of the 2008 standards. The Master Plan also includes an objective to design a plan that demonstrates a commitment to sustainability and environmental conservation and engages and tests new ideas. The Master Plan would adhere to the University's Climate Action Plan which is used as a planning tool to develop strategies for reducing energy use and GHG emissions. In addition, the Master Plan proposes the creation of pedestrian promenades and the Gold Line Plaza Gateway, which will increase pedestrian activity on campus and will encourage ridership of public transportation by providing a pedestrian linkage between the La Verne Gold Line Station and the University of La Verne.
OTLVSP Section 7.10 Open Spaces and Streetscapes Sustainability Elements The Specific Plan promotes onsite renewable energy and other methods to reduce the adverse environmental, economic, and health effects associated with fossil fuel use.	**Potentially Consistent.** One of the objectives of the Master Plan's sustainability vision is to encourage density as means to maximize energy and available land resources. Buildings that concentrate more square footage with a small footprint allow for larger campus open spaces, optimal ground water infiltration, natural ventilation, and reduced heat-island effect.
Hydrology and Water Quality	
OTLVSP Section 7.10 Open Spaces and Streetscapes Sustainability Elements To reduce pollution from construction activities, the implementation of an erosion and sedimentation control plan may be required for all new construction activities within the Specific Plan area. New projects may also be required to develop and implement storm water management and construction waste management plans.	**Potentially Consistent.** See Section 4.7, Hydrology and Water Quality.

Specific Plans Goals and Policies	Discussion
Land Use and Planning	
OTLVSP Section 4.5 Block Types and Alleys University of La Verne Superblock: The University of La Verne has closed several streets of the Historic Lordsburg Townsite Plan to create a Superblock which has enabled the University of La Verne to accommodate larger functions such as sports fields. The interface between the Historic Grid Block and the University of La Verne Superblock along D Street is an important urban design relationship within the Specific Plan area. **OTLVSP Section 5.3 Sustainability Approach** New development will building upon the existing Old Town La Verne pattern of blocks that feature a compact network of walkable streets and alleyways that provide access to parks, plazas, and open spaces. To reduce dependence on automobiles, multimodal transportation options are made accessible such as pedestrian, bicycles, and tram connections to the Gold line Station. **OTLVSP Section 6.4 Pedestrians** First Street: First Street is currently discontinuous between D Street and E Street, with meandering pedestrian connection between these two streets. As many of the land uses on both sides of this pedestrian way are planned for redevelopment, the pedestrian connection would be upgraded to provide the principal walking connection between the Gold Line State, D Street in Old Town La Verne, and the University of La Verne Campus. This area is currently privately owned by the University of La Verne; therefore any change in the configuration would require their approval.	**Potentially Consistent.** The primary objectives of the proposed Master Plan include: Creating campus coherence that emphasizes an intimate sense of place with safe pedestrian scale that promotes personal interaction, community identify and a welcoming experience for the diversity of La Verne students. Developing a campus plan that creates a positive interface between the University and La Verne community, including the support of a vibrant downtown La Verne and the opening of the Gold Line light rail system. Goals for the Master Plan include: Developing a more pedestrian-oriented campus by closing (except for emergency access) C Street below Third Street, and Second Street in front of the Abraham Campus Center and by closing (except for emergency access) Third Street between B Street and C Street for the creation of a Pedestrian Promenade. Delineate new edges and mark key entry points to La Verne Campus by installing “Campus Entry Markers”, as well as landscaping and signage features that will enhance way-finding and reinforce the University’s identity. Developing the Gold Line Gateway Plaza as a pedestrian-oriented welcome center into the University and downtown areas. A landscaped pedestrian promenade along the eastern perimeter of campus will be created to facilitate the connection between the La Verne Light Rail station and Old Town La Verne. Constructing a mixed-use academic building on the Wilson Library parking lot along D Street between Third Street and Second Street. This building will define the eastern “face” of the University. Because of its location on a major commercial retail street in downtown La Verne, the first floor of this building facing D Street will provide retail or commercial space. Developing a student residential complex and mixed-use development along the area bounded on the west by D Street, on the north by Second Street, on the east by E Street, and on the south by the railroad tracks along Arrow Highway. The new student residential complex will involve higher density housing development, but also with extensive student recreational components, including a swimming pool. A new parking garage is expected to be built on the south portion of the block, along the railroad tracks. It is anticipated that the design and composition of the mixed-use development will be influenced by the arrival of the Gold Line Light Rail

Specific Plans Goals and Policies	Discussion
	Transit.
OTLVSP Section 9.1/2 Land Uses and Land Use Districts The Master Plan Area includes the following land uses: ▪ *Old Town Mixed-Use.* For small-scale and medium-scale uses which included retail stores, restaurants, and services on the ground level, with residential or office uses above or adjacent. This District also allows surface parking lots or parking structures and Open Space to implement the proposed Land Use plan. ▪ *Adaptive Reuse Mixed-Use.* For the reuse of La Verne's unique, historical citrus era packing houses and supporting structures for small-scale and medium-scale uses including retail, restaurant, services, and educational uses. ▪ *Historic Fabric Mixed-Use.* For the adaptive reuses or sensitive new construction of retail, restaurants, offices, services or residential uses in the small-scale residential structures or lots located between D and E Streets and along the east side of E Street. ▪ *University of La Verne.* For educational uses and support services associated with the University of La Verne as described in the City-approved Master Plan. This District also allows surface parking lots or parking structures and Open Space to implement the Land Use plan.	**Potentially Consistent.** The majority of La Verne Campus is within the University of La Verne land use district. **Potentially Inconsistent.** The eastern most portions of La Verne Campus Plan Area are located within the OTLVSP Old Town Mixed-Use District and the Historic Fabric Mixed-Use District. Figure 9.3 of the OTLVSP details the land uses permitted within these districts and University of La Verne land uses are listed as not permitted within these districts. However, this portion of land is already owned by the University and has been used for student housing for years. A component of Phase III of the Master Plan includes the demolition of the existing student residence hall, known as the Oaks Dormitory, and the development of a parking facility and new residence halls. The buildings include a retail component. The proposed uses of this University property aligns with the vision for Old Town La Verne by complementing the existing, historically based and contemporary uses of Old Town, enabling transit-oriented development new the Gold Line Station and facilitating the appropriate expansion of the University of La Verne. Upon adoption of a minor Specific Plan Amendment to amend the list of permitted use, the uses envisioned within the Master Plan would be consistent with the uses permitted within the Mixed-Use District and Historic Fabric Mixed-Use District.
OTLVSP Section 10.4 All new construction, new additions to existing buildings, and any other exterior improvements shall be subject to the design standards and guidelines set forth in [the] Specific Plan and require design review pursuant to the provisions of Chapter 18 of the Municipal Code.	**Potentially Consistent.** Figure 10.1 of the OTLVSP specifies that the development standards for the University of La Verne District are subject to the adopted Campus Master Plan. Portions of the Plan Area are outside of the University of La Verne District and therefore must meet the requirements of the Specific Plan. See next discussion point.
OTLVSP Section 10.5/6 Development Standards Figure 10.1 of the OTLVSP details the development standards for the Old Town Mixed-Use and University of La Verne Districts. Figure 10.2 contains the development	**Potentially Consistent.** The portion of the Plan Area that falls within the boundaries of the University of La Verne District shall be regulated by the City-approved Master Plan. **Potentially Inconsistent.** The portions of the Plan Area that fall within the Old Town Mixed-Use and Historic Fabric Mixed-Use District shall be regulated by the

Specific Plans Goals and Policies	Discussion
standards for the Historic Fabric Mixed-Use District	OTLVSP development standards. Inconsistencies between the proposed Master Plan's building height and the OTLVSP development standard for building height are as follows:

Mixed-Use District	Standard Max. Height	Proposed
Old Town	32 feet	60 feet
Historic Fabric	30 feet	

There are also setback and lot coverage requirements pursuant to OTLVSP Figure 10.2 that would apply to the project. However, the Master Plan does not provide detailed development standards for either of those standards.

Upon adoption of a Specific Plan Amendment to allow for building heights up to 60 feet within the Old Town and Historic Fabric land use districts, the building heights envisioned within the Master Plan would be consistent with the OTLVSP building height standards.

Transportation and Traffic	
OTLVSP Section 4.3 Street Functions *D Street:* D Street serves as a Primary Pedestrian Connector serving the Historic Core of Old Town and Connecting the Historic Core with the University of La Verne and First Street. D Street also serves as a Low Speed Auto Carrier, which dead ends into Arrow Highway to the south and connects with Foothill Boulevard to the north. Due to its connector functions and its historic character, D Street is also a Destination Plane within La Verne. *First Street:* First Street serves as a Primary Pedestrian Connector with the existing Packing Houses and future residential area and the connection to the University of La Verne and D Street. First Street serves as a Low Speed Auto Carrier which dead ends into White Avenue on the east and University of La Verne on the west. First Street also serves as a Secondary Bikeway between White Avenue and D Street. With First Street providing important pedestrian and bicycle connections to both the University of La Verne and the Historic Retail Core and lined with citrus heritage packing houses, it also becomes a Destination Place. *Second/Third/C Street Loop:* This Loop connects with both D and E Streets to provide	**Potentially Consistent.** The proposed project is designed to encourage pedestrian activity and walking as a transportation mode. La Verne Campus site is planned to provide many facilities and amenities to encourage pedestrian activities, including the Second and C Street pedestrian promenades (which would create a pedestrian "super block" in the interior portions of campus), an outdoor student dining plaza a student life quad, and pedestrian circulation in Phase I; the Third Street pedestrian promenade and a student plaza in Phase II; and additional pedestrian connection, a gateway plaza, and a student court in Phase III. As indicated in Figures 2-2, 2-4, and 2-6 of the TIA, the walkways planned within La Verne Campus will connect to adjacent sidewalks in a manner that promotes walkability. The proposed Master Plan includes several features that would encourage safe and efficient bicycle transportation. Sustainability Principles and Recommendations from page 20-21 of the Master Plan relating to bicycle access include the following: ▪ Create pedestrian and bicycle priority on campus ▪ Develop new safe routes for biking and walking The closures of portions of Third Street, Second Street, and C Street proposed under the Master Plan would create a pedestrian "super block" in the interior portions of campus, improving safety for bicyclists. Additionally,

Specific Plans Goals and Policies	Discussion
a Primary Pedestrian Connector, Secondary Bikeway, and Low Speed Local Transit Carrier by means of its interface with both D and E Streets. **OTLVSP Section 5.3 Sustainability Approach Street Network** La Verne's Interconnected grid of walkable streets and alleyways promotes a healthy lifestyle and benefits the local economy. The street rights-of-way also present opportunities for sustainable practices. Adopting the "green street" model In which biofiltration of street storm water runoff is accommodated in street side planting area and parkways is possible on most of the streets throughout the Old Town La Verne area. **OTLVSP Section 6.5 Bicycles** A bicycle route should be established that connects the University of La Verne, the Gold Line Station, and the Fairplex. The eastern segment would be a Class I Bike Route that would be provided off-street on the south side of Arrow Highway, starting at White Avenue in the east, and extending westward past the Fairplex to E Street. This would also connect to the Class I Bike Route within the Fairplex. A Class I Bike Route is defined by a bike route that is completely separate from traffic. The route would continue into Old Town and the University of La Verne campus via E street, Second Street, C Street, and Third Street back to E Street. As there is insufficient roadway width to stripe bike lanes on these streets and to retain on-street parking, this would be accomplished in the downtown with the designation of Class III Bike Route.	Mitigation Measure GHG-1 of this EIR requires the creation of a GHG Reduction Plan that would includes the following two recommended vehicle trip reduction measures: provide bicycle storage/parking facilities for onsite employees; and provide shower/locker facilities for onsite employees. The proposed Master Plan would have a generally positive impact on bicycle access and safety, and this mitigation measure, while required for greenhouse gas reduction, is not required to mitigate Master-Plan related impacts to bicycle access or safety. The Master Plan proposes the creation of pedestrian and bicycle promenades via the closure of streets internal to the campus. This will help distribute vehicle traffic around the periphery of La Verne Campus in favor of pedestrian and bicycle movements inside the campus.
OTLVSP Section 6.6 Parking The overall strategy of the Specific Plan for parking in Old Town is to provide sufficient parking to ensure the economic viability and success of Old Town, to provide that parking is cost-effective and in convenient locations to users, and to efficiently manage parking in a manner that supports a walkable and pedestrian-friendly Old Town environment. The supply of parking should be carefully balanced with the actual demand for parking.	**Potentially Consistent.** The south portion of La Verne Campus, along the rail line, would include a parking structure, consistent with the existing Parking Structure I. The new structure (Phase III) would provide convenient parking while still encouraging a "park and walk" concept. It is anticipated that pedestrian distribution would occur along a new 1st Street promenade, funneling people to and from campus and connecting with the future Gold Line Station. The Master Plan would require a minimum parking ratio of 0.3 spaces per student. As currently designed, the Master Plan would maintain 0.47 spaces per student.

Specific Plans Goals and Policies	Discussion
Utilities and Service Systems	
OTLVSP Section 7.10 Open Spaces and Streetscapes Sustainability Elements As a means to reduce water use while enhancing open spaces and streetscapes, the landscape concept relies on native and drought-tolerant plant species, irrigation efficiency, and non-potable water sources.	**Potentially Consistent.** The proposed Master Plan includes a policy goal to transition to a dough-tolerant (native and adaptive) planting palette. Since much of the University's water usage is for landscaping, the drought-tolerant and water-conscious plan will decrease water demand, as well as water loss due to run-off.
OTLVSP Section 7.10 Open Spaces and Streetscapes Sustainability Elements The Specific Plan reduces waste and promotes recycling to reduce use of virgin materials and limit the amount of waste deposited in landfills.	**Potentially Consistent.** The Master Plan's sustainability goals include integrating recycling into all proposed projects, where feasible, and creating space for a composting program that partners the University, food services, and the community with the potential to use the compost on the University landscape areas.

Table 33 Arrow Corridor Specific Plan Consistency

Specific Plans Goals and Policies	Discussion
Aesthetics	
Objective 6: To provide design standards to assure a well-designed, aesthetically pleasing environment *Design Compatibility.* Design treatments should be attractive and functional, protect the public from nuisances, and communicate a sense of order. Development proposal will be evaluated on how well they handle the traditional "elements of design": mass, scale, rhythm, proportion, balance, texture, color, light and shade contrast, solid-to-void contrast, style and unity. *Architectural Design.* The architectural goal of the ACSP for new development is to obtain high quality contemporary architectural design or high quality contemporary interpretations of traditional La Verne architectural styles that will complement existing development and improve the overall visual quality of the area.	**Potentially Consistent.** Proposed Campus West development is conceptual under the proposed Master Plan. Final development plans will be provided to the City for approval by the Development Review Committee. All proposed development shall meet the Architectural Principles and Guidelines for Industrial and Commercial Development within the ACSP Area or the applicant shall be required to file for the appropriate permits and/or Specific Plan Amendment.
Cultural Resources	
Objective 7: To practice sound principles of development through guidelines that protect …and, where possible, preserve archaeological and historical resources.	**Potentially Inconsistent.** Mitigation Measures CR-1 through CR-5 and CR-9 and CR-10 will help to reduce the potential impacts to archaeological and paleontological resources to less than significant levels, therefore protecting the cultural resources of the City of La Verne. However, if a proposed project would

Specific Plans Goals and Policies	Discussion
	result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level. Recordation of the resource prior to construction activities can assist in reducing adverse impacts to the resource to the greatest extent possible. The specific scope and details of documentation would be developed at the project level. Mitigation Measures CR-6 through CR-8 would help to reduce the impacts to historical resources to the extent possible; however, impacts to historical resources proposed to be demolished would remain significant and unavoidable. See Section 4.3 Cultural Resources.
Historic and Archaeological Resources. An initial study and appropriate mitigations shall be required on vacant sites west of Puddingstone Channel.	**Potentially Consistent.** See Section 4.3, Cultural Resources.
Greenhouse Gas Emissions	
Objective 7: To practice sound principles of development through guidelines that protect to the extent possible the natural environment, …encourage wise use of natural resources, [and] promote energy savings…	**Potentially Consistent.** See Section 4.5, Greenhouse Gas Emissions. The Master Plan includes an objective to design a plan that demonstrates a commitment to sustainability and environmental conservation and engages and tests new ideas. The Master Plan would adhere to the University's Climate Action Plan which is used as a planning tool to develop strategies for reducing energy use and GHG emissions. The Master Plan includes improvements to pedestrian and bicycle infrastructure and integration of University facilities into the planned Gold Line Station, which will reduce reliance on the private automobile and would reduce greenhouse gas emissions in the region. The Master Plan proposes to use LEED-silver design guidelines as the minimum baseline for future build-out of new structures and would monitor energy usage in existing buildings, renovations, and new construction.
Hazards and Hazardous Materials	
Brackett Air Corridor. Brackett Airport administrators shall review proposals within the Airport Runway Protection Zone, a corridor affected by operations at Brackett Field. Due consideration shall be given to avoid glare and reflection that could interfere with pilots' ability to see as they approach or leave Brackett Field	**Potentially Consistent.** See details in Table 46 below.

Specific Plans Goals and Policies	Discussion
Hydrology and Water Quality	
Objective 7: To practice sound principles of development through guidelines that protect to the extent possible the natural environment, protect future residents and workers from harm, [and] encourage wise use of natural resources…	**Potentially Consistent.** See Section 4.7, Hydrology and Water Quality.
Land Use and Planning	
Objective 1. Implement the City of La Verne General Plan	Potentially Consistent. See Table 43 above.
Objective 2: To Provide for the development of well-designed buildings and groups of buildings that can house many types of uses and that can respond to changing market conditions	**Potentially Consistent.** The existing Carson Building and leased industrial building within Park Campus, the proposed residential housing, the proposed University House, and HR/Facilities/OIT Building within Campus West would be required to meet the ACSP design standards and would be designed to accommodate a number of University uses in response to changing market conditions.
Objective 5: To realize land uses that are compatible with surrounding uses and take advantage of site characteristics	**Potentially Consistent**. Campus West is designated as Business Park (BP) in the ACSP. However, the ACSP conceded that the undeveloped property, west of Wheeler Avenue and north of Puddingstone Drive, would likely include University facilities.
Development Standards. Every parcel to be developed requires a design plan that is site-specific. Topography, surrounding, unique features such as mature trees, views, orientation, and constraints such as easements all need to be considered in designing a site plan. The ACSP provides an extensive list of required site design standards and site design guidelines.	**Potentially Consistent.** Proposed Campus West development is conceptual under the proposed Master Plan. Final development plans will be provided to the City for approval by the Design Review Committee. All proposed development shall meet the standards of the ACSP or the applicant shall be required to file for necessary permits and/or a Specific Plan Amendment.
Landscaping. Landscaping should not be an afterthought, but should be a basic component of site and street design.	**Potentially Consistent.** The Master Plan includes a general landscape plan for La Verne Campus, as well as a heritage tree plan to ensure compliance with Chapter 18.78 (Preservation, Protection, and Removal of Trees) of the La Verne Municipal Code. However, plans for Campus West include only a conceptual inclusion of a landscape buffer along the property boundary, but offer no details. Final landscape plans will be provided to the City for approval.
ACSP Section IV Permitted and Conditional Uses Administrative/Professional Office use — Permitted Educational Use College and University — Conditional Use Permit	**Potentially Inconsistent.** The land uses proposed for Campus West include conceptual multi-family residences, a University House (residence and conference facility), and a University administrative facility. Single Family homes are not permitted in the ACSP, but the proposed University House could also be

Specific Plans Goals and Policies	Discussion
Facilities Residential & Related Uses Not Permitted Single Family & accessory uses	classified by the Community Development Director as a University Facility. However, the conceptual multi-family units to the south of the existing Athletic Complex are not listed as a permitted use within the ACSP area. All proposed land uses must meet the requirements of the ACSP and thus, the applicant shall be required to file for necessary permits and/or a Specific Plan Amendment.
Noise	
Buffers to Protect Sensitive Land Uses. Buffers, barriers, and screens of various kinds are direct, physical ways to protect sensitive land uses such as residential districts from intrusions by noise, light, vibration, traffic, and similar effects associated with non-residential uses.	**Potentially Consistent.** Landscape buffers are proposed around the northern, southern, western and eastern boundaries of Campus West. These landscape buffers would protect the existing residential neighborhood to the west from intrusions by noise, light, and traffic.
Transportation and Traffic	
Circulation Master Plan, Bicycle and Pedestrian Circulation. Require new developments to include connections to sidewalks and pedestrian circulation.	**Potentially Consistent.** The proposed project is designed to encourage pedestrian activity and walking as a transportation mode. The proposed Master Plan includes several features that would encourage safe and efficient bicycle transportation. Sustainability Principles and Recommendations from page 20-21 of the Master Plan relating to bicycle access include the following: Create pedestrian and bicycle priority on campus Develop new safe routes for biking and walking. Additionally, Mitigation Measure GHG-1 of this EIR requires the creation of a GHG Reduction Plan that would include the following two recommended vehicle trip reduction measures: provide bicycle storage/parking facilities for onsite employees; and provide shower/locker facilities for onsite employees. . The proposed Master Plan would have a generally positive impact on bicycle access and safety, and this mitigation measure, while required for greenhouse gas reduction, is not required to mitigate Master-Plan related impacts to bicycle access or safety, which would be less than significant without mitigation.
Utility Services	
Water Conservation. The ACSP encourages conservation of water in site design, building, and landscaping.	**Potentially Consistent.** The proposed Master Plan includes a policy goal to transition to a drought-tolerant (native and adaptive) planting palette. Since much of the University's water usage is for landscaping, the drought-tolerant and water-conscious plan will decrease water demand, as well as water loss due to run-off.

Table 34 Brackett Field Airport Land Use Compatibility Plan Consistency

Specific Plans Goals and Policies	Discussion
Land Use and Planning	
Chapter 2 Land Use Compatibility Criteria The criteria listed in Table 2A, Basic Compatibility Criteria, together with the compatibility zones depicted on Map 2A, compatibility Policy Zones, shall be the primary basis for determining whether a proposed land use project will be compatible with Brackett Field Airport activity. Table 2B, Compatibility Zone Factors, identifies the relative contributions of noise, safety, airspace protection, and overflight factors to the delineation of each of the compatibility zones. Criteria for Noise, Safety, Airspace Protection, and Overflight factors are listed in Chapter 2.	**Potentially Consistent.** The Master Plan will be subject to review by the ALUC and all development shall be required to meet the criteria set forth in the ALUCP. Table 2A categorizes the proposed La Verne Campus land uses (University facilities, student housing, parking, and retail) with Zone E and Campus West land uses (residential and office) within Zone D as "Normally Compatible." This means that normal examples of the uses are presumed to comply with the noise, safety, airspace protection, and overflight criteria set forth in Chapter 2 of the ALUCP. See discussions for Hazards and Hazardous Materials and Noise below.
Section 2.7 Site-Specific Exceptions *Section 2.7.4 University of La Verne Campus West* The following site-specific special policies shall apply to Campus West: New field lighting shall be shielded to minimize glare to pilots and air traffic controllers to the satisfaction of airport management. Residential uses shall be limited to combined total of no more than 70 student rooms and/or multi-family units per acre. Additionally, the total occupancy of the development, including the residential unit occupants and the occupants of any nonresidential components, shall comply with the basic intensity criteria for that zone (maximums of 300 people per acre sitewide average and 1,000 people in single one-acre area). All structures must meet the height-limit as set forth in Section 2.4. Residences, student housing, lodging, classroom buildings, and other buildings containing noise-sensitive uses shall incorporate sound attenuation design as indicated by Section 2.2.2. An aviation easement shall be dedicated to the County of Los Angeles in accordance with Section 2.6.1.	**Potentially Inconsistent.** The development plans for Campus West have not been detailed yet. As development occurs under the Master Plan, plans will be submitted to the City for review prior to approval as part of the permitting process. All proposed development shall meet the criteria as set forth in the ALUCP or a Specific Plan Amendment must be processed

Specific Plans Goals and Policies	Discussion
Hazards and Hazardous Materials	
Section 2.3 Safety Compatibility Policies The intent of the land use safety compatibility policies is to minimize the risks associated with an off-airport aircraft accident or emergency landing. The policies focus on reducing the potential consequences of such events should they occur. Risks both to people and property in the vicinity of an airport and to people on board the aircraft are considered. **Section 2.4 Airspace Protection Compatibility Policies** Airspace protection compatibility policies seek to prevent creation of land use features that can pose hazards to the airspace required by aircraft in flight and have the potential for using an aircraft accident.	**Potentially Consistent.** The risk level for safety and airspace protection factors are listed as Low for both Zones D and E. Object height limits are typically 100 to 150 feet or more above the runway elevation, which far exceeds the proposed development under the Master Plan. Risk concern in Zone D is primarily with very-high-intensity activities in a confined space, which is not proposed as part of the Master Plan. Additionally, approximately 13 percent of general aviation accidents would be anticipated to take place in Zone D. Accident likelihood is measured in terms of the geographic distribution of where accidents have historically occurred around other airports having similar types of activity. Only 2 percent of near-airport accidents would be anticipated to occur within Zone E. These are considered Low risk levels. In addition, the large area encompassed by these zones means a low likelihood of accident occurrence in any given location. See Section 4.6 Hazards and Hazardous Materials for further details.
Noise	
Section 2.2 Noise Compatibility Policies The purpose of the noise compatibility policies is to avoid establishment of noise-sensitive land uses in the portions of the airport environs that are exposed to significant levels of aircraft noise. **Section 2.5 Overflight Compatibility Policies** Noise from individual aircraft operations, especially by comparatively loud aircraft, can be intrusive and annoying in locations beyond the limits of noise exposure areas address by the Policies in Section 2.2 (Noise Compatibility Policies). Sensitivity to aircraft overflight varies from one person to another.	**Potentially Consistent.** Noise Impacts in Zone D are listed as Moderate and in Zone E, Low. Noise would be more of a concern with respect to individual loud events than with cumulative noise contours. Occasional overflights may be intrusive to outdoor activities. Interior noise concerns can be addressed through sound attenuation, as necessary. All development under the Master Plan will be required to meet the noise requirements of the City. See Section 4.9 Noise for further details.

Mitigation Measure

The proposed Master Plan, with adherence to the mitigation measures identified in this EIR and below, would be consistent with the Old Town La Verne Specific Plan, the Arrow Corridor Specific Plan, and the Brackett Field Airport Land Use Compatibility Plan. However, the demolition or significant alteration of historical structures and increased traffic congestion at the intersection of D Street and Bonita Avenue would remain significant and unavoidable and, therefore, inconsistent with the Specific Plans. Implementation of Mitigation Measure LU-1 and LU-1(a-d) would contribute towards reducing land use impacts to less than significant, to the extent possible.

Mitigation Measure LU-1 Compliance with the Old Town La Verne Specific Plan and Arrow Corridor Specific Plan

All development projects proposed through implementation of the Master Plan shall be reviewed through the City's development review process, and CEQA process where warranted, for consistency with applicable adopted Specific Plan policies. If any proposed development is shown to be inconsistent with the applicable adopted Specific Plan the applicant shall be required to file for necessary permits and/or a Specific Plan Amendment.

Mitigation Measure LU-2 Compliance with Brackett Field Airport Land Use compatibility Plan

Until such time that the Airport Land Use Committee finds that the City of La Verne General Plan, the Old Town La Verne Specific Plan, and the Arrow Corridor Specific Plan are consistent with the Brackett Field Airport Land Use Compatibility Plan, the following actions shall be referred to the Airport Land Use Committee for review:

1. Adoption or approval of any new general or specific plan or any amendment thereto that affects lands within the Brackett Field Airport influence area. If it is determined by the ALUC Administrative Officer that such amendment or plan does not involve in any way the types of airport impact concerns listed in Section 1.3.1 of the ALUCP, then the Administrative Officer can make the consistency determination. Otherwise, the amendment or plan must be referred to the ALUC for its determination.
2. Adoption or approval of a zoning ordinance or building regulation, including any proposed change or variance to any such ordinance or regulations that affects land with the Brackett Field Airport influence area.
3. Implementation of projects having the potential to create electrical or visual hazards to aircraft in flight, including electrical interference with radio communications or navigational signals; lighting that could be mistaken for airport lighting; glare in the eyes of pilots or aircraft using the airport; and impaired visibility near the airport.
4. Proposal of structures that are part of a land use action where there exists evidence that those structures will be designed to comply with the criteria in Section 2.2.2 (a) of the ALUCP shall be submitted to the involved local agency as part of the building permit process.

Significance After Mitigation

With implementation of Mitigation Measures LU-1 and LU-2(a-d), as well as the mitigation measures identified in Sections 4.1, 4.2, 4.3, 4.9, and 4.13 of this EIR, and with adherence to the design and planning principles laid out in the proposed Master Plan, most potentially significant impacts to aesthetic, air quality, cultural resources, noise, and transportation would be reduced to less than significant levels. After mitigation, the proposed Master Plan would be consistent with the policies and standards contained within the Old Town La Verne Specific Plan, the Arrow Corridor Specific Plan, and the Brackett Field Airport Land Use Compatibility Plan. However, impacts resulting from the demolition or significant alteration of historical structures and increased traffic congestion at the intersection of D Street and Bonita Avenue would remain significant and unavoidable and therefore, the

proposed Master Plan would not be consistent with the area Specific Plan policies related to cultural resource preservation and transportation management. Therefore, land use impacts relating to the Master Plan's consistency with applicable land use policies in the Specific Plans would remain significant and unavoidable.

4.8.3 Cumulative Impacts

Implementation of the proposed Master Plan would cumulatively result in an overall intensification of land uses in La Verne, particularly in south La Verne, with new development on Campus West. La Verne Campus would see an intensification of residential and institutional uses, while there would be new residential and office uses on Campus West. The Master Plan would be part of the evolution and measured growth of the University since the mid-twentieth Century.

Although some of the projects considered in the cumulative impact scenario may require discretionary land use actions, the merits of each project and their relationship to applicable policy documents analyzing cumulative impacts of anticipated development would be considered on a case-by-case basis. These projects may not be approved if they are found inconsistent with the General Plan or relevant Specific Plans, or if the required findings of approval, which typically address land use compatibility, cannot be made. Increased development densities from these projects would generate secondary cumulative impacts with respect to aesthetics, air quality, noise, public services, and transportation. These impacts are discussed in their respective sections of this EIR. After mitigation described in the above-described sections, cumulative land use compatibility impacts would not be significant.

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4.9 Noise

This section evaluates the potential impacts of implementing the proposed University of La Verne Master Plan on existing and future local noise conditions, including temporary construction noise, long-term noise generated by operation of the facilities called for under the proposed Master Plan, and traffic generated by these facilities and the Master Plan's projected growth in enrollment, faculty and staff.

4.9.1 Setting

Overview of Noise and Vibration Measurement

Noise. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (similar to the highest note on a piano) and less sensitive to frequencies below 100 Hertz (similar to a transformer hum).

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB, and a sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while those along arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate (drop off) at a rate of 6 dB per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dB per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dB per doubling of distance.

In addition to the instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period.

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. Two commonly used noise metrics – the Day-Night average level (Ldn) and the Community Noise Equivalent

Level (CNEL) - recognize this fact by weighting hourly Leqs over a 24-hour period. The Ldn is a 24-hour average noise level that adds 10 dB to actual nighttime (10:00 p.m. to 7:00 a.m.) noise levels to account for the greater sensitivity to noise during that time period. The CNEL is identical to the Ldn, except it also adds a 5 dB penalty for noise occurring during the evening (7:00 p.m. to 10:00 p.m.).

Vibration. Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Groundborne vibration related to human annoyance is generally related to root mean square (RMS) velocity levels expressed in vibration decibels (VdB). However, construction-related groundborne vibration in relation to its potential for building damage can also be measured in inches per second (in/sec) peak particle velocity (PPV) (Federal Transit Administration, 2006). Based on the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment* and the California Department of Transportation's (Cal Trans) *1992 Transportation-Related Earthborne Vibration, Technical Advisory*, vibration levels decrease by 6 VdB with every doubling of distance.

The background vibration velocity level in residential and educational areas is usually around 50 VdB. (FTA 2006). The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Residences, hospitals, schools, guest lodging, libraries, and parks are most sensitive to noise intrusion and therefore have more stringent noise exposure thresholds than commercial or industrial uses that are not susceptible to certain impacts, such as sleep disturbance. Sensitive land uses generally should not be subjected to noise levels that would be considered intrusive in character. Therefore, the location, hours of operation, type of use, and extent of development warrant close analysis in an effort to ensure that noise sensitive receptors are not substantially affected by noise.

The construction of Master Plan proposed facilities would occur over the course of three phases taking place between the year of Master Plan approval to 2021 for Phase I, 2022 to 2028 for Phase II, and 2029 to 2035 for Phase III. Table 35 shows major construction activity that will occur adjacent to sensitive receptors including single family homes and the Public Safety Facility, which provides living quarters for its firefighters.

Table 35 Distance of Major Construction Activity to Nearest Receptor

Building	Phase	Construction Activity	Approximate Distance (ft) to Nearest Receptor	Receptor
La Verne Campus				
Interfaith Chapel	Phase I	Demolition	85	Off-campus Single-Family residences on the north side of Bonita Avenue
Modular Classroom Building	Phase I	Demolition	250	Off-campus Single-Family residences on the west side of B Street
Stu-Han Residence Hall	Phase I	Demolition	85	Off-campus Single-Family residences on the north side of Bonita Avenue
Academic Building I	Phase I	Construction	85	Off-campus Single-Family residences on the north side of Bonita Avenue
North Physical Plant	Phase I	Construction	85	Off-campus Single-Family residences on the west side of B Street
Center for Spirituality Interfaith Cooperation and Multicultural Advancement	Phase I	Construction	135	Off-campus Single-Family residences on the north side of Bonita Avenue
Dining/Event Space	Phase I	Construction	300	On campus Vista La Verne Residence Hall
Residence Hall	Phase I	Construction	50	On campus Vista La Verne Residence Hall
Woody Hall	Phase II	Demolition	150	Off-campus Single-Family residences on the west side of B Street
Davenport Dining	Phase II	Demolition	225	Off-campus Public Safety Facility
Academic Building II	Phase II	Construction	150	Off-campus Single-Family residences on the west side of B Street
Consolidated Student Services	Phase II	Construction	225	Off-campus Public Safety Facility
Acquired Buildings	Phase III	Demolition	85	Off-campus Single-Family residences on the east side of E Street
Health Services	Phase III	Demolition	75	Off-campus Single-Family residences on the east side of E Street
Barkley Annex	Phase III	Demolition	225	On campus Vista La Verne Residence Hall

Building	Phase	Construction Activity	Approximate Distance (ft) to Nearest Receptor	Receptor
La Verne Campus				
Barkley Building	Phase III	Demolition	85	On campus Vista La Verne Residence Hall
Leo Hall	Phase III	Demolition	85	On campus Vista La Verne Residence Hall
Oaks Dormitories	Phase III	Demolition	265	Off-campus Single-Family residences on the east side of E Street
Academic/ Mixed Use Building	Phase III	Construction	95	On campus Vista La Verne Residence Hall
Parking Structure II	Phase III	Construction	225	Off-campus Single-Family residences on the east side of E Street
Physical Plant East/ Pool Support Building	Phase III	Construction	225	On campus Vista La Verne Residence Hall
Residence Hall II/ Mixed-Use Building	Phase III	Construction	75	Off-campus Single-Family residences on the east side of E Street
Residence Hall III/ Mixed-Use Building	Phase III	Construction	85	On campus Vista La Verne Residence Hall
Student Recreation Center/ Mixed Use	Phase III	Construction	85	On campus Vista La Verne Residence Hall
Campus West				
Multi-Family Residential Development	Phase I	Construction	550	Off-campus Park La Verne single-family residential community
University House	Phase II	Construction	600	Off-campus Park La Verne single-family residential community
HR/ Facilities/ OIT Building	Phase III	Construction	150	Off-campus Park La Verne single-family residential community

Note: Construction activities among phases will be staggered and are not expected to occur concurrently.

Regulatory Setting

Federal Noise Policies

There are no federal noise requirements or regulations that apply directly to the implementation of the Master Plan. However, there are federal regulations that influence the audible landscape, especially for projects where federal funding is involved. For example, the FHWA requires abatement of highway traffic noise for highway projects through rules in the Code of Federal Regulations (23 CFR Part 772), the Federal Transit Administration (FTA), and Federal Railroad Administration (FRA). Each agency recommends

thorough noise and vibration assessments through comprehensive guidelines for any highway, mass transit, or high-speed railroad projects that would pass by residential areas.

The Federal Aviation Administration has prepared guidelines for acceptable noise exposure in its Federal Aviation Regulations Part 150 Noise Compatibility Planning program for airports. The program is aimed at balancing an airport's operational needs and its impact on the surrounding community. Its purpose is to reduce noise impacts on existing incompatible land use and to prevent the introduction of new incompatible land uses in the areas impacted by aircraft noise. It establishes standard noise methodologies and noise metrics, identifies land uses normally compatible with various levels of airport noise, and provides for voluntary development and submission of noise exposure maps and noise compatibility programs by airport operators. See discussion below regarding the Bracket Field Airport Land Use Compatibly Plan.

Federal Vibration Policies

The FTA has published guidelines for assessing the impacts of groundborne vibration associated with construction activities, which have been applied by other jurisdictions to other types of projects. FTA guidelines show that a vibration level of up to 102 VdB (an equivalent to 0.5 in/sec in RMS) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in RMS). The threshold of perception of vibration is 0.01 in/sec PPV. (FTA 2006)

State Noise Policies

Title 24 of the CCR codifies Sound Transmission Control requirements establishing uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings. Specifically, Title 24 states that interior noise levels attributable to exterior noise sources shall not exceed 45 dBA CNEL in any habitable room of a new building. California has adopted guidelines for land use compatibility and community noise environment, shown in Table 36.

Table 36 California Land Use Compatibility for Noise Environment

Land Use Category	Community Noise Exposure Level			
	Normally Acceptable (dB)	Conditionally Acceptable (dB)	Normally Unacceptable (dB)	Clearly Unacceptable (dB)
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50-60	55-70	70-75	75+
Residential – Multiple Family	50-65	60-70	70-75	75+
Transient Lodging – Motel, Hotels	50-65	60-70	70-80	80+
Schools, Libraries Churches, Hospitals, Nursing Homes	50-65	60-70	70-80	80+
Auditoriums, Concert Halls, Amphitheaters	N/A	50-70	65+	N/A
Sports Arenas, Outdoor Spectator Sports	N/A	50-75	70+	N/A
Playgrounds, Neighborhood Parks	50-70	N/A	67-75	73+
Golf Courses, Riding Stable, Water Recreation, Cemeteries	50-75	N/A	70-80	80+
Office Buildings, Business Commercial and Professional	50-70	67-77	75+	N/A
Industrial, Manufacturing, Utilities, Agriculture	50-75	70-80	80+	N/A

Source: State of California General Plan Guidelines, Governor's Office of Planning and Research, 2003
Notes:

N/A - Not Applicable

Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements

Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable – New construction or development should generally not be undertaken.

State Vibration Policies

There are no state standards for traffic-related vibrations. California Department of Transportation's (Caltrans) position is that highway traffic and construction vibrations generally pose no threat to buildings and structures. For continuous, frequent, and intermittent vibrations however, Caltrans considers the architectural damage risk level to

be somewhere between 0.08 and 0.5 inches per second (in/sec) peak particle velocity (PPV) depending on the type of building that is affected, as shown in Table 37.

Table 37 Caltrans Vibration-Related Building Damage Thresholds

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

Source: California Department of Transportation, "Transportation- and Construction-Induced Vibration Guidance Manual", June 2004.

[1] Transient sources create single, isolated vibration events, such as blasting or drop balls.

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

in/sec = inches per second

PPV = peak particle velocity

City of La Verne Noise and Vibration Policies

Applicable standards are derived from the City's Noise Ordinance, which adopts by reference the County of Los Angeles Noise Ordinance (Los Angeles County Code, Chapter 12.08.010) under authority of Section 50022.9 of the Government Code. The Noise Control Ordinance contains both exterior and interior noise standards, as well as standards for groundborne vibration caused by construction activities. The County's exterior and interior noise standards for different noise zones are shown in Table 50. The University of La Verne Master Plan Area includes noise-sensitive receptors that would fall into the "Noise Zone II" category in Table 38. In addition, the City's General Plan (1998) Noise Element establishes citywide policies to maintain or reduce noise levels throughout the City; these policies are discussed in Section 4.9.2, *Impact Analysis*.

Table 38 Los Angeles County Land Use/Noise Guidelines and Standards (Municipal Code)

Noise Zone	Type of Land Use	Time Interval	Maximum Allowable (dB)
Exterior Noise Standards			**Exterior Noise Level**
I	Noise-Sensitive Area (any area designated to ensure exceptional quiet)	Anytime	45
II	Residential	10:00 p.m. to 7:00 a.m.	45
		7:00 a.m. to 10:00 p.m.	50
III	Commercial	10:00 p.m. to 7:00 a.m.	55
		7:00 a.m. to 10:00 p.m.	60
IV	Industrial	Anytime	70
Interior Noise Standards			**Interior Noise Level**
All	Residential	10:00 p.m. to 7:00 a.m.	40
		7:00 a.m. to 10:00 p.m.	45

Source: County of Los Angeles Ordinance No.11743, Section 12.08.390 and Section 12.08.400.

Section 12.08.390B of the County Code states that no person shall operate or cause to be operated, any source of sound at any location… or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, when measured on any other property either incorporated or unincorporated, to exceed any of the following exterior noise standards:

- Standard No. 1 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No 1 shall be the applicable noise level; or, if the ambient L50 exceeds the forgoing level, then the ambient L50 becomes the exterior noise level for Standard No 1.
- Standard No. 2 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from Standard 1 plus 5 dB(A); or, if the ambient L25 exceeds the forgoing level, then the ambient L25 becomes the exterior noise level for Standard No. 2.
- Standard No. 3 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 5 minutes in any hour. Standard No. 3 shall be the applicable noise level from Standard 1 plus 10 dB(A); or, if the ambient L8.3 exceeds the forgoing level, then the ambient L8.3 becomes the exterior noise level for Standard No. 3.
- Standard No. 4 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 1 minute in any hour. Standard No. 4 shall be the applicable noise level from Standard 1 plus 15 dB(A); or, if the ambient L1.7 exceeds the forgoing level, then the ambient L1.7 becomes the exterior noise level for Standard No. 4.

- Standard No. 5 shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from Standard 1 plus 20 dB(A); or, if the ambient L0 exceeds the forgoing level, then the ambient L0 becomes the exterior noise level for Standard No. 4

Furthermore, according to Section 12.08.400A, no person shall operate or cause to be operated within a dwelling unit, any source of sound, or allow the creation of any noise, which causes the noise level when measured inside a neighboring receiving dwelling unit to exceed the following standards:

- Standard No. 1: The applicable interior noise level for cumulative period of more than five minutes in any hour; or
- Standard No. 2: The applicable interior noise level plus 5dB for a cumulative period of more than one minute in any hour; or
- Standard No. 3: The applicable interior noise level plus 10dB or the maximum measured ambient noise level for any period of time.

The Noise Element of La Verne's General Plan contains guidelines and goals for new land uses in various noise environments. As detailed in Table 39, the City of La Verne utilizes the CNEL for noise level/land use guidelines. CNEL noise levels are typically considered "normally acceptable" or "conditionally acceptable" for various land use categories within the City. "Normally Acceptable" means that normal construction techniques would typically be adequate to attenuate noise impacts. "Conditionally Acceptable" means that special construction techniques must be applied to attenuate noise. A third category, "Normally Not," means that development should generally be discouraged, but if a development proposal does proceed, a detailed analysis of the noise reduction requirements must be made and noise insulation features must be included in the design. Finally, "Clearly Not," means that new construction or development generally should not be undertaken.

For the most sensitive land uses in La Verne, the maximum "normally acceptable" exterior level is 60 dBA and anything above 75 dBA would be "clearly not" acceptable. These standards would apply to the existing and proposed residential and institutional uses that predominately make up the Plan Area and its surroundings.

Table 39 City of La Verne Noise/Land Use Compatibility Matrix

	Acceptability (CNEL-Decibels)			
Land Use	**Normal**	**Conditional**	**Normally Not**	**Clearly Not**
Single-Family/Multi-Family Residential	55-60	60-70	70-75	Above 75
School, Library, Church, Hospital, Nursing Home	55-60	60-65	65-75	Above 75
Concert/Meeting Hall, Auditorium, Amphitheater	Not Used	55-60	60-70	Above 70
Indoor/Outdoor Sports Arena, Amusement Park	55-65	65-75	Not Used	Above 75
Office/ Professional Building	55-65	65-75	75-80	Above 80
Commercial Retail, Bank, Restaurant, Theatre	55-70	70- 80	Above 80	Not Used
Industrial, Utilities, Manufacturing, Wholesale, Service Station	55-70	70-80	Not Used	Not Used

Source: City of La Verne General Plan Noise Element, 1998, modified form the U.S. Department of Housing and Urban Development and State of California Guidelines.

Note: All land uses have been included.

The County Noise Ordinance also identifies specific restrictions regarding construction noise. However, the City of La Verne's Municipal Code Section 8.20.020 includes an amendment to the County's Noise Ordinance to prohibit the operation of equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 8:00 p.m. to 7:00 a.m. (instead of 7:00 p.m. to 7:00 a.m.) and anytime on Sundays or legal holidays if such noise would create a noise disturbance across a residential or commercial real property line. The City of La Verne Municipal Code Section 8.20, *Noise Control*, specifies time-of-day constraints on construction activity; however, it does not contain noise level limits pertaining to construction activity. Regardless, the County's Noise Ordinance further states the contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings would not exceed those listed in Section 12.08.440 of the County's Noise Ordinance, shown in Table 40.

Table 40 Los Angeles County Construction Noise Standards Affecting Residential Structures (Municipal Code)

Land Use	Time Interval	Noise Level (dBA)
Mobile Equipment		
Single-Family Residential	8:00 p.m. to 7:00 a.m.	60
	7:00 a.m. to 8:00 p.m.	75
Multi-Family Residential	8:00 p.m. to 7:00 a.m.	64
	7:00 a.m. to 8:00 p.m.	80
Semi-residential/ Commercial	8:00 p.m. to 7:00 a.m.	70
	7:00 a.m. to 8:00 p.m.	85
Stationary Equipment[3]		
Single-Family Residential	8:00 p.m. to 7:00 a.m.	50
	7:00 a.m. to 8:00 p.m.	60
Multi-Family Residential	8:00 p.m. to 7:00 a.m.	55
	7:00 a.m. to 8:00 p.m.	65
Semi-residential/ Commercial	8:00 p.m. to 7:00 a.m.	60
	7:00 a.m. to 8:00 p.m.	70

Source: County of Los Angeles Ordinance No. 11743, Section 12.08.440.

[1]**Mobile Equipment.** Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment.

[2]Daily except Sundays, and legal holidays.

[3]**Stationary Equipment.** Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:

All mobile and stationary internal-combustion-powered equipment and machinery are also required to be equipped with suitable exhaust and air-intake silencers in proper working order. The County exempts all vehicles of transportation (with a few exceptions) that operate in a legal manner within the public right-of-way, railway, or air space, or on private property, from the standards of the Noise Ordinance. The County has no adopted ordinance regulating individual motor vehicle noise levels.

Section 12.08.560 of the County's Noise Ordinance governs perceptible vibration caused by construction activities:

> *Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 inches/second over the range of 1 to 100 Hertz. (Ord. 11778 Section 2 [Art. 5 Section 501 (d)], 1978; Ord 11773 Section 2 [Art. 5 Section 501(s)], 1978.)*

Brackett Field Airport Land Use Compatibility Plan (ALUCP)

Brackett Field Airport is a County owned and operated airport located at 1615 McKinley Avenue, in La Verne. On December 9, 2015, the Airport Land Use Commission (ALUC) adopted the Brackett Field Airport Land Use Compatibility Plan (ALUCP). The ALUCP sets forth land use compatibility policies that are intended to ensure that future land uses in the surrounding area will be compatible with potential long-range aircraft activities at the airport, and that the public's exposure to airport safety hazards and noise impacts are minimized. The ALUCP provides the basis by which the ALUC and local agencies located within the Airport Influence Areas carry out land use development review responsibilities in accordance with State Law. The ALUC retains land use development review of applicable projects until the affected local agencies' general and specific plans have been deemed consistent with the ALUCP. The Plan Area is located within the Brackett Field Airport Influence Area ("AIA") and is therefore subject to the ALUCP. La Verne Campus is within Compatibility Zone E and Campus West is within Compatibility Zone D.

This document contains the following land use policy topics specifically applicable to the proposed Master Plan:

- Noise
- Safety
- Airspace Protection
- Overflight

The purpose of noise compatibility policies is to avoid establishment of noise-sensitive land uses in the portions of the airport environs that are exposed to significant levels of aircraft noise. Single-event noise levels are especially important in areas that are overflown regularly by aircraft, but that do not have a significant CNEL. Locations where aircraft regularly fly at approximately the traffic pattern altitude – 1,000 feet above ground level – or lower are considered to be within the overflight impact area of Bracket Field Airport.

Existing Noise Conditions and Sources

The City's General Plan Noise Element depicts noise level contour maps of the City of La Verne. According to the General Plan, sources of noise levels in excess of 65 dBA CNEL within the City include traffic on I-10 and I-210 freeways, Foothill Boulevard, D Street, Wheeler Avenue, Bonita Avenue, Puddingstone Drive, and Arrow Highway. The most common source of noise in the Master Plan Area is traffic on surrounding major roadways. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create sustained noise levels. Ambient noise levels would be expected to be highest during the morning and evening rush hour unless congestion slows speeds substantially. However, the majority of the Master Plan Area, particularly areas within the University's campuses and not along roadways, is not subject to noise levels above 60 dBA CNEL, according to forecasted noise contours for the year 2015 as shown in Figure N-2, Project Noise Level Contour Map of the City's Noise Element. To determine ambient noise levels at nearby sensitive receptors, nine 15-minute noise measurements were taken between 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. (using an ANSI Type II integrating

sound level meter) along select roadways in the vicinity of the Master Plan area on September 21, 2016. Table 41 shows the locations of all nine noise measurements and their respective results, and Figure 21 shows the location that each noise measurement was taken within and adjacent to the University (each location is labeled according to its numerical listing in Table 38). Ambient roadway noise levels within and adjacent to the Plan Area range from 50.0 to 70 dBA Leq. All field data is included in Appendix H.

Table 41 Noise Measurement Results

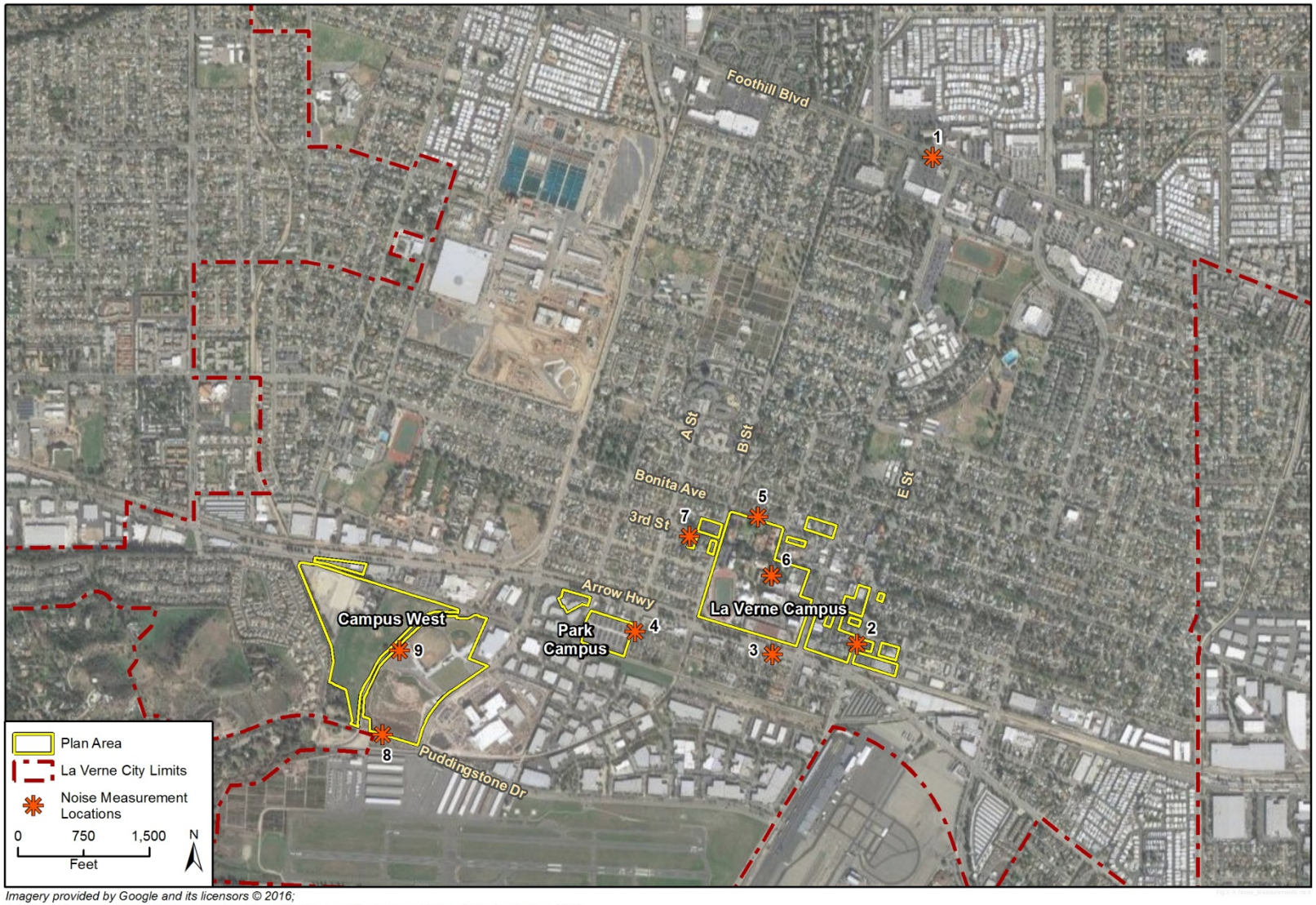
Measure-ment Location	Description	Distance from Centerline of Nearest Road (feet)	Approximate Sample Time	Leq dBA[1]
1	North of La Verne Campus on Foothill Boulevard	45	7:30 a.m. - 7:45 a.m.	66.5
2	Southeast corner of La Verne Campus on E Street	30	7:55 a.m. - 8:10 a.m.	62.0
3	Southern boundary of La Verne Campus on Arrow Highway	45	8:15 a.m. - 8:30 a.m.	70.0
4	Eastern boundary of Park Campus on A Street	25	8:35 a.m. - 8:50 a.m.	53.6
5	Northern boundary of La Verne Campus on Bonita Avenue	30	4:05 p.m. - 4:20 p.m.	68.2
6	Center of La Verne Campus on C Street	30	4:27 p.m. - 4:42 p.m.	54.2
7	Eastern boundary of La Verne Campus on Third Street	30	4:48 p.m. - 5:03 p.m.	60.5
8	Southern boundary of Campus West on Puddingstone Drive	15	5:20 p.m. - 5:35 p.m.	67.2
9	Center of Campus West	N/A	5:43 p.m. - 5:58 p.m.	50.0

[1] All measurements were taken on September 21, 2016 using an ANSI Type II sound level meter.

Refer to the Appendix H for noise measurement results.

N/A – Measurement was taken to record ambient noise at the center of Campus West prior to proposed development; there are no adjacent roads.

Figure 22 Noise Measurement Locations



Imagery provided by Google and its licensors © 2016;
Additional Data provided by University of La Verne Facilities and Technology Master Plan, September 2016.

4.9.2 Impact Analysis

Methodology and Significance Thresholds

In accordance with Appendix G of the CEQA Guidelines, a significant noise impact would occur if implementation of the proposed Master Plan would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies;
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Expose people residing or working in the project area to excessive noise levels 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; or
- Expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip.

All of the thresholds above are analyzed in this section of the EIR as concerns noise exposure.

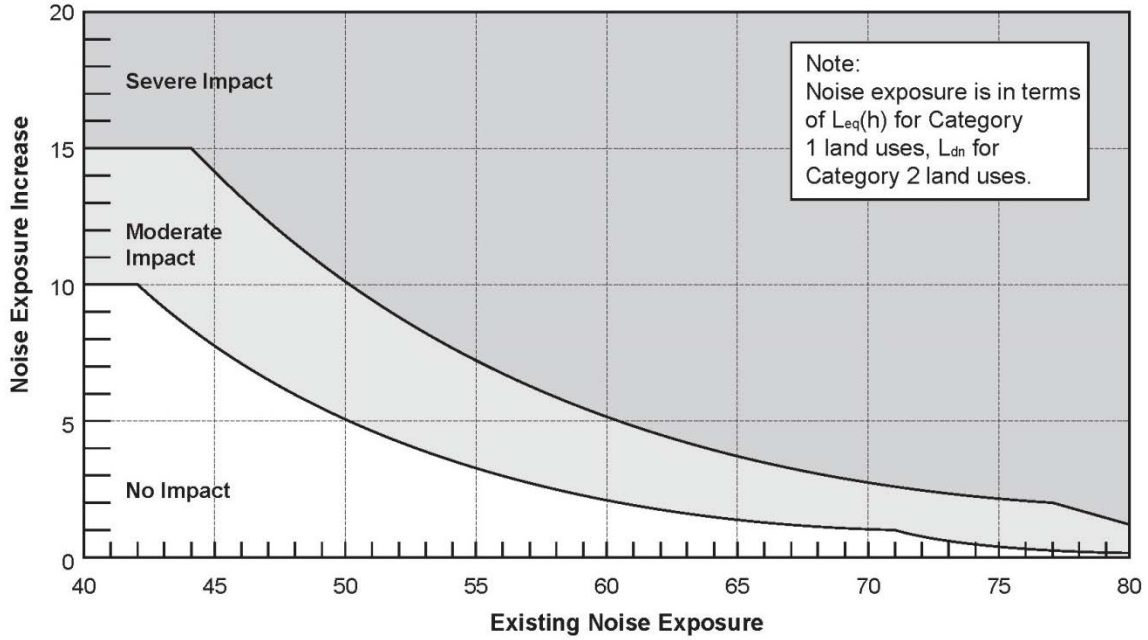
Noise generated by on-campus construction activity was estimated based on typical construction equipment noise levels. Assuming a standard attenuation of noise from point sources of 6 dBA per doubling of distance, the exposure of sensitive receptors to noise in the vicinity of Plan Area from various types of construction equipment was then estimated. Construction noise in the City of La Verne is limited between the hours of 7 a.m. and 8 p.m. weekdays and Saturdays, excluding national holidays, and also subject to the other conditions of the County's Municipal Code listed in Section 4.9.1. If construction activities occur outside of the designated times established by the City Municipal Code or generate noise in excess of City standards during allowable hours for construction, pursuant to Section 12.08.440 of the County Municipal Code, impacts would be significant.

The Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment (FTA 2006) was used to determine whether or not groundborne vibration would cause damage to nearby structures. Damage criteria vary depending on the type of building adjacent to the vibration source. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 102 velocity decibels (VdB) (an equivalent to 0.5 inches per second (in/sec) PPV) (FTA, May 2006) is considered safe and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec PPV). The PPV thresholds for building damage referenced above are shown in Table 51, taken from the *Transportation- and Construction-Induced Vibration Guidance Manual* (Cal Trans 2004). However, if construction vibration impacts of the

proposed Master Plan would exceed the 0.01 PPV perception threshold of the City of La Verne Municipal Code (Section 12.08.560, as cited above), construction vibration impacts would be considered significant.

The May 2006 Transit Noise and Vibration Impact Assessment recommendations created by the Federal Transit Administration (FTA) were used to determine whether or not increases in roadway noise would be considered significant. Figure 22 shows the increases in exposure to roadway noise that would result in moderate and severe impacts on sensitive receptors where people normally sleep, such as residences, hotels, and hospitals (labeled as Category 2 land uses). For the purpose of this analysis, moderate impacts were considered the threshold of significance. It should be noted that the level of significance changes with increasing noise exposure, such that smaller changes in ambient noise levels result in significant impacts at higher existing noise levels. If residential development or other sensitive receptors would be exposed to traffic noise increases exceeding the criteria presented in Figure 22, impacts would be potentially significant.

Figure 23 Noise Impact Criteria



Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006

Project Impacts and Mitigation Measures

Impact N-1 Construction Noise

Development called for under the Master Plan would generate intermittent noise during construction. Although construction in the Plan Area would be limited to daytime hours and regulated pursuant to provisions of the City's Municipal Code, maximum noise levels would exceed City standards. Mitigation Measure N-1 would reduce noise impacts, but noise impacts during construction to certain sensitive receptors would remain Class I, significant and unavoidable.

Temporary noise generated during the construction of facilities called for under the proposed Master Plan would exceed ambient noise levels in the Plan Area. Noise sources during demolition and construction of individual facilities would include noise generated by construction equipment during construction activities and increased construction traffic to and from the construction site.

The first type of noise impact during site development would occur when equipment used during demolition, site preparation, excavation, grading, and building construction generates noise audible to sensitive receptors off and on campus. The primary areas of concern off-campus include adjacent residences and the Public Safety Facility. Table 54 details the major construction activity that would occur adjacent to these sensitive receptors.

The second type of noise impact during construction would come from increased traffic to and from the site, including the transport of materials used in construction. Construction-related traffic, including trucks loaded with construction materials, would incrementally increase noise levels on area roads (refer to Impact N-2 for a discussion of vibration generated by loaded trucks). However, the construction projects under the proposed Master Plan would be implemented throughout the lifespan of the 20 year Master Plan and thus, would not involve a large number of hauling trips at one particular time. In addition, vehicle trips associated with the construction projects proposed in the Master Plan would likely not be concentrated in one particular location because the projects would be spread across the 97-acre Plan Area. Although adjacent sensitive noise receptors would potentially be exposed to relatively high single-event noise levels from trucks, the effect on hourly and daily ambient noise levels would be minimal because noise from passing construction vehicles would be transient.

Construction is typically completed in discrete steps, or phases, each of which has its own mix of equipment, and consequently, its own noise characteristics. As shown in Table 54, typical maximum noise levels at construction sites range from 82 dBA to 99 dBA at 50 feet from the source. Table 42 lists typical construction equipment noise levels based on a reference distance of 50 feet between the equipment and sensitive receptor (corresponding to the minimum distance of noise to the locations of the nearest sensitive receptors described in Table 35).

As shown in Table 42, the excavation and grading, and foundation/conditioning phases of construction tend to generate the highest noise levels since the noisiest construction equipment is earthmoving equipment. Construction of certain individual construction projects carried out under the proposed Master Plan is expected to require the use of earthmoving equipment such as bulldozers, haul trucks, front-end loaders, and water and pickup trucks. It is not expected that construction near sensitive receptors would require the use of pile drivers or rock drills, which produce the highest maximum sound levels shown in Table 42. Pile drivers are typically in use only when soils are poor and the proposed structure is at least three stories in height, while rock drills would only apply for drilling into bedrock.

Based on the information in Table 42, the maximum noise levels during construction carried out under the proposed Master Plan would be generated by haul trucks (88 dBA at a distance of 50 feet) and scrapers (87 dBA at the same distance). Since 50 feet would be the approximate lowest distance of a sensitive receptor to construction activity throughout Phases I-III of the Master Plan, these maximum noise levels represent a worst-case scenario of noise impacts during project construction. It should also be noted that actual peak noise levels may vary depending on the brand and make of each type of construction equipment used onsite, as well as the presence of intervening barriers such as buildings between the noise source and the receptor. Table 43 indicates that typical average noise levels from a combination of equipment operating on a site at one time would range from 86 to 96 dBA Leq at 50 feet.

Table 42 Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Pile Driver 12,000 to 18,000 ft-lb/blow	81 – 96	93
Rock Drills	83 – 99	96
Jack Hammers	75 – 85	82
Pneumatic Tools	78 – 88	85
Pumps	74 – 84	80
Scrapers	83 – 91	87
Haul Trucks	83 – 94	88
Cranes	79 – 86	82
Portable Generators	71 – 87	80
Rollers	75 – 82	80
Dozers	77 – 90	85
Tractors	77 – 82	80
Front-End Loaders	77 – 90	86
Hydraulic Backhoe	81 – 90	86
Hydraulic Excavators	81 – 90	86
Graders	79 – 89	86
Air Compressors	76 – 89	86
Trucks	81 – 87	86

Source: Bolt, Beranek & Newman, Noise Control for Buildings and Manufacturing Plants, 1987.
dBA = A-weighted decibels
ft-lb/blow = foot-pounds per blow

Table 43 Typical Noise Levels at Construction Sites by Construction Phase

	Average Noise Level at 50 feet (Leq)	
Construction Phase	Minimum Required Equipment Onsite (dBA)	All Pertinent Equipment Onsite (dBA)
Clearing	84	84
Excavation and Grading	78	88
Foundation/Conditioning	88	88
Laying Subbase, Paving	78	80
Finishing and Cleanup	85	85

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the U.S. Environmental Protection Agency, 1971, modified to include a reference distance of 50 feet instead of 75 feet

While the City's Municipal Code restricts construction to the hours of 7:00 am and 8:00 pm, noise associated with construction would also be regulated according to the standards in Table 40. For single-family residences, noise levels for mobile construction equipment must not exceed 75 dBA while noise levels for stationary construction equipment must not

exceed 60 dBA. Therefore, noise levels from construction at the nearest sensitive receptors could exceed City noise standards and impacts during construction would be significant.

MITIGATION MEASURES

MITIGATION MEASURE N-1 CONSTRUCTION-RELATED NOISE REDUCTION MEASURES

The following measures shall be followed during construction of all Phases of the Master Plan:

a. **Mufflers.** During all project site excavation and grading, all construction equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards.
b. **Mobile and Stationary Equipment.** All stationary construction equipment shall be placed so that emitted noise is directed away from the nearest sensitive receptors. All mobile and stationary internal-combustion-powered equipment and machinery are also required to be equipped with suitable exhaust and air-intake silencers in proper working order.
c. **Equipment Staging Areas.** Equipment staging shall be located in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receptors.
d. **Electrically-Powered Tools and Facilities.** Electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities.
e. **Smart Back-up Alarms.** Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms shall be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction.
f. **Additional Noise Attenuation Techniques.** During the clearing, earth moving, grading, and foundation/conditioning phases of construction for Phases I-III near sensitive residential, institutional, and park receptors, temporary sound barriers shall be installed and maintained between the construction site and the sensitive receptors. Temporary sound barriers shall consist of sound blankets affixed to construction fencing along all sides of the construction site boundary facing potentially sensitive receptors.
g. **City Enforcement - Noise.** The Building Official of the City of La Verne shall enforce noise-attenuating construction requirements.
    i) Excavation, grading, and other construction activities related to construction projects carried out under the proposed Master Plan shall comply with City restrictions on hours of construction activity.
    ii) All construction vehicles, such as bulldozers and haul trucks, shall be prohibited from idling in excess of 15 minutes.

iii) The contractor shall inspect construction equipment to ensure that such equipment is in proper operating condition and fitted with standard factory silencing features. Construction equipment shall utilize all standard factory silencing features, such as equipment mufflers, enclosures, and barriers.

SIGNIFICANCE AFTER MITIGATION

Compliance with existing regulations governing construction hours, plus Mitigation Measures N-1 (a-g) would reduce noise levels from construction activity associated with implementation of the proposed Master Plan; however, noise levels could still potentially exceed City thresholds. In particular, it may not be possible to mitigate impacts from construction noise associated with the proposed University development to a less than significant level because of the proximity of residences and other sensitive receptors to these sites. For example, even if temporary sound barriers were installed in accordance with Mitigation Measure N-1(f), sensitive receptors adjacent to the Master Plan Area may still have a direct line-of-sight to construction activity if it occurs on the second story of these buildings. Therefore, construction noise impacts would remain significant and unavoidable.

Impact N-2 VIBRATION LEVELS DURING CONSTRUCTION

Development called for under the Master Plan would generate intermittent vibration levels during individual construction activities. However, vibration levels would not exceed standards during construction or operation of projects carried out under the proposed Master Plan. This impact would be a Class III, less than significant impact.

The operation of construction equipment such as pile drivers, bulldozers, loaded trucks, and jackhammers generates groundborne vibration that can be a nuisance to people and cause damage to existing structures. Table 44 shows typical groundborne vibration levels associated with this equipment.

Table 44 Vibration Source Levels for Construction Equipment

		Approximate VdB		
Equipment		**At 50 Feet**	**At 100 Feet**	**At 350 Feet**
Pile Drive (impact)	Upper range	106	100	89
	Typical	98	92	81
Pile Drive (sonic)	Upper range	99	93	82
	Typical	87	81	70
Large Bulldozer		81	75	64
Loaded Trucks		80	74	63
Jackhammer		73	67	56
Small Bulldozer		51	46	35

Source: Federal Transit Administration, 2006.

As shown in Table 44, pile drivers produce the most intense groundborne vibration during construction; however, per the discussion in Impact N-1, the use of pile drivers is not expected on the proposed construction sites near sensitive receptors. The operation of a large bulldozer, the next highest producer of groundborne vibration, would generate 87 VdB of groundborne vibration when measured at a distance of 25 feet from the source. However, as discussed under Impact N-1, 50 feet would be the approximate lowest distance of a sensitive receptor to construction activity throughout Phases I through III of the Master Plan. With the exception of one residence hall located approximately 50 feet from Phase I construction activity, all other sensitive receptors are located more than 50 feet from proposed construction sites (shown in Table 35). For example, single-family residential buildings located approximately 85 feet from the proposed development on the north side of La Verne Campus would be exposed to groundborne vibration between 81 Vdb and 75 Vdb if large bulldozers were used at this construction site. Regardless, the maximum groundborne vibration that would be experienced by sensitive receptors would be 81 VdB. At this velocity level, groundborne vibration becomes distinctly perceptible for many people. The potential passage of individual loaded trucks onto Bonita Avenue, B Street, C Street, E Street and other roadways from La Verne Campus also would generate groundborne vibration within approximately 50 feet of sensitive receptors, with levels reaching approximately 80 VdB.

With regard to the potential for damaging buildings, groundborne vibration from construction is measured in terms of inches per second (in/sec) peak particle velocity (PPV). Table 45 shows the typical PPV for construction equipment.

Table 45 Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)
Pile Driver (Impact), Typical	0.644	0.300
Pile Driver (Sonic), Typical	0.170	0.079
Vibratory Roller	0.210	0.098
Large Bulldozer	0.089	0.042
Caisson Drilling	0.089	0.042
Loaded Trucks	0.076	0.035
Jackhammer	0.035	0.016
Small Bulldozer	0.003	0.001
Crack-and-Seat Operations	2.4	1.120

Sources: Federal Transit Administration 2006 (except Hanson 2001 for vibratory rollers) and Caltrans 2004 for crack-and-seat-operations.

PPV equipment = PPVref (25/D)n

ft = feet

in/sec = inches per second

PPV = peak particle velocity

PPVref = reference PPV at 25 feet

D = distance from equipment to the receiver in feet

n = 1.1 (the value related to the attenuation rate through ground)

Using a formula provided by Caltrans' Transportation and Construction Induced Vibration Guidance Manual for calculating the attenuation of vibration over space, the vibration level associated with a large bulldozer operating 50 feet away from sensitive receptors would be 0.042 in/sec, and the vibration level of a loaded truck driving 50 feet away from residences or dormitories, would be 0.035 in/sec (Jones and Stokes, 2004).

FTA guidelines show that a vibration level of up to 102 VdB (an equivalent to 0.5 in/sec in RMS) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in RMS). Under Section 12.08.560 of the County Municipal Code, vibration caused by construction activity would be perceptible if the vibration exceeds a motion velocity of 0.01 inch/second over the range of 1 to 100 Hertz. Although the analysis shows that vibration levels associated with onsite construction equipment and offsite loaded trucks would be higher than this perception threshold; these vibration levels would not result in physical damage to surrounding buildings. Additionally, groundborne vibration during construction activity is temporary. Furthermore, construction activities in La Verne are limited to the hours of 7 a.m. to 8 p.m., which would prevent construction vibration impacts from disturbing the sleep of nearby residents. Therefore, less than significant groundborne vibration impacts would occur.

MITIGATION MEASURE

Because impacts would be less than significant, mitigation is not required.

SIGNIFICANCE AFTER MITIGATION

Vibration impacts would be less than significant without mitigation.

Impact N-3 TRAFFIC NOISE IN AND AROUND THE PLAN AREA

Development called for under the Master Plan would incrementally increase traffic along roadways in and around the Plan Area, thus exposing existing and future land uses to increased noise. However, increases in traffic would not expose sensitive receptors to noise levels exceeding applicable standards. Impacts related to operational traffic noise would be Class III, less than significant.

As discussed in Section 4.9.1, noise contours developed in 1998 for the City's General Plan indicate that the Plan Area is subject to noise levels that exceed 65 dBA CNEL from traffic along D Street, Bonita Avenue, Puddingstone Drive, and Arrow Highway. These noise contours are representative of current conditions because they mirror noise measurements taken along these streets and adjacent to the Plan Area on September 21, 2016 during peak traffic times. Measurements along Third Street and E Street produced noise levels between 60 and 65 dBA CNEL, while measurements along A Street and C Street produced noise levels below 60 dbA CNEL. The majority of the Plan Area, particularly areas within the University's campuses is not along roadways, and thus is not subject to noise levels above 60 dBA CNEL, according to forecasted noise contours for the year 2015 as shown in Figure N-2, Projected Noise Level Contour Map of the City's Noise Element. In areas with existing traffic noise

below 60 dBA, the addition of Master Plan-related traffic resulting in an increase of 3 dBA or more in traffic noise could have a significant impact on sensitive receptors in the vicinity of the Plan Area. Traffic volumes on roads in the vicinity of the University of La Verne would need to double in order to increase traffic noise by approximately 3 dBA.

As discussed in Section 4.13, *Transportation*, development facilitated by the proposed Master Plan would generate an estimated increase of 3,656 average daily trips in addition to ambient traffic volumes. These trips would be distributed on multiple roadways in the vicinity of the University of La Verne. Table 46 shows the percentage difference in traffic during peak hours when comparing future (2035) traffic volumes with project buildout (addition of Master Plan-related traffic or “Project Traffic”) to existing 2016 traffic volumes on road intersections adjacent to sensitive receptors, including “B” Street/ Bonita Avenue, “D” Street/ Bonita Avenue, and D Street/ Second Street. Traffic volumes for these road intersections were calculated by adding turning volumes at intersections shown in Figures 5-1, 5-2, 9-17, and 9-18 of the Traffic Impact Analysis (see Appendix E).

Table 46 Traffic Volumes on Local Road Segments During Peak Hours

Intersection	Peak Hour	Existing (2016)	Future Year (2035) with Project Buildout	Percentage in Difference in Traffic
San Dimas Avenue/Arrow Highway	AM	2662	3461	+30
	PM	3916	4894	+25
Walnut Avenue/Arrow Highway	AM	2245	2863	+28
	PM	3194	4000	+25
San Dimas Canyon Road/Arrow Highway	AM	2245	2863	+28
	PM	3189	3989	+25
Wheeler Avenue/Arrow Highway	AM	2539	3443	+36
	PM	3420	4536	+33
“A” Street/Arrow Highway	AM	2077	2716	+31
	PM	2825	3629	+28
“B” Street/Bonita Avenue	AM	1353	1862	+38
	PM	1512	2154	+42
“B” Street/Third Street	AM	225	192	-13
	PM	315	307	-3
“C” Street/Bonita Avenue	AM	1203	1699	+41
	PM	1347	1952	+45
“C” Street/Third Street	AM	288	121	-58
	PM	405	155	-62
“D” Street/Foothill Boulevard	AM	1802	2197	+22
	PM	2987	3594	+20
“D” Street/Bonita Avenue	AM	1630	2139	+31
	PM	1950	2527	+30
“D” Street/Third Street	AM	624	687	+10
	PM	829	908	+10
“D” Street/Second Street	AM	522	686	+31
	PM	687	884	+29
“D” Street/Parking Structure D	AM	575	824	+43
	PM	694	1001	+44
“D” Street/Arrow Highway	AM	2312	3107	+34
	PM	3088	4069	+32
“E” Street/Second Street	AM	563	760	+35
	PM	686	911	+33
“E” Street – Fairplex Drive/Arrow Highway	AM	2830	3819	+35
	PM	3439	4566	+33
White Avenue/Arrow Highway	AM	3640	4683	+29
	PM	4097	5217	+27

Source: LLG Traffic Study, 2016. See Appendix F

As shown in Table 46, development called for in the Master Plan would generate a maximum increase of 44 percent in traffic volume along road intersections with sensitive receptors. The amount of traffic generated by the Master Plan would fall below levels that would produce a perceptible increase in roadway noise levels of 3 dBA or more (double the traffic). Therefore, impacts related to operational traffic noise would be less than significant.

MITIGATION MEASURE

No significant noise impacts from traffic would occur; therefore, mitigation is not required.

SIGNIFICANCE AFTER MITIGATION

Operational traffic noise impacts would be less than significant without mitigation.

Impact N-4 OPERATIONAL NOISE LEVELS

Development called for under the Master Plan would increase onsite operational noise levels in and around the Plan Area, thus exposing existing and future land uses to increased noise. The operation of an increased number of University facilities, including dormitories, student centers, and other stationary sources, could generate noise in excess of applicable local standards at residential receptors. Impacts would be Class II, less than significant with mitigation incorporated.

Operation of new on campus development proposed by the Master Plan (academic, residential, and other institutional facilities, as well as parking infrastructure) would generate noise. Sources of noise could include heating/air conditioning systems, ground-mounted mechanical equipment, conversations, and other activities generally associated with facilities on a university campus. Parking lots can also generate noise from cars driving, sweepers, doors slamming, and engines starting up. Table 47 shows major operational activity that would occur adjacent to a sensitive residential receptor to consider uses with nighttime noise restrictions. Since 50 feet would be the approximate lowest distance of a sensitive receptor to a new facility as shown in Table 47, maximum noise levels represent a worst-case scenario of noise impacts during project operation.

Table 47 Distance of New Operational Activity to Nearest Receptor

Building	Phase	Approximate Distance (ft) to Nearest Receptor	Receptor
La Verne Campus			
Academic Building I	Phase I	85	Off-campus Single-Family residences on the north side of Bonita Avenue
North Physical Plant	Phase I	85	Off-campus Single-Family residences on the west side of B Street
Center for Spirituality Interfaith Cooperation and Multicultural Advancement	Phase I	135	Off-campus Single-Family residences on the north side of Bonita Avenue
Dining/Event Space	Phase I	300	On campus Vista La Verne Residence Hall
Residence Hall	Phase I	50	On campus Vista La Verne Residence Hall
Academic Building II	Phase II	150	Off-campus Single-Family residences on the west side of B Street
Consolidated Student Services	Phase II	225	Off-campus Public Safety Facility
Academic/ Mixed Use Building	Phase III	95	On campus Vista La Verne Residence Hall
Parking Structure II	Phase III	225	Off-campus Single-Family residences on the east side of E Street
Physical Plant East/ Pool Support Building	Phase III	225	On campus Vista La Verne Residence Hall
Residence Hall II/ Mixed-Use Building	Phase III	75	Off-campus Single-Family residences on the east side of E Street
Residence Hall III/ Mixed-Use Building	Phase III	85	On campus Vista La Verne Residence Hall
Student Recreation Center/ Mixed Use	Phase III	85	On campus Vista La Verne Residence Hall
Campus West			
Multi-Family Residential Development	Phase I	550	Off-campus Park La Verne single-family residential community
University House	Phase II	600	Off-campus Park La Verne single-family residential community
HR/ Facilities/ OIT Building	Phase III	150	Off-campus Park La Verne single-family residential community

Rooftop Mechanical Equipment

Newly-constructed and renovated buildings in the Plan Area could have additional rooftop heating, ventilating, and air conditioning (HVAC) mechanical equipment. Rooftop HVAC units generate noise levels of approximately 59 dBA at 75 feet. Since the shortest distance

between a sensitive receptor and new development throughout all phases of the Master Plan would be approximately 50 feet, it would be expected that noise levels attributable to rooftop mechanical equipment would be higher than 59 dBA at the nearest sensitive receptor. This would exceed the City's night time exterior noise level standard of 50 dBA for residential uses, as shown in Table 39. Therefore, this is a potentially significant impact.

Ground-Mounted Mechanical Equipment

According to the University's Facility Manager, Robert Beebe, a major source of operational noise in the Plan Area is generated by the University's existing SMARDT Turbocor Chiller HVAC system located along Arrow Highway in La Verne Campus. The HVAC system is surrounded by the Hanawalt Fitness Center on the north, Ortmayer Athletic Complex to the west, and Parking Structure I to the east. The nearest sensitive receptor to the HVAC system would be the proposed Residence Hall I which would be located at a distance of approximately 300 feet northeast. Due the HVAC system's placement and distance to the nearest sensitive receptor, impacts associated with noise from the system would be less than significant.

No ground-mounted mechanical equipment, including uninterruptible power sources (UPS), are proposed for any of the new and renovated buildings under the Master Plan at this time; however, this type of equipment could be used in the Plan Area in the future. A UPS differs from an emergency power system or standby generator in that it would provide near-instantaneous back-up power to protect against the loss of data stored on hardware in the event that the primary electrical power supply fails (PG&E, 2000). . Most UPS systems generate noise levels between 28 and 38 dBA at a distance of 75 feet from the source, and between 32 and 42 dBA at a distance of 50 feet, which would be quieter than the normally acceptable range shown in Table 52 for residential areas. Furthermore, uninterruptible power supplies would rarely be used; only during temporary power outages and periodic tests. Since the shortest distance between a sensitive receptor and new development throughout all phases of the Master Plan would be approximately 50 feet, it would be expected that noise levels attributable to uninterruptible power supplies would not exceed the City's standard of 50 dBA for sensitive receptors. Therefore, operational impacts from ground-mounted mechanical equipment would be less than significant.

Conversations

Outdoor events and informal conversations within open space areas on the University campuses would contribute to ambient noise on-campus. Open space improvements include, but are not limited to, the Student Life Quad near Vista La Verne Residence Hall, Student Court near Wilson Library, and the Third Street Pedestrian Promenade north of Founders Hall. According to the Occupational Safety and Health Administration, normal conversations range from 50 to 60 dBA (OSHA, 2011). Noise generated by conversations at new outdoor facilities proposed by the Master Plan would be consistent with the existing campus environment and would not substantially affect ambient noise levels. No significant impacts would occur.

Combined Operational Noise

Among sources of operational noise, rooftop mechanical equipment could produce noise that would exceed the City's exterior noise standard of 50 dBA. Although uninterruptible power supplies and conversations could also generate sporadic noise, these sources would not consistently contribute to combined operational noise levels. Operational noise from rooftop mechanical equipment could be potentially significant.

MITIGATION MEASURES

MITIGATION MEASURE N-2 OPERATION-RELATED NOISE REDUCTION MEASURES

The following measure shall be implemented during operation of all phases of the Master Plan to mitigate operational noise impacts of new University facilities.

Rooftop Mechanical Equipment Shielding. A noise-attenuating barrier shall be installed around any new rooftop mechanical equipment installed within the new or renovated sufficiently to reduce operational noise at the nearest offsite noise-sensitive receptor to less than 55 dBA.

SIGNIFICANCE AFTER MITIGATION

With implementation of Mitigation Measures N-2 to control noise from rooftop mechanical equipment, operational noise impacts would be reduced to a less than significant level.

Impact N-5 EXPOSURE OF SENSITIVE RECEPTORS TO AIRPORT NOISE

Development called for under the Master Plan would expose a sensitive residential receptor to noise from Brackett Field Airport, located approximately 200 feet south. However, noise from operational activity of the airport would not generate noise levels exceeding applicable standards. Impacts would be Class III, less than significant.

Phase I development on Campus West would predominately consist of a multi-family residential complex on the southeast property boundary, located approximately 200 feet north of the Bracket Field Airport property boundary, across Puddingstone Drive. Bracket Field Airport facilitates over 114,000 general aviation takeoffs and landings each year, which approximates to an average daily traffic count of 312 operations. The airport has accommodations for 300 based aircraft. (LA County Airports, 2016). Noise from Brackett Field moderately but briefly, affects the areas beneath the approach and departure pattern. However, the City of La Verne General Plan Noise Element Policy 5.1 is designed to prevent and reduce sources of excessive noise from Brackett Field Airport operations. Policy 5.1 and its implementation measures are outlined below.

Policy 5.1 *Maintain noise from Brackett Field at its current level.*

1. Communicate with Los Angeles County to monitor expansion plans.
2. Require that all development at Brackett Field adhere to a master plan (to be reviewed by the City) and the County noise ordinance.
3. Monitor helicopter and corporate jet noise from airport operations, to assure that they are maintained at current levels.

4 Require full environmental review should the Sheriff's Aerobureau relocate to Bracket facility.

Additionally, the Brackett Field Airport Land Use Compatibility Plan (ALUCP) sets forth land use compatibility policies that are intended to ensure that future land uses in the surrounding area will be compatible with noise associated with aircraft activities at the airport, and to ensure that any noise impacts are minimized. According to the ALUCP, La Verne Campus is within Compatibility Zone E and Campus West is within Compatibility Zone D. Compatibility Zone E is characterized by the ALCUP as an area beyond the CNEL 55 dB noise contour that experiences occasional overflights intrusive to some outdoor activities. Therefore, noise impacts experiences on La Verne Campus related to aircraft noise would be low. However, Compatibility Zone D includes areas within the 55-60 dB noise contour that experience closer proximities to descending and ascending aircraft. Noise impacts are moderate in Zone D; however, noise is more of a concern with respect to individual loud events than with cumulative noise. Although most development on Campus West would be within Compatibility Zone D, intrusive noise impacts would occur periodically and with limited duration. Impacts associated with aircraft operations from Brackett Field Airport would be less than significant.

Mitigation Measure

No mitigation would be required at this time. Any future development on Campus West will need to demonstrate compliance with the standards set forth in the ALUCP, including noise standards. Impacts relating to operational noise impacts from Brackett Air Field would be less than significant.

Significance After Mitigation

Operational noise impacts from Brackett Field Airport would be less than significant without mitigation.

4.9.3 Cumulative Impacts

As discussed in Section 3.0, *Environmental Setting*, cumulative development in La Verne, including development called for under the proposed Master Plan, would add university facilities, dormitories, non-university housing, and other non-residential development within the City of La Verne. This cumulative development would increase the amount and density of development in the city, which would incrementally increase noise. However, the level of traffic generated by development called for under the proposed Master Plan would not make a noticeable contribution to cumulative increases in operational traffic noise impacts. Other noise impacts association with operation of development called for under the proposed Master Plan would be less than significant or require mitigation. All development projects proposed through implementation of the Master Plan shall be reviewed through the City's development review process and CEQA process where warranted, and appropriate mitigation measures would be identified at that time.

4.10 Population and Housing

This section describes existing and projected population and housing conditions within the Master Plan Area, the City of La Verne and in the surrounding Los Angeles area. This section also describes the growth in population and housing directly related to development under the proposed Master Plan.

4.10.1 Setting

Regional

The City of La Verne's estimated 2016 population is 33,200 people (California Department of Finance [DOF] 2016). Table 48 provides the State's 2016 estimates of population and housing units for the city of La Verne and Los Angeles County as a whole.

Table 48 2016 Housing and Population Estimates

	City of La Verne	Los Angeles County
Housing Units	12,073	3,504,061
Population	33,200	10,241,335
Persons/Household	2.75	2.92

Source: California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2016, with 2010 Benchmark, May 2016.

As shown in Table 48, La Verne's 2016 population of 33,200 is less than 0.01 percent of the countywide population of 10,241,335; and the City's 12,073 housing units make up less than 0.01 percent of the County's 3,504,061 total housing units. The average number of persons per household in La Verne in 2016 is 2.75, which was about 6.2 percent lower than the countywide average of 2.92 persons per household. Table 49 shows employment, household, and population forecasts for La Verne from the SCAG 2016-2040 RTP/SCS Growth Forecasts.

Table 49 Southern California Association of Governments Employment, Households, and Population Forecasts for La Verne and Los Angeles County

La Verne	2012		2040	
Population	31,800		32,900	
Households	11,400		12,100	
Employment	12,200		14,300	
Jobs/Housing Ratio	1.07		1.18	
Los Angeles County	**2012**	**2020**	**2035**	**2040**
Population	9,923,000	10,326,000	11,145,000	11,514,000
Households	3,257,000	3,494,000	3,809,000	3,946,000
Employment	4,246,000	4,662,000	5,062,000	5,226,000
Jobs/Housing Ratio	1.30	1.33	1.33	1.32

Source: SCAG, 2016 RTP/SCS Growth Forecast, April 2016.

Based on the SCAG estimates of employment (jobs) and households shown in Table 49, there were 1.07 jobs per household in La Verne in 2012. This ratio is approximately 17.7 percent lower than the SCAG estimate of 1.30 jobs per household for all of Los Angeles County, suggesting that La Verne is somewhat "jobs poor" compared to the County as a whole. As shown in Table 49, this situation is expected to continue, but improve slightly in coming years, based on the SCAG forecasts.

The SCAG estimates of population growth are lower than the current 2016 estimated population growth by the DOF. According to the City of La Verne's 2014-2021 Housing Element, and based on 2010 U.S. Census data, the City's population in 2010 was 31,139; an increase of 0.8 percent from the population reported in 1990, and a 2.2 percent decrease from the population reported in 2000 (City of La Verne 2013). Table 50 shows the projected City population, based on the more conservative 0.8 percent population growth trend.

Table 50 Population Growth Estimates Based on City's 2014-2021 Housing Element

City of La Verne	2010	2012	2016	2020	2035	2040
Population	31,139	31,639	32,663	33,721	38,004	39,548

Source: Growth percentage based on City of La Verne 2014-2021 Housing Element.

The Housing Element estimated population for the year 2016 is 32,663 people. This is 537 people (1.6 percent) less than the DOF's estimate of 33,200 people for 2016. The Housing Element estimated population for 2040 is 39,548 people. This is 6,648 people (20.2 percent) more than the SCAG population forecast for the same year.

La Verne Campus

POPULATION

The population of La Verne Campus fluctuates during each school year as well as from year to year. Estimated Full-Time Enrollment (FTE) campus population for the current school year (2016-2017) is 4,849 students (West 2016) and 392 staff. The current faculty to student ratio is 14:1. Table 51 summarizes the University's population trends provided on the University's website.

Table 51 University Population Trends

University of La Verne Population	2005	2007	2008	2016
Undergraduate Students	2,203	2,047	1,913	3,373
Graduate Students	1,205	1,265	1,377	1,314
Doctoral Students	272	210	217	162
Subtotal	3,680	3,522	3,507	4,849
Faculty[1]	263	252	251	346
Total	**3,943**	**3,774**	**3,758**	**5,195**

[1] Faculty number based on student/faculty ratio of 14:1.

Source: University of La Verne Website;http://sites.laverne.edu/institutional-research/files/2011/10/FTEcampus.pdf

HOUSING

There are currently four on-campus residence halls available for student housing. The total capacity of these buildings is currently 874 beds. The University also has an agreement with the Sheraton Fairplex Hotel and Conference Center, located at 601 West McKinley Avenue, Pomona California, to house up to 20 students during the academic year. Table 52 summarized the current housing options for the University students.

Table 52 Current University of La Verne Housing Options

Name	Current Bed Occupancy
Brandt Residence Hall	95
Stu-Han Residence Hall	132
“The Oaks” Residence Hall	269
Vista La Verne Residence Hall	378
The Sheraton Hotel	20[1]
Total	874 (894[1])

[1] The availability of hotel accommodations fluctuates every year based on demand. The current 2016-2017 housing agreement with the Sheraton Fairplex Hotel provides up to 10 double occupancy rooms.

Source: University of La Verne Website, Housing & Residential Life: Housing Options; and University of La Verne Facilities and Technology Master Plan, September 2016

4.10.2 Regulatory Setting

La Verne Housing Element

The Housing Element of the City of La Verne General Plan (2013) was developed to ensure that the City establishes policies, procedures and incentives in its land use planning and development activities that result in the maintenance and expansion of the housing supply

to adequately accommodate households currently living and expected to live in La Verne. As required by State law, the Housing Element identifies strategies and programs that focus on: (1) housing and neighborhood conservation; (2) providing adequate sites to achieve diversity of housing; (3) opportunities for affordable housing; (4) removing governmental constraints as necessary; and (5) promoting equal housing opportunities. The Housing Element recognizes that La Verne is almost completely developed, with very little vacant residential land available for development. In the Housing Element, the City focuses on the current density of housing and the possibility to better utilize it to accommodate lower income housing

Regional Comprehensive Plan and Guide

SCAG's Regional Comprehensive Plan (RCP) contains a general overview of federal, state, and regional plans applicable to the southern California region and serves as a comprehensive planning guide for future regional growth. The primary goals of the RCP are to improve the standard of living, enhance the quality of life, and promote social equity. The RCP was originally adopted in 1994 by the member agencies of SCAG to set broad goals for the southern California region and identify strategies for agencies at all levels of government to use in their decision making. The 2008 RCP, which serves the same function as the previous version, was accepted by the Board as an advisory document and adopted in October 2008. The 2008 RCP includes input from each of the 13 sub-regions that make up the southern California region including Los Angeles, Orange, San Bernardino, Riverside, Imperial, and Ventura Counties.

SCAG's RCP serves as a framework for addressing problems and creating a path to correct issues on a regional level through 2035. The RCP is broken up into nine chapters that include key areas where resource management is necessary due to the urban growth an area experiences. Population projections are made through SCAG's RTP/SCS and are the basis for the growth considered for the RCP.

Regional Transportation Plan/Sustainable Communities Strategy

SCAG's RTP/SCS is a long range regional transportation and land use network plan that looks ahead 20+ years and provides a vision of the region's future mobility and housing needs with economic, environmental and public health goals. The RTP identifies major challenges as well as potential opportunities associated with growth, transportation finances, the future of airports in the region, and impending transportation system deficiencies that could result from growth that is anticipated in the region. SCAG adopted its current RTP/SCS in April 2016 (SCAG 2016c).

4.10.3 Impact Analysis

Methodology and Thresholds of Significance

Impacts related to population are generally social or economic in nature. Under CEQA, a social or economic change generally is not considered a significant effect on the

environment unless the changes can be directly linked to a physical change. Impacts related to population and housing would be potentially significant if the project would:

- 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);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

The proposed Master Plan would allow the University to better accommodate the projected expansion of enrollment and faculty at University of La Verne, while also expanding the supply of on-campus housing. Direct and indirect population increases caused by the project as well as the potential for future development projects to displace housing or people will be discussed in this section. For additional discussion of impacts related to the project's potential to induce growth, please refer to Section 6.0, Other CEQA-Required Discussions.

Project Impacts and Mitigation Measures

IMPACT PH-1 INCREASES IN POPULATION AS A RESULT OF DEVELOPMENT

Development associated with the Master Plan, including enrollment and employment growth associated with the Master Plan, may directly and indirectly increase the City's population over time. However, this population growth would be expected to fall within and be consistent with the La Verne General Plan Housing Element, Southern California Association of Governments (SCAG), and Department of Finance (DOF) population forecasts. Therefore, the proposed project would not induce population growth beyond that already planned. Impacts related to inducement of substantial population growth would be Class III, less than significant.

University of La Verne's future enrollment of full-time students is projected to increase over time. As shown in Table 53, the projected number of FTE students will increase approximately 3.3 percent by the year 2020 in comparison to 2016-17 student numbers, and increase approximately 16.1 percent by the year 2035 in comparison to 2016-17 student numbers. The increase in student enrollment for the year 2035 would equate to less than 0.001 percent of the projected population of the County of Los Angeles for the year 2035, based on SCAG projections and would equate to approximately 2.1 percent of the projected population of the city of La Verne for 2035, based on the population estimates created from the City of La Verne Housing Element. The projected increase in students for the University of La Verne would be consistent with projected population growth in the county and city. The proposed increase in on-campus student housing would accommodate the increase of students enrolled and provide housing to a growing campus population that would otherwise not have an on-campus housing option, and therefore, will not create a significant impact related to housing needs.

Table 53 Future University of La Verne FTE Enrollment Though Year 2035

Student Level	2016-17	2019-20	2034-35
Undergraduate	3,373	3,482	3,759
Master – Graduate	1,314	1,367	1,710
Doctoral	162	162	162
Totals	4,849	5,011	5,631

Source: University of La Verne Updated Headcount & FTE Enrollment Projections through 2035 Memorandum, August 2016

University of La Verne's FTE enrollment at its main campus, including traditional undergraduate and graduate, doctoral, and law students, in the 2016-17 academic year is 4,849. The estimated FTE enrollment is expected to increase to approximately 5,631 by the year 2035. This analysis makes the conservative assumption that all 782 new students would come from outside La Verne and live in La Verne while attending the University, resulting in direct population growth in the city.

The proposed Master Plan would also result in an increase in faculty and staff at the University. University of La Verne currently employs approximately 819 regular full- and part-time staff (University of La Verne 2016). Assuming an increase in faculty and staff proportional with the increase in FTE resulting from Master Plan implementation, the total increase in faculty and staff would be approximately 132 by 2035. While it should not necessarily be assumed that all of these individuals would become new residents of La Verne (they may, for example, already live in the community or live outside of it after they are hired), if they did, they would create an additional direct population growth of 132 persons, for a total direct population growth of 914 students, faculty, and staff. This increase, when compared to the existing City population of 33,200 (DOF 2016), would lead to a population of up to 34,114 persons in La Verne, an increase of approximately 2.7 percent over 20 years.

To help reduce the need for additional campus facilities and staff, the University of La Verne is also converting many of its traditionally-taught classes to hybrid-classes (part online-part in person) to help reduce the need for classroom space and student transportation, as well as capping the enrollment of the doctoral programs to current enrollment (162 students, FTE) for academic quality (West 2016).

As shown in Table 50, the City of La Verne Housing Element forecasts estimate that the population of La Verne will be 39,548 in 2040 (City of La Verne 2013). The 914 projected additional full-time equivalent students, faculty and staff would represent approximately 2.3 percent of the future population of the City of La Verne from the Housing Element. Direct population growth associated with implementation of the Master Plan is therefore within the Housing Element projection. Therefore, impacts of the Master Plan related to directly inducing population growth beyond projections would be less than significant.

Population growth indirectly induced by the proposed Master Plan would come from sources such as increased employment in the area. Increased employment could be created

by construction jobs associated with projects carried out under the Master Plan and employment opportunities in businesses serving an increased campus population and proposed retail space, all of which could attract new residents to La Verne. With the direct population growth associated with the full implementation of the Master Plan, indirect population growth would also be well within the population forecasting, and therefore impacts of the Master Plan related to indirectly inducing population growth beyond projections would be less than significant.

MITIGATION MEASURE

Because impacts would be less than significant, mitigation is not required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT PH-2 DISPLACEMENT OF PEOPLE OR ELIMINATION OF EXISTING HOUSING

Development associated with the Master Plan would not result in the displacement of a substantial number of people or existing housing, necessitating the construction of replacement housing elsewhere. The development associated with the proposed project would facilitate the development of new campus housing for the University. Impacts related to displacement of people or housing would be considered Class III, less than significant.

The proposed Master Plan includes the demolition of Stu-Han Residence Hall and “The Oaks” Residence Hall and the development of three new student residential complexes with higher density housing. Two of the new residential halls would be mixed-use buildings with retail amenities on the first floors. There would also be the potential for renovations to Brandt Residence Hall, depending on future University needs. As shown in Table 54, the three new residence halls are expected to increase the number of on-campus beds to 1,091 beds at double occupancy (approximately 27.6 percent of current bed occupancy) or 1,561 beds at triple occupancy (approximately 82.6 percent of current bed occupancy), and create a net increase of 85,446 gross square feet (GSF) of built space devoted to residence halls.

Table 54 Residential Development under Master Plan

Name	Proposed GSF	Demolished GSF	GSF Net Change	Current Bed Occupancy	Proposed Beds at Double Occupancy	Proposed Beds at Triple Occupancy
Residence Hall I	79,650	0	79,650	-	350	400
Residence Hall II	70,200	0	108,000	-	480	720
Residence Hall III	35,000	0	47,000	-	360	540
Vista La Verne Residence Hall	N/A	0	0	378	378	378
Brandt Residence Hall Renovation	-	-22,500	-22,500	95	-95	-95
Stu-Han Residence Hall	-	-28,800	-28,800	132	-132	-132
"The Oaks" Residence Hall	-	-48,104	-48,104	269	-269	-269
Totals	184,850	-99,404	85,446	874	1,072	1,542

Source: University of La Verne Facilities and Technology Master Plan, September 2016
University of La Verne Website, Housing & Residential Life: Housing Options

In order to meet the demand for student housing, the University of La Verne has an agreement with the Sheraton Hotel, located approximately 1.6 miles southeast of the main campus. The agreement allows students to use the hotel as a residence hall during the academic year. While this property is outside the Plan Area and would not be directly affected by the proposed Master Plan, it is described here for informational purposes. The additional student housing provided by the Master Plan would eliminate the need for the Sheraton Hotel agreement.

Demolition of "The Oaks" residence hall would be completed in two phases to avoid loss of bed occupancy during construction. The new bed occupancy of proposed Residence Hall II would be used while "The Oaks" is demolished to make way for the latter phase of Residential Hall II. Demolition of current classrooms, a dining hall, vehicle and pedestrian accesses, a chapel, parking lots, a health services facility, and residence halls would be completed in three phases to reduce the effect on students and faculty currently using the facilities. The phases would occur over an approximately 20 year period. Phase I would start on approval of the Master Plan and be completed in the year 2021. Phase II is expected to start in the year 2022 and be completed in year 2028. Phase III is expected to start in the year 2029 and be completed in the year 2035. The developed residential halls and new beds would serve enrolled students that may not currently have an option for on-campus housing.

The City of La Verne Housing Element (2013) recognizes that the City has an urban setting, with limited vacant or underutilized residential land available for housing development; however, there is a growing demand for additional housing in the City. The Regional

Housing Needs Assessment allocation for the years 2014 to 2021 for the City of La Verne has a total of 562 units (City of La Verne 2013). If constructed, the proposed multi-family residential units for Campus West could contribute approximately 170 units towards the needs of the City. These units could provide housing opportunities for students or private residents.

Development under the Master Plan would impact vacant land, campus classrooms, a dining hall, vehicle and pedestrian pathways, a chapel, multiple parking lots, a health services facility, and residence halls. However, as previously mentioned, the demolition/construction would be completed in phases to help prevent any significant or long-term displacement of people or housing that would necessitate additional housing beyond what is already proposed. Therefore, the impacts related to displacement of people or housing would be less than significant.

Mitigation Measure

Because impacts would be less than significant, mitigation is not required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Cumulative Impacts

As described above under Impact PH-1, direct population growth from implementation of the proposed Master Plan would fall well within the population projections contained in the La Verne Housing Element. Cumulative development projects planned in the City, described in detail in Section 3.0, Environmental Setting, would result in a population increase of 506 (184 residential dwelling units multiplied by the City's average person/household of 2.75). Therefore, the direct population growth of 914 students, faculty and staff that would result from the Master Plan, in addition to the maximum local cumulative population growth, would total 1,420 additional persons. As such, housing and population growth facilitated by the proposed Master Plan would be consistent with the growth envisioned in the La Verne General Plan Housing Element, as well as SCAG's RCP. Therefore, cumulative impacts related to population and housing in La Verne would not be significant.

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4.11 Public Services

This section assesses impacts related to public services, including fire and police protection, schools and libraries. Impacts related to water and wastewater infrastructure and solid waste collection and disposal are discussed in Section 4.14, Utilities and Service Systems.

4.11.1 Setting

Fire

The City of La Verne receives fire protection and emergency services from the La Verne Fire Department (LVFD). Thirty-three full-time and five part-time personnel are employed by LVFD. They are supported by 24 apprentice firefighters and 30 fire explorers. The LVFD has three fire stations throughout the city. Fire Station 1 is located at 2061 Third Street; Fire Station 2 is located at 4785 Wheeler Avenue; and Fire Station 3 is located at 5100 Esperanza Drive. The equipment at Fire Station 1 includes a fire command vehicle, one Type 1 pumper (fire engine), and one Advanced Life Support (ALS) vehicle. The station also has one Type I pumper as a reserve vehicle and several support vehicles. An aerial platform truck is also cross-staffed as needed by the engine company. Fire Station 2 includes one Type I pumper and houses one Type III pumper as a reserve vehicle. It also has one utility vehicle in its fleet. Fire Station 3 includes one ALS Rescue ambulance and houses one reserve ambulance.

The City's Wilderness Fire Plan indicates that adequate firefighting infrastructure is supplied by the three fire stations, ample fire hydrants are installed throughout the city, and a sufficient water delivery system is in place to serve emergency needs for La Verne. On average, the LVFD receives over 3,000 calls each year, the vast majority of which are for emergency medical services rather than firefighting services (La Verne Fire Department 2016). In addition to providing emergency response services and firefighting services, LVFD also is responsible for enforcing fire codes, providing fire inspections, assisting in planning and development standards for High Fire Hazard Areas (and enforcing such standards), community education and outreach and incident management team support.

The Plan Area will be served by Fire Station 1, which is located on the north side of Third Street directly across from La Verne Campus.

Police

The University and surrounding uses are serviced by the La Verne Policy Department (La Verne PD). The La Verne police station is located at 2061 Third Street in the same building as fire department. La Verne PD has 42 sworn officers, 18 professional staff members, a reserve force up to 25 officers and a retired, senior volunteer patrol program consisting of 35 members. The police station houses all divisions of the La Verne PD including patrol, traffic, detectives, records, communications, and the jail division. The facility also houses a Type I Jail and state of the art indoor shooting range (La Verne Police Department website, 2016).

The City has established a desired service goal of 1.25 officers per 1,000 civilians. The city's population is approximately 33,000 and therefore La Verne PD is sufficiently staffed with a service ratio of 1:27 officers per 1,000 civilians which exceeds the City's standards. The Department maintains a 3.50-minute emergency response time, which is sufficient to serve the city (Paz 2016).

Security within the Plan Area is provided by the Campus Safety Department located at 2021 D Street. The Campus Safety Officers patrol campus 24 hours a day, 7 days a week, including holidays. The Campus Safety Department serves as the first responders to emergencies on campus and controls traffic at special events. They also monitor fire alarms and escort students on and around campus. The University Campus Safety Department consists of trained Campus Safety Officers, professional staff including an Emergency Preparedness Coordinator, and Student Assistants who are dedicated to provided security services and swift response to calls for assistance from our campus community and guests.

The University requires all officers to complete training and receive certification from a California Peace Officer's Standards and Training Certified Academy in powers of arrest, search and seizure (832 PC), as well as obtain advanced certification from the California Bureau of Security and Investigative Services to operate as a Campus Safety Officer. The Department of Campus Safety works with the City of La Verne and neighboring cities, the County of Los Angeles, the State of California, and various federal law enforcement authorities. These collaborative relationships help the Department of Campus Safety provide a safer university campus and more thorough and effective responses to concerns (University of La Verne 2016).

Schools

The city is home to six public schools, and three private schools. All public schools are in the Bonita Unified School District (BUSD).

The Bonita Unified School District oversees four elementary schools, one middle school, and one high school in the City of La Verne. BUSD recently published a Residential Development School Fee Justification Study (BUSD 2016) that outlined the projected district needs for schools in the future and how residential development would impact the school system. The data included in the study shows that the schools are currently over-populated, but individual schools accommodate additional students through the use of portable classrooms (Martin 2016). Therefore, class sizes are maintained within the state mandated levels by utilizing portable classrooms. In addition, development fees are accessed based on student increase forecasts conducted by BUSD and these development fees are used to build permanent on-campus facilities to accommodate the increased student body.

Table 55 2016-2017 Bonita Unified School Enrollment

School	Students Enrollment	Student Capacity	Utilization (percent)
Elementary			
Grace Miller Elementary	429	412	104.1
J. Marion Roynon Elementary	753	752	100.1
Oak Mesa Elementary	591	594	99.5
La Verne Heights Elementary	492	491	100.2
Middle			
Ramona Middle	1,391	1,287	108.1
High			
Bonita High	1,993	2,040	97.7

Sources:

California Department of Education, DataQuest website: http://data1.cde.ca.gov/dataquest/ Accessed September 18, 2016

Bonita Unified School District School Facilities Capacity Calculation, Residential Development School Fee Justification Study (March 2016)

Public Libraries

Los Angeles County operates one public library in the City of La Verne. It is located at 3640 D Street. The La Verne Library is a 10,347 square foot facility with a meeting room, children's area, teen space and study room. The library has over 30,000 titles available, including books, audio books, movies and music. Due to budget constraints, the library has limited hours of operation, but is open Monday through Saturday.

Wilson Library is located on the University's main campus, on Third Street. The library was originally a part of the Lordsburg Hotel building, located on the first floor. The library originally had just 2,500 titles. In 1977, with financial assistance from college alumni Elvin and Betty Wilson, the University purchased a supermarket building and remodeled it to become the Wilson Library. In 1996, the library was dedicated as the Wilson Library in honor of the support of the Wilson family. Today Wilson Library serves the faculty, students and community with over 150,000 book titles, 100,000 e-journals and numerous other resources (ULV Wilson Library Website, September 2016).

4.11.2 Regulatory Setting

Federal Policies

Disaster Mitigation Act (2000-Present)

Section 104 of the Disaster Mitigation Act of 2000 (Public Law 106-390) enacted Section 322, Mitigation Planning of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, which created incentives for state and local entities to coordinate hazard mitigation planning and implementation efforts, and is an important source of funding for fuels mitigation efforts through hazard mitigation grants.

National Incident Management System (NIMS)

The City adopted NIMS, which provides a systematic, proactive approach to guide government agencies, nongovernmental organizations, and the private sector to work together to prevent, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. NIMS improves the City's ability to prepare for and respond to potential incidents and hazard scenarios.

National Fire Plan (NFP) 2000

This plan places a priority on collaborative work within communities to reduce their risk from large-scale wildfires.

State Policies

California Strategic Fire Plan (updated 2012)

This statewide plan is a strategic document, which guides fire policy for much of California. The plan is aimed at reducing wildfire risk through pre-fire mitigation efforts tailored to local areas through assessments of fuels, hazards, and risks.

California State Multi-Hazard Mitigation Plan, draft (updated 2013)

The purpose of the State Multi-Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, state, and federal agencies as well as the private sector.

Public Resources Code Section 4290

This provision grants authority to State Board of Forestry and Fire Protection to develop and implement fire safety standards for defensible space on State Responsibility Area lands.

Public Resources Code Section 4291

A state law, effective in January 2005, this section extends the required defensible space clearance around homes and structures from 30 feet to 100 feet for wildfire protection. The code applies to all lands that have flammable vegetation. The regulations include several requirements for how the vegetation surrounding buildings and structures should be managed to create defensible space.

Public Resources Code 4292-4296 and 14 CCR 1256: Fire Prevention for Electrical Utilities

These statutes and regulations address the vegetation clearance standards for electrical utilities. They include the standards for clearing around energy lines and conductors such as power-line hardware and power poles. These regulations are critical to wildland fire safety because of the substantial number of power lines in wildlands, the historic source of fire

ignitions associated with power lines, and the extensive damage that results from power line caused wildfires in severe wind conditions.

2013 California Fire Code

This code establishes regulations affecting or relating to structures, processes, premises and safeguards regarding residences and historic buildings. The code includes: 1) hazards of fire and explosion arising from the storage, handling or use of structures, materials or devices; 2) conditions hazardous to life, property or public welfare in the occupancy of structures or premises; 3) fire hazards in the structure or on the premises from occupancy or operation; 4) matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems; and 5) conditions affecting the safety of fire fighters and emergency responders during emergency operations.

Government Code 51175: Very High Fire Hazard Severity Zones

This code section defines Very High Fire Hazard Severity Zones and designates lands considered by the State to be a very high fire hazard.

Government Code 51189: WUI Building Standards

This code section directs the Office of the State Fire Marshal to create building standards for wildland fire resistance. The code includes measures that increase the likelihood of a structure withstanding intrusion by fire (such as building design and construction requirements that use fire-resistant building materials) and provides protection of structure projections (such as porches, decks, balconies and eaves), and structure openings (such as attics, eave vents, and windows).

Government Code 65302.5: General Plan Fire Safety Element Review

This code section requires the State Board of Forestry and Fire Protection to provide recommendations to a local jurisdiction’s General Plan fire safety element at the time that the General Plan is amended. General Plans that adopt the Board's recommendations will include goals and policies that provide for contemporary fire prevention standards for the jurisdiction.

Local Policies

La Verne Municipal Code Title 8 - Fire Department and Fire Prevention Regulations

This code section discusses non-compliance liability and the accumulation and storage of flammable waste material and storage of combustible materials

La Verne Municipal Code Title 9 - Health and Safety

This code section discusses property maintenance such as landscaping and vegetation that are fire hazards, are considered a nuisance and are declared to be unlawful.

La Verne Municipal Code Chapter 15 - Building and Construction

This code section provides direction on the numbering of buildings, flammable roofs, fences, fire codes, fire zones, and very high fire hazard severity zone regulations. In addition, it discusses the modifications to the Los Angeles County Building Code and 2013 California Fire Code as adopted by the City of La Verne. These codes are updated on a regular basis as required by State law.

La Verne Municipal Code Title 16 - Subdivisions

This code section addresses development capacity as it relates to fuel modification zones or green belts required by city ordnance for fire safety purposes.

La Verne Municipal Code Title 18 - Zoning

This code section provides for hillside development overlay zones (HDOZ) supplemental standards for development of hillside areas of the City that includes fire hazard standards, access requirements, water supply, perimeter protection, fire-resistant design and material guidelines, landscaping, etc. Title 18 also includes a section on the preservation, protection, and removal of trees.

City of La Verne Natural Hazard Mitigation Plan (2012)

This plan is a tool for all stakeholders to increase public awareness of local natural and human-made hazards and risks, while providing information about options and resources available to reduce risks by hazard mitigation measures.

City of La Verne Parks & Community Services Master Plan (2006)

This Master Plan identifies long range strategies for the development of new parks and recreation facilities in La Verne that guide the orderly development, renovation, and improvement of parks, recreation facilities, programs, and services.

City of La Verne Strategic Plan (2012)

The Strategic Plan presents eight principles that guide the development of the City. These principles are service, small town virtues, quality of life, responsiveness, sound leadership, prudent financial management, teamwork, and pride.

City of La Verne Municipal Code, Chapter 18.78. Preservation, Protection and Removal of Trees

This code section establishes standards and guides for the management of significant and historic trees within the City.

La Verne General Plan (1998)

The City's General Plan governs land use, transportation, resource management, noise, cultural resources, community facilities, housing, public safety, economic development, and community design. The City's General Plan outlines specific policies for fire facilities which

will apply to the Plan Area. Table 56 details General Plan policies applicable to public services.

Table 56 General Plan Policies Relating to Public Services

General Plan Policy	Implementation Measure(s)
Fire	
Land Use Policy 2.5: Protect our Community from hillside wildfires	*Land Use Policy 2.5 (f):* Approve only development plans that conclusively prove that they can be adequately served with fire flow.
	Land Use Policy 2.5 (g): Require that all development within the seven-minute response time contribute to the fire equipment fund established to provide additional fire coverage from Fire Station 2.
Public Safety Policy 1.1: Provide adequate fire protection	*Public Safety Policy 1.1 (a):* Maintain the seven-minute response time, or an acceptable response time, as determined by the fire chief.
	Public Safety Policy 1.2: Minimize risk of wildfire spread
	Public Safety Policy 1.2 (b): Require development plans to prove conclusively that they can be served with adequate water capacity.
	Public Safety Policy 1.2 (c): Ensure that water plans shall be approved by the Fire and Public Works Departments and constructed to City standards.
	Public Safety Policy 1.2 (k): Enforce all sections of the Uniform Fire Code.
Public Safety Policy 5.5: Minimize fire threat through safe development	*Public Safety Policy 5.5 (a):* Circulate all public and private proposed project plans to the fire department as part of the development review procedure. The Department shall be consulted on all aspects of the project involving fire safety, including building materials, access and circulation. This review shall take place as early in the process as possible to permit any necessary changes to project design.
Public Safety Policy 5.6: Provide adequate emergency medical care	*Public Safety Policy 5.6 (a):* Maintain adequate paramedic service in La Verne. If deficiency occurs, add personnel and paramedic units as needed.
Police	
Public Safety Policy 5.1: Provide adequate police protection	*Public Safety Policy 5.1 (a):* Maintain sworn officers in proportion to population to maintain a ratio of at least 1.25 officers per 1,000.
	Public Safety Policy 5.1 (b): Enlist civilian employees to support sworn staff.
	Public Safety Policy 5.1 (c): Provide adequate equipment for all personnel.
	Public Safety Policy 5.1 (e): Maintain sufficient fees charged to Fair Association to cover cost of police protection.
Public Safety Policy 5.2: Minimize crime threat through safe development	*Public Safety Policy 5.2 (a):* Circulate all proposed project plans, both public and private, to the police department for evaluation of public safety impacts, as part of the development review procedure. Police shall be consulted on issues including traffic, lighting, and impact on surrounding areas. This review shall take place at the earliest possible point to permit changes to be made if necessary.

General Plan Policy	Implementation Measure(s)
	Public Policy 5.2(b:) Apply standards for defensible space as part of the City design review process for residential projects (particularly multiple-family), where applicable.
Schools	
Transportation Policy 4.2: Relieve parking-impacted neighborhoods	*Transportation Policy 4.2 (e):* Require adequate onsite parking at all public and private schools to prevent pressure on the surrounding residential and commercial neighborhoods.
Community Facilities Policy 4.1: Provide adequate school facilities and curriculum	*Community Facilities Policy 4.1 (a):* Deny new residential development in areas with severe overcrowding until a site for a new school is secured and construction financing is secured.
	Community Facilities Policy 4.1 (b): Require new developments to pay the full costs, as allowed by state law, for schools needed to serve them.
	Community Facilities Policy 4.1 (f): Reduce densities of new residential developments.
	Community Facilities Policy 4.1 (g): Phase new residential developments so the school age population can be absorbed without overcrowding into the existing system.
Libraries	
Community Facilities Policy 5.1: Expand library access and facilities through innovative means	*Community Facilities Policy 5.1 (a):* Encourage private libraries, such as the University of La Verne to allow some public access.
	Community Facilities Policy 5.1 (b): Cooperate with Los Angeles County to add needed library services and facilities.
	Community Facilities Policy 5.1 (c): Work with Bonita Unified School District to expand its facilities and acquisitions.
	Community Facilities Policy 5.1 (d): Assist the library in identifying funds and grants to provide Internet access as a library resource.

4.11.3 Impact Analysis

Methodology and Significance Thresholds

The following thresholds have been used to determine the impacts of the proposed Master Plan on fire protection services, police protection services, public libraries, and schools. In accordance with Appendix G of the *State CEQA Guidelines*, the proposed Master Plan would result in potentially significant impacts relating to public services if it would:

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 services ratios, response times or other performance objectives for any of the public services:

- Fire protection
- Police protection

- Schools
- Parks
- Other public facilities

Impacts may be significant if implementation of the Master Plan would result in a need for new or physically altered facilities for the public services discussed above, the construction of which might have adverse environmental impacts, or increase the use of existing parks and recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (Recreational facilities and impacts are discussed in Section 4.12).

Project Impacts and Mitigation

IMPACT PS-1 DEMANDS ON FIRE SERVICES

Implementation of the Master Plan would incrementally increase demands on fire protection services, but would not create the need for new or expanded fire protection facilities. Impacts would be Class III, less than significant.

The proposed University of La Verne Master Plan would provide for the addition of up to 1,542 student beds on campus and a total increase of 782 total students.

Active uses within the Plan Area are currently served by the La Verne Fire Department (LVFD); however, these facility and enrollment increases may incrementally increase demand for fire protection service. The Plan Area is located in an already-developed and currently served area of La Verne, with adequate access to fire-fighting infrastructure such as fire hydrants. LVFD has a five-minute response time goal for the first arriving fire unit and an eight-minute response time goal for the first arriving emergency medical services (EMS) unit. Fire services can be provided to the Plan Area by both the City of La Verne Fire Department and, based on existing mutual and automatic aid agreements, other jurisdictions can provide support in responding to emergencies.

As part of the City's regular budget process, the LVFD assesses needs for service and service goals and standards. The LVFD is also part of the development review process to ensure that necessary fire prevention and emergency response features are incorporated into development projects. All site and building improvements carried out under the Master Plan would be required to comply with all applicable fire code and ordinance requirements for construction, access, water mains, fire flows, and hydrants, and would be subject to review and approval by the LVFD prior to building permit and certificate of occupancy issuance. Improvements would also be subject to the City's fire facility fee for new development, which funds the fair share costs of constructing and equipping new fire facilities.

Because the Plan Area is already developed and within the Fire Department's existing service area, the development under the proposed Master Plan would be subject to the fees and regulations discussed above, and the proposed Master Plan would be incrementally built out over a 20-year period, the proposed Master Plan would not result in the need to expand existing fire protection facilities or build new facilities. With the

continued compliance with the California Fire Code and Uniform Building Code, the proposed Master Plan would not significantly affect community fire protection services and would not result in the need for construction of fire protection facilities, the construction of which could cause significant environmental impacts. Impacts would be less than significant.

MITIGATION MEASURES

Because impacts would be less than significant, mitigation is not required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT PS-2 DEMANDS ON POLICE PROTECTION

Implementation of the Master Plan would incrementally increase demands on Police protection services, but would not create the need for new or expanded Police protection facilities. Impacts would be Class III, less than significant.

The addition of up to 782 full time equivalent students and up to 132 new faculty and staff from implementation of the proposed Master Plan would incrementally increase demand for police service. However, the Plan Area is already served by both the La Verne Police Department (La Verne PD) and the University Campus Safety Department (Campus Safety).

La Verne PD maintains a current emergency response time of 3.5 minutes and reported that an increase in students typically does not impact response times (Source: e-mail communication with Police Captain Nick Paz, September 2016).

However, even if all 914 potential new students and faculty were added to the current population of roughly 33,000 (Source: La Verne PD website, 2016), this would represent a 2.7 percent increase in the City's population. Based on La Verne PD's current staffing level of 42 sworn officers, the PD's officer/resident ratio would drop slightly down to approximately 1.24 Sworn Officers per 1,000 residents. This ratio is slightly below (.01 percent) the City's goal; however, the Police Department has indicated that the impact on service levels would not be significant and the Department has no concern regarding the increase in student population (personal communication with Police Captain Nik Paz, September 2016). The Department also plans to increase sworn officers over the projected timeframe for Master Plan buildout (until 2035).

In addition to the La Verne PD, the University operates the Campus Safety Department. Campus Safety Officers patrol campus 24 hours a day, 7 days a week, including holidays. The Campus Safety Department serves as the first responders to emergencies on campus and control traffic at special events. They also monitor fire alarms and escort students on and around campus. The University Campus Safety Department consists of trained Campus Safety Officers, professional staff including an Emergency Preparedness Coordinator, and Student Assistants who are dedicated to provided security services and swift response to calls for assistance from our campus community and guests.

The University requires all officers to complete training and receive certification from a California Peace Officer's Standards and Training Certified Academy in powers of arrest, search and seizure (832 PC), as well as obtain advanced certification from the California Bureau of Security and Investigative Services to operate as a Campus Safety Officer. The Department of Campus Safety works with the cities of La Verne and its neighbors, the County of Los Angeles, the State of California, and various federal law enforcement authorities. These collaborative relationships help the Department of Campus Safety provide a safer university campus and more thorough and effective responses to concerns (ULV Campus Safety Department Website, 2016).

Because the Plan Area is already served by La Verne PD and Campus Safety, and because implementation of the proposed Master Plan would not cause a significant change in the officer to population ratio in the City or have a significant impact on the Police Department's service goals, the proposed Master Plan would not create the need for new police-related physical facilities. As such, impacts related to new or expanded police facilities would be less than significant.

MITIGATION MEASURES

Because impacts would be less than significant, mitigation is not required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT PS-3 DEMANDS ON PUBLIC SCHOOLS

Implementation of the Master Plan would incrementally increase demand on public schools, but due to the nature of the development and the number of new residents it could bring to the area, impacts would be Class III, less than significant.

The Plan Area is located in the Bonita Unified School District (BUSD). Implementation of the proposed Master Plan would accommodate 782 new full time students and 132 new faculty and staff members. The University of La Verne offers both undergraduate and graduate programs and some University students may have children. In 2014, 40 percent of college students were between 18 and 25 years old, with the remaining 60 percent over 25 years of age (Mathews and Hamilton 2016). The average age of mothers in the United States at first birth was 26.3 in 2014 (Mathews and Hamilton 2016), and the average age for college educated women was 28 (Livingston 2015). Based on the average age of University students and national statistics, it is anticipated that a portion of the University student body would have children. However, only a fraction of such children would be of school-age (five years old or older). Any direct impact to the City's public school student numbers would be minimal.

To offset a project's potential impact on schools, Government Code 65995 (b) establishes the base amount of allowable developer fees a school district can collect from development projects located within its boundaries. The fees obtained by BUSD are used to maintain the desired school capacity and the maintenance and/or development of new school facilities. Future residential or commercial development carried out under the Master Plan would be

subject to these State-mandated school impact fees. Pursuant to Section 65995 (3)(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), the payment of statutory fees "is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Therefore, impacts would be less than significant.

MITIGATION MEASURES

Because impacts would be less than significant, mitigation is not required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACTS PS-4 INCREASED DEMAND FOR PUBLIC LIBRARY FACILITIES

Implementation of the Master Plan would incrementally increase demand for public library facilities due to an increase in student enrollment at the University of La Verne. However, demand for public library facilities would be offset by the provision of such facilities at the University, and City library facilities would remain at current ratios. This would be a Class III, less than significant impact.

The La Verne Library provides 10,347 square feet of facility space and a collection of over 30,000 titles available, including books, audio books, movies and music (Source: County of Los Angeles Public Library website and personal communication with staff, September 2016). The City's current estimated population is 33,000 residents. Therefore, the ratio of library facilities to resident in the City is approximately 0.31 square feet of library facility and 0.90 volumes per capita which is below the state standard guidelines of 0.5 square feet of library facility and 2 volumes per capita.

The University of La Verne operates one library on the main campus. The Wilson Library is 30,374 square feet of facility space with over 150,000 book titles, 100,000 e-journals and numerous other resources (ULV Wilson Library Website and personal communication with Librarian, September 20, 2016). The City of La Verne General Plan Community Facilities Policy 5.1(a) encourages the University to offer some public access to University libraries to help meet community needs. If the University library facility were opened to the public, it would increase the ratio of library facility square footage to book volumes to approximately 0.92 square feet and 4.6 book volumes per capita. With the addition of e-book titles, the book volume ratio increase to 7.6 titles per capita.

The Master Plan includes possible facility renovations to Wilson's Library which could expand resources available and facility space. The additional increase in students would be approximately 2.3 percent of the City's population and the students would likely almost exclusively use the Wilson Library. Therefore, the proposed Master plan would not result in inadequate staffing levels or a need for new or expanded library facilities in the City of La Verne. Impacts to public library facilities as a result of the proposed Master plan would be less than significant.

MITIGATION MEASURES

Because impacts would be less than significant, mitigation is not required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

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4.12 Recreation

This section assesses impacts related to recreational facilities.

4.12.1 Setting

The City of La Verne's Parks and Community Service Department maintains 19 City-owned parks, recreational facilities totaling 141.5 acres. Joint-use agreement facilities, combined with neighboring regional parks, comprise a network of passive and active recreational opportunities for the residents of La Verne. City residents have access to several neighboring regional parks, national forests, and recreation facilities. The City has formed joint use agreements with the Bonita Unified School District, private institutions, and the University of La Verne.

The closest parks to the Plan Area are Wheeler Avenue Park (located at 1499 Palomares Avenue), Lordsburg Park (located at 1922 Walnut Street) and Kuns Park (located at 1600 Bonita Avenue). Wheeler Avenue Park is a 5.7-acre neighborhood park. The land on which Wheeler Avenue Park is located was purchased by the City from Ethelyn Edith Willhite in 1978 and was opened to the public in 1979. The park was formerly known as the La Verne Recreation Park. The park was designed as an active sports park. Lordsburg Park is a .09-acre mini park with a half-court basketball court, and open turf area. Kuns Park is the oldest park in the city, purchased in 1939. The 2.5-acre neighborhood park includes green open space areas, a tot lot and shelter areas.

4.12.2 Regulatory Setting

The California Government Code, Section 66477 (Quimby Act) was enacted in an effort to promote the availability of park and open space areas in response to the need for such facilities by residential development. The Quimby Act authorizes cities and counties to enact ordinances requiring the dedication of land and/or the payment of fees for park and/or recreational facilities for projects involving residential subdivisions. The Act states that "the dedication of land or the payment of fees, or both, shall not exceed the proportionate amount necessary to provide three acres of park area per 1,000 persons residing within a subdivision subject to this section, unless the amount of existing neighborhood and community park area, as calculated pursuant to this subdivision, exceeds that limit, in which case the legislative body may adopt the calculated amount as a higher standard not to exceed five acres per 1,000 persons residing in a subdivision subject to this section. "In addition to Quimby fees, facilities can be provided by grants, donations, user fees, community fund raising events, joint ventures, and joint use agreements.

With the adoption of the Parks and Recreation Facilities Master Plan Development Program, the City decided adopted a modified version of the State standards that is better suited for the City of La Verne (Source: La Verne Parks and Community Services Master Plan Second Update 2006). More specifically, the City modified the size of a park within a particular category (Mini-Park, Neighborhood Park, and Community Park) and with the overall

park/open space goal of 4.0 acres of developed parkland for every 1,000 residents. Table 57 provides details of existing park classifications.

Table 57 Existing Park Classifications

Land Category	Existing Park	Acres (acres)
Mini Park	Lincoln Park	0.6
	Lordsburg Park	0.9
	Price/Hayes Park	0.5
	Park La Verne (private)	0.5
	Rustic Canyon Park	0.5
	Valley Rancho Park	0.2
Neighborhood Park	Puddingstone Village (private)	1.8
	Challenger Park	2.5
	Emerald Park	3.0
	Heritage Park	4.0
	Kuns Park	2.5
	La Verne Heights Park (private)	1.2
	Los Encinos Park	7.0
	Lowell Brandt Park	15.0
	Mills Park	7.0
	Pelota Park	4.6
	Park La Verne (private)	1.0
	Wheeler Avenue Park	5.7
Community Park/Passive Open Space	Golden Hills Wilderness Park	20.0
	Las Flores Park	16.0
	La Verne Sports Park	21.0
	Live Oak Park	13.0
	Oak Mesa Park	13.0
Total Park Area (acres)		**141.5**

Source: City of La Verne Parks and Community Services Master Plan Second Update (October 2006)

Note: The acreage listed above references parks only and does not include public plazas or privately owned space available for public use (private schools with written agreements with the City).

The City's Parks and Recreation Master Plan also describes the potential for additional public recreational uses within the existing University Athletic Complex located within Campus West. This existing 14-acre facility includes baseball and softball fields, lockers/restrooms/training rooms, baseball and softball batting cages, a multi-purpose field and parking lot.

4.12.3 Impact Analysis

Methodology and Significance Thresholds

In accordance with Appendix G of the *State CEQA Guidelines*, the proposed Master Plan would result in potentially significant impacts relating to recreation if it would do either of the following:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- Include recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

Impacts may be significant if implementation of the Master Plan would result in a need for new or physically altered facilities for the public services discussed above, the construction of which might have adverse environmental impacts, or increase the use of existing parks and recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No new or expanded recreational facilities which might have a physical impact on the environment are proposed as part of the Master Plan. Therefore, this issue is not discussed further in this section of the EIR.

The La Verne General Plan and adopted Parks and Community Services Master Plan (updated 2006) set a City goal to maintain a ratio of 4.0 acres of parkland per 1,000 residents. Therefore, impacts may be significant if a project causes the City's parkland to resident ratio to fall below 4.0 acres of parkland per 1,000 residents, or if additional parkland use from new University students and/or staff would cause substantial deterioration of existing recreational facilities.

Project Impacts and Mitigation

Impact REC-1 Demand on Park Facilities

Implementation of the Master Plan would incrementally increase the demand for park facilities due to an increase in student enrollment at the University. However, City parkland is expected to remain above the City's goal of 4.0 acres per 1,000 residents, substantial deterioration of existing recreational facilities would not occur and the proposed on-campus recreational facilities would not adversely affect the effect the environment. This would be a Class III, less than significant impact.

The City of La Verne's Parks and Community Service Department maintains 19 City-owned parks, recreational facilities totaling 141.5 acres. This includes mini-parks, community parks, and neighborhood parks. The City's joint-use agreement facilities, combined with neighboring regional parks, create many passive and active recreational opportunities for the residents of La Verne. City residents also have access to several neighboring regional parks, national forests, and recreation facilities.

The proposed Master Plan would accommodate an eventual expansion of 782 full-time equivalent students, and up to 132 new faculty and staff. The increase in students and staff with implementation of the proposed Master Plan may increase the use of off-campus parks and other recreational facilities. With full implementation of the Master Plan, additional recreational space may be added to Campus West to offset this potential increase in park usage. The increase in students would result in the City's ratio of public parks to residents decreasing from 4.3 acres to 4.2 acres per 1,000 residents, which is still above the City's adopted goal of 4.0 acres of parkland for every 1,000 residents. The City's Parks and Community Services Master Plan (update 2006) identifies the Campus West site as an opportunity to expand the City's available recreational facilities. Thus, with the incorporation of the previously constructed 14-acre sport complex, the City parkland ratio remains at 4.3 acres of parkland per 1,000 residents. Therefore, the proposed Master Plan would not result in a need for new or expanded park facilities.

The proposed increase in full-time equivalent students could incrementally increase the use of park facilities within the City of La Verne. To offset this potential increase in park demand, the City will require the payment of park, recreation and open space fees as part of any future development proposed within the Master Plan, as specified in La Verne Municipal Code Chapter 3.20 – Parks and Recreation Charges. The amount of the fee would be equal to the new development's fair share of the costs of developing new parks, open space and recreation facilities, including the acquisition, design, and construction. The payment of these required fees would be used to maintain, construct or dedicate parks within the City. Impacts to recreation facilities as a result of the proposed Master plan would be less than significant.

MITIGATION MEASURES

Because impacts would be less than significant, mitigation is not required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

4.13 Transportation

This section evaluates the potential impacts on the local and regional circulation system from implementation of the proposed Master Plan, including potential traffic increases, congestion management plan consistency, traffic-related hazards, and alternative transportation. The discussion is based on the Traffic Impact Analysis (TIA) prepared for this EIR by Linscott, Law, & Greenspan (LLG) Engineers (October 2016). The complete Traffic Impact Analysis is contained in Appendix E.

4.13.1 Setting

Existing Street System

The local network of streets serving the three campuses of the University of La Verne includes Arrow Highway, 1st Street, Second Street, Third Street, Bonita Avenue, Wheeler Avenue, Park Avenue, A Street, B Street, C Street, D Street, and E Street. The following 18 intersections were selected in the vicinity of the Plan Area as study locations for the proposed Master Plan:

1. San Dimas Avenue/Arrow Highway (City of San Dimas)
2. Walnut Avenue/Arrow Highway (City of San Dimas)
3. San Dimas Canyon Road/Arrow Highway City of San Dimas and City of La Verne)
4. Wheeler Avenue/Arrow Highway (City of La Verne)
5. A Street/Arrow Highway (City of La Verne)
6. B Street/Bonita Avenue (City of La Verne)
7. B Street/Third Street (City of La Verne)
8. C Street/Bonita Avenue (City of La Verne)
9. C Street/Third Street (City of La Verne)
10. D Street/Foothill Boulevard (City of La Verne)
11. D Street/Bonita Avenue (City of La Verne)
12. D Street/Third Street (City of La Verne)
13. D Street/Second Street (City of La Verne)
14. D Street/Parking Structure D (City of La Verne)
15. D Street/Arrow Highway (City of La Verne)
16. E Street/Second Street (City of La Verne)
17. E Street – Fairplex Drive/Arrow Highway (City of La Verne)
18. White Avenue & Arrow Highway (City of La Verne)

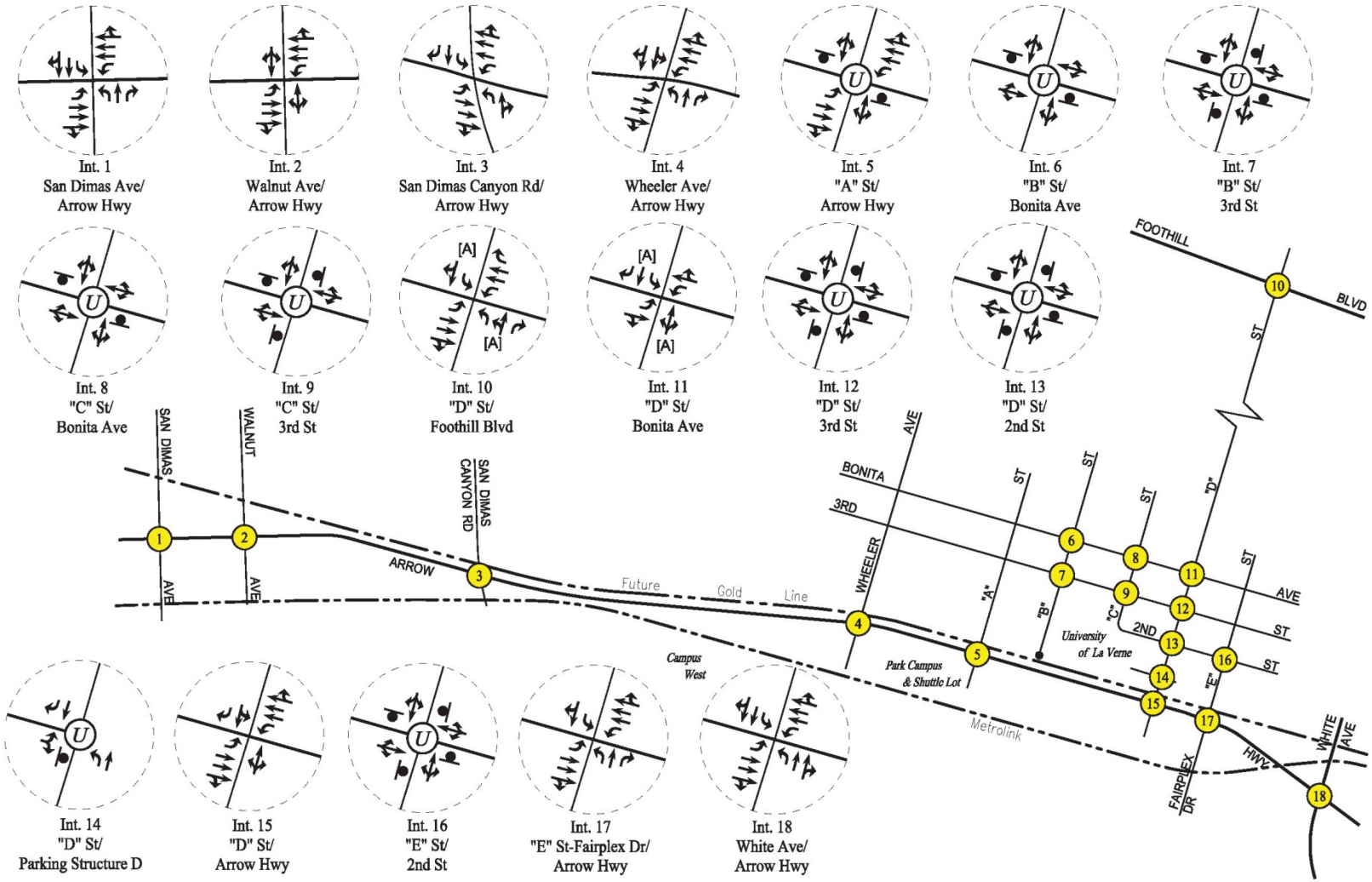
Of these 18 study intersections, nine are currently traffic signal controlled. It should be noted that the City is completing the installation of a new traffic signal at the intersection of B Street and Bonita Avenue. This intersection is currently operated under stop-sign control with stop signs facing the northbound and southbound B Street approaches. The existing roadway configurations and intersection controls at the 18 study intersections are displayed in Figure 23.

Roadway Classifications

The City of La Verne utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses. The SR-210 and I-10 Freeways are located approximately one and a half to two miles to the north and south, respectively, of the project site.
- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: primary and secondary arterials. Primary arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Secondary arterials are typically two-to-four lane streets that service local and commute traffic.
- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.
- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

Figure 24 Existing Intersection Configurations and Controls



Roadway Descriptions

A review of the characteristics (e.g., street classification, number of travel lanes, speed limit, etc.) of important roadways in the project site vicinity and study area is summarized in Table 58 (Table 4-1 of the TIA). The roadway classifications are also presented in the table. As indicated in the table, the important roadways in the project study area were inventoried on a segment basis in terms of the number of lanes provided, median types, posted speed limits, etc.

Table 58 Existing Roadway Descriptions

Roadway	Classification [1]	Direction [2]	# Lanes [3]	Median Types [4]	Speed Limit
San Dimas Avenue	Major arterial	N/S	2 to 4	RM1/2WLT	35 to 40
Walnut Avenue	Secondary arterial	N/S	2	N/A	30
San Dimas Canyon Road (Arrow Highway to Bonita Avenue)	Major arterial	N/S	4	RMI	40
Wheeler Avenue	Secondary arterial	N/S	4	N/A	40
A Street	Local street	N/S	3	N/A	30
B Street	Collector street	N/S	3	N/A	25
C Street	Local street	N/S	3	N/A	25
D Street (3rd St. to Foothill Blvd.)	Collector street	N/S	3	N/A	35
E Street	Local street	N/S	2	N/A	25
Fairplex Drive	Local street	N/S	2	N/A	30
White Avenue	Secondary arterial	N/S	2 to 4	RMI/2WLT	45
Foothill Boulevard	Major arterial	E/W	4	RMI	35 to 45
Bonita Avenue	Secondary arterial	E/W	3	N/A	30
Third Street	Collector street	E/W	2	N/A	25 to 35
Second Street	Local street	E/W	2	N/A	25
Arrow Highway (Valley Center Avenue to San Dimas Canyon Road)	Secondary arterial	E/W	6	RMI	45
Arrow Highway (San Dimas Canyon Road to Fulton Road)	Secondary arterial	E/W	6	RMI	45

Notes:
[1] Roadway classifications obtained from City of La Verne General Plan Map (1998) and City of San Dimas General Plan (1991).
[2] Direction of roadways in the project area: N/S = North/South and E/W = East/West
[3] Number of lanes in both directions of the roadway
[4] Median type for the road: RMI – Raised Median Island, 2WLT = Two-way Left Turn Lane; N/A = Not applicable

Currently, vehicular access to the various La Verne Campus parking areas is provided via driveways on Bonita Avenue, Third Street, Second Street, 1st Street, B Street, C Street, D Street, and E Street. Vehicular access to the Park Campus site parking areas is currently provided via driveways on Wheeler Avenue, Park Avenue, and A Street. Vehicular access to the Campus West site parking areas is currently provided via driveways on Wheeler Avenue. It should be noted that the extension of Wheeler Avenue from its current terminus to Puddingstone Drive is near completion.

The Federal and State transportation system recognizes three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive car free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

There are no existing Class I or Class II bicycle facilities in the project vicinity. Based on the City of La Verne General Plan, Wheeler Avenue between Foothill Boulevard and Bonita Avenue is identified as a bicycle route. The General Plan has also identified Bonita Avenue, 1st Street, D Street and White Avenue in the project vicinity as future/proposed bicycle routes. In addition, the Old Town La Verne Specific Plan has proposed future bicycle connectors (Class I and/or Class III) in the project vicinity in an effort to connect Old Town and the University of La Verne with the proposed Gold Line station and the Fairplex.

Existing Public Transit

Public Bus Transit Services

Public bus transit service within the project study area is currently provided by the Foothill Transit. A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in Table 59. The existing public transit routes in the project site vicinity are illustrated in Figure 4–2 of the TIA.

Table 59 Existing Transit Routes

Roadway	Classification [1]	Travel Lanes		Median Types [4]	Speed Limit
		Direction [2]	# Lanes [3]		
San Dimas Avenue	Major arterial	N/S	2 to 4	RM1/2WLT	35 to 40
Walnut Avenue	Secondary arterial	N/S	2	N/A	30
San Dimas Canyon Road (Arrow Highway to Bonita Avenue)	Major arterial	N/S	4	RMI	40
Wheeler Avenue	Secondary arterial	N/S	4	N/A	40
A Street	Local street	N/S	3	N/A	30
B Street	Collector street	N/S	3	N/A	25
C Street	Local street	N/S	3	N/A	25
D Street (Third St. to Foothill Blvd.)	Collector street	N/S	3	N/A	35
E Street	Local street	N/S	2	N/A	25
Fairplex Drive	Local street	N/S	2	N/A	30
White Avenue	Secondary arterial	N/S	2 to 4	RMI/2WLT	45
Foothill Boulevard	Major arterial	E/W	4	RMI	35 to 45
Bonita Avenue	Secondary arterial	E/W	3	N/A	30
Third Street	Collector street	E/W	2	N/A	25 to 35
Second Street	Local street	E/W	2	N/A	25
Arrow Highway (Valley Center Avenue to San Dimas Canyon Road)	Secondary arterial	E/W	6	RMI	45
Arrow Highway (San Dimas Canyon Road to Fulton Road)	Secondary arterial	E/W	6	RMI	45

Notes:

[1] Roadway classifications obtained from City of La Verne General Plan Map (1998) and City of San Dimas General Plan (1991).

[2] Direction of roadways in the project area: N/S = North/South and E/W = East/West

[3] Number of lanes in both directions of the roadway

[4] Median type for the road: RMI – Raised Median Island, 2WLT = Two-way Left Turn Lane; N/A = Not applicable

[5] Bike lane

Foothill Transit operates six bus transit routes along major roadways within the traffic analysis study area, including routes on Foothill Boulevard, Bonita Avenue, San Dimas Avenue, D Street, and White Avenue/Arrow Highway. Foothill Transit routes provide headways ranging from two to five buses per hour during the morning and afternoon peak commute hours (i.e., the peak commute hour between 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., respectively). The six Foothill Transit routes in the traffic analysis study area provide services for an average of (i.e., average of the directional number of buses during the peak hours) roughly 28 and 31 buses during the weekday a.m. and p.m. peak hours, respectively.

Regional Rail Transit Network Connections

Los Angeles County and surrounding counties are interconnected by a regional network of rail lines, with Union Station in Downtown Los Angeles functioning as the hub of the rail system. Amtrak, Metro, and the Southern California Regional Rail Authority (SCRRA) operate a system of heavy rail, light rail and subway lines that provide interconnections throughout Los Angeles County and connections between the six county Southern California region including Los Angeles County, Orange County, Riverside County, San Bernardino County, San Diego County and Ventura County.

Metro operates the Gold Line Foothill Extension from Pasadena to Azusa which recently began service in March 2016. The 11.5-mile extension added six new stations in the cities of Arcadia, Monrovia, Duarte, Irwindale, and Azusa (which has two stations). The next phase of the Gold Line Foothill Extension project, comprising 12.3 miles, will add six new stations in the cities of Glendora, San Dimas, La Verne, Pomona, Claremont, and Montclair. This extension received its Final EIR certification in March 2013 and this project is currently in advanced conceptual engineering stage. When completed, the future La Verne station will be located north of Arrow Highway and east of E Street in the immediate vicinity of the main La Verne Campus.

Existing Intersection Levels of Service

Eighteen intersections were selected as study locations for the proposed Master Plan as shown in Figure 22. The operating conditions of intersections are described with the term level of service (“LOS”), a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, operating conditions with little to no delay, to LOS F, when traffic volumes exceed the intersection capacity and stop-and-go conditions result. More complete definitions of the individual categories of LOS for signalized and unsignalized intersections are shown in Table 60.

Table 60 provides the corresponding volume-to-capacity (v/c) ratios/vehicular delays for each studied intersection under existing conditions. As shown in Table 61, 16 of the 18 study intersections are currently operating at acceptable levels of service (LOS D or better) during the a.m. and p.m. peak hours. The following two study intersections are operating at LOS F during the weekday a.m. and p.m. peak hours under existing conditions: Intersection 5: A Street/Arrow Highway, and Intersection 6: B Street/Bonita Avenue.

It should be noted that at the time when the intersection turning movement traffic counts were being conducted, the B Street approaches at Bonita Avenue were operated under stop-sign control. This intersection was therefore appropriately analyzed as an unsignalized/two-way stop-controlled intersection under existing conditions, and the vehicular delays associated with the most constrained intersection approach were reported. The City of La Verne is completing the installation of a new traffic signal at this intersection. As further discussed under Impact T-1, the LOS for this intersection is expected to improve to an acceptable LOS upon completion of the traffic signal installation.

Table 60 Level of Service Criteria for Intersections

LOS	Signalized Intersections (ICU V/C ratio)	LOS Description	Unsignalized Intersections (HCM Delay Value sec/veh)	LOS Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.	< 10	Little or no delay
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 15	Short traffic delays
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 15 and ≤ 25	Average traffic delays
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 25 and ≤ 35	Long traffic delays
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 35 and ≤ 50	Very long traffic delays
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.	> 50	Severe congestion

Source: Linscott, Law & Greenspan Engineers, October 2016

Table 61 Existing Intersection Peak Hour Levels of Service

Int. No.	Intersection	Traffic Control	Peak Hour	V/C or Delay (sec/vehicle)	LOS[1]
1	San Dimas Avenue/ Arrow Highway	Signalized	AM PM	0.525 0.764	A C
2	Walnut Avenue/ Arrow Highway	Signalized	AM PM	0.547 0.654	A B
3	San Dimas Canyon Road/ Arrow Highway	Signalized	AM PM	0.583 0.603	A B
4	Wheeler Avenue/ Arrow Highway	Signalized	AM PM	0.608 0.629	B B
5	"A" Street/ Arrow Highway	Two-Way Stop	AM PM	>50.0 >50.0	F F
6	"B" Street/ Bonita Avenue	Two-Way Stop	AM PM	>50.0 >50.0	F F
7	"B" Street/ Third Street	All-Way Stop	AM PM	7.7 7.7	A A
8	"C" Street/ Bonita Avenue	Two-Way Stop	AM PM	34.9 34.7	D D
9	"C" Street/ Third Street	All-Way Stop	AM PM	7.9 8.5	A A
10	"D" Street/ Foothill Boulevard	Signalized	AM PM	0.470 0.730	A C
11	"D" Street/ Bonita Street	Signalized	AM PM	0.711 0.810	C D
12	"D" Street/ Third Street	All-Way Stop	AM PM	9.7 11.5	A B
13	"D" Street/ Second Street	All-Way Stop	AM PM	9.1 11.0	A B
14	"D" Street/ Parking Structure D	Two-Way Stop	AM PM	13.3 15.0	B C
15	"D" Street/ Arrow Highway	Signalized	AM PM	0.499 0.603	A B
16	"E" Street/ Second Street	All-Way Stop	AM PM	9.4 11.3	A B
17	"E" Street – Fairplex Drive/ Arrow Highway	Signalized	AM PM	0.675 0.745	B C
18	White Avenue/Arrow Highway	Signalized	AM PM	0.736 0.841	C D

[1] Level of Service (LOS) is based on the reported intersection capacity utilization (ICU) value for signalized intersections and the delay value for unsignalized intersections. Reported control delay value (in seconds per vehicle) for two-way stop controlled intersections represents the delay associated with the most constrained approach of the intersection.
Source: Linscott, Law & Greenspan Engineers 2016

SB 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 creates a process to change analysis of transportation impacts under the California Environmental Quality Act (Public Resources Code section 21000 and following) (CEQA), which could include analysis based on project vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. The intent of the original guidance documentation was geared towards projects within areas that are designated as transit priority areas first, to be followed by other areas of the State. OPR issued another draft discussion document in March, 2015, suggesting some new revisions to the formal CEQA guidelines. OPR has recently issued another guidance document (January 2016) and is requesting additional input. Therefore, these requirements are not binding at this time as the earliest adoption of formal changes to the CEQA guidelines is not expected until 2017 at the earliest. The impact analysis methodology used in this EIR is based on and is consistent with the current *State CEQA Guidelines,* which utilizes intersection level of service to determine impacts on the transportation system.

4.13.2 Impact Analysis

Methodology and Thresholds of Significance

Consistent with the *State CEQA Guidelines*, impacts related to transportation and circulation would be considered potentially significant if implementation of the proposed Master Plan would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit
- Conflict with an applicable congestion management program, including, but not limited to level of services standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways
- 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
- Substantially increase traffic-related hazards due to a design feature or incompatible uses
- Result in inadequate emergency access
- Conflict with adopted policies, plans, or programs supporting alternative transportation

The proposed Master Plan has potentially significant impacts in all of the environmental impact areas listed above. Therefore, all the issue areas above are discussed below under Impacts T-1 through T-5; the fourth and fifth bullet points are combined in one impact

analysis section below. The methodology used in the TIA to analyze the potential traffic impact characteristics of the project is explained below.

In order to estimate the traffic impact characteristics of the project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using existing and expected future traffic volumes without and with forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

Master Plan Traffic Generation

Traffic volumes expected to be generated by the proposed project during the weekday a.m. and p.m. peak hours, as well as on a daily basis, were estimated using rates published in the ITE *Trip Generation Manual*, 9th Edition publication. Traffic volumes expected to be generated by the forecast enrollment increases at the main La Verne Campus site were based upon rates per student. It is important to note that the inherent average ITE trip rates developed on a per student basis reflect traffic generation associated with all users groups (i.e., students, faculty, staff, visitors, and service). Traffic volumes expected to be generated by the residential component at the Campus West site were based upon rates per number of residential units. Traffic volumes expected to be generated by the retail/commercial and office components of the proposed project were based upon rates per 1,000 square feet of floor area. Trip generation average rates for the following uses were used to forecast the traffic volumes expected to be generated by the proposed project:

- ITE Land Use Code 210: Single-Family Detached Housing
- ITE Land Use Code 220: Apartment
- ITE Land Use Code 550: University/College

- ITE Land Use Code 710: General Office
- ITE Land Use Code 820: Shopping Center

In addition to the above project trip generation forecasts, a forecast was made of likely trip reductions due to the following: increases in on campus student housing, transit/walk trips, internal capture trips, and pass-by trips that could be anticipated at the site for the proposed uses. Trip generation credits were not taken for the uses/buildings proposed for demolition. One of the intents of the Master Plan is to replace these uses/buildings with new facilities in order to accommodate the proposed student enrollment forecasts. Further, vehicle trip generation for Universities is based on total student enrollment and not determined on a building by building basis.

On Campus Student Housing Adjustments

Based on information provided by the University, La Verne Campus currently provides a total of 874 beds for on-campus student housing. Phase I project is proposed to result in a net increase between 123 beds and 173 beds. While no increases in student housing is proposed for Phase II, the Phase III project is planned to provide an additional net increase between 571 beds and 991 beds. In order to determine the corresponding trip reduction expected due to the increases in on-campus housing, bed-to-student ratios were developed both for existing conditions as well as for each of the future analysis conditions. Based on this assessment, 10 percent, 5 percent, and 40 percent reduction adjustments were employed to the Phase I, Phase II, and Phase III projects, respectively, to account for the significant future increases in on-campus housing and the corresponding reduction in commuting students.

Transit/Walk Trip Adjustments

Based on a review of the existing transit opportunities in the project vicinity, a 5 percent adjustment was applied to the Phase I project components to account for transit use. It should be noted that the five percent adjustment was applied to the Phase I La Verne Campus trip generation forecasts after the student housing adjustments were applied.

With the anticipated completion of the Metro Gold Line Foothill Extension project and the close proximity of the proposed La Verne Gold Line Station, transit usage in the surrounding areas is expected to increase in both the Phase II and Phase III project conditions. For the main La Verne Campus, a transit adjustment of 15 percent was applied to the corresponding Phase II and Phase III trip generation forecasts after the student housing adjustments were applied to account for the proximity of the La Verne Gold Line Station and nearby transit lines. For the proposed uses on Campus West, a transit adjustment of 10 percent was applied to the corresponding Phase II and Phase III trip generation forecasts.

Internal Capture Reductions

Internal capture adjustments refer to a reduction of external trips for mixed-use developments such as the proposed Phase III project. Internal capture trips are those trips made internal to the site between land uses within a mixed-use environment. When

combined within a mixed-use development, land uses tend to interact, and thus attract a portion of each other's trip generation. Internal capture adjustments were applied only to the proposed Phase III retail/commercial component at the main La Verne Campus to account for the synergistic effects of the proposed retail/commercial use, as well as neighborhood walk-ins from other local community serving commercial/retail uses in Old Town. Furthermore, based on the locations of the proposed retail/commercial use, a significant number of patrons can also be expected to draw from the general University of La Verne school population (i.e., students, faculty, staff, and visitors). These internal trips are not generated on the external street system and can be made by walking without using streets external to the site. Based on a review of these synergistic effects and characteristics, a 50 percent adjustment was applied to the Phase III retail/commercial component. It should be noted that the internal capture adjustment was applied after the transit reduction was applied. No internal capture reductions were applied to any of the other project components and/or project phases.

Pass-By Trips

Pass-by trips are intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site. The source for the pass-by adjustment factors applied in the project trip generation forecasts are the ITE *Trip Generation Manual* and the ITE *Trip Generation Handbook (*ITE 2014). For this project, pass-by trip adjustments were applied only to the Phase III retail/commercial project component. No pass-by reductions were applied to any of the other project components and/or project phases.

Phase I Project Traffic Generation

The traffic generation forecast for Phase I of the proposed project is summarized in Table 62, which shows that this phase is forecast to generate an additional 126 vehicle trips (51 inbound trips and 75 outbound trips) during the weekday a.m. peak hour and 143 vehicle trips (79 inbound trips and 64 outbound trips) during the weekday p.m. peak hour. Over a 24-hour period, Phase I of the proposed project is forecast to generate an additional 1,518 daily trip ends during a typical weekday (759 inbound trips and 759 outbound trips).

Table 62 Master Plan Phase I Trip Generation

Land Use	Size	Daily Trip Ends (2) Volumes	AM Peak Hour			PM Peak Hour		
			IN	OUT	Total	IN	OUT	Total
LaVerne Campus	**s**							
University/College [3]	304 students	520	41	11	52	17	35	52
Less 10% student housing reduction [4]		-52	-4	-1	-5	-2	-4	-6
Less 5% transit/walk reduction [5]		-24	-2	-1	-3	-1	-2	-3
Subtotal		444	35	9	44	14	29	43
Campus West								
Apartments [6]	170 DI	1,130	17	70	87	68	37	105
Less 5% transit/walk reduction [5]		-56	-1	-4	-5	-3	-2	-5
Subtotal		1,074	16	66	82	65	35	100
Phase I Net Increase		1,518	51	75	126	79	64	143

[1] Source: ITE 2012
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 550 (University/College) trip generation average rates
- Daily trip rate: 1.71 trips/student, 50% inbound, 50% outbound
- AM peak hour trip rate: 0.17 trips/student, 78% inbound, 22% outbound
- PM peak hour trip rate: 0.17 trips/student, 32% inbound, 68% outbound

[4] A 10% trip reduction factor has been applied to reflect the net increase in additional student housing (i.e., number of beds) under Phase I
[5]Aa 5% transit/walking trip reduction factor has been applied to the proposed uses on the La Verne Campus and Campus West sites
[6] ITE Land Use Code 220 (Apartment) trip generation average rates
- Daily trip rate: 6.65 trips/dwelling unit, 50% inbound, 50% outbound
- AM peak hour trip rate: 0.51 trips/ dwelling unit, 20% inbound, 80% outbound
- PM peak hour trip rate: 0.62 trips/ dwelling unit, 65% inbound, 35% outbound

Phases I & II Project Traffic Generation

The traffic generation forecast for Phases I & II of the proposed project is summarized in Table 63, which shows that these phases are forecast to generate an additional combined 178 vehicle trips (93 inbound trips and 85 outbound trips) during the weekday a.m. peak hour and an additional combined 194 vehicle trips (93 inbound trips and 101 outbound trips) during the weekday PM peak hour. Over a 24-hour period, Phases I and II of the proposed project are forecast to generate an additional combined 2,006 daily trip ends during a typical weekday (1,003 inbound trips and 1,003 outbound trips).

Build-out (Phases I, II & III) Project Traffic Generation

The traffic generation forecast for Phases I, II & III of the proposed project (build-out) is summarized in Table 64, which shows that build-out of the proposed project is forecast to generate an additional combined 289 vehicle trips (184 inbound trips and 105 outbound trips) during the weekday a.m. peak hour and an additional combined 367 vehicle trips (149 inbound trips and 218 outbound trips) during the weekday PM peak hour. Over a 24-hour period, build-out of the proposed project is forecast to generate an additional, combined

3,656 daily trip ends during a typical weekday (1,828 inbound trips and 1,828 outbound trips).

Table 63 Master Plan Phases I and II Trip Generation

Land Use	Size	Daily Trip Ends (2) Volumes	AM Peak Hour			PM Peak Hour		
			IN	OUT	Total	IN	OUT	Total
LaVerne Campus								
University/College [3]	674 students	1,152	90	25	115	37	78	115
Less 10% student housing reduction [4]		-58	-5	-1	-6	-2	-4	-6
Less 5% transit/walk reduction [5]		-164	13	4	-17	-5	-11	-16
Subtotal		930	72	20	92	30	63	93
Campus West								
Apartments [6]	170 DI	1,130	17	70	87	68	37	105
Less 5% transit/walk reduction [5]		-114	-2	-7	-9	-7	-4	-11
Single family detached housing [7]		10	0	1	1	1	0	1
General Office [8]	1DU	56	7	1	8	1	6	7
Less 10% transit/walk reduction [5]	5,000 GSF	-6	-1	0	1	0	-1	-1
Subtotal		1,076	21	65	86	63	38	101
Phase I Net Increase		2,006	93	85	178	93	101	194

[1] Source: ITE 2012
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 550 (University/College) trip generation average rates
- Daily trip rate: 1.71 trips/student, 50% inbound, 50% outbound
- AM peak hour trip rate: 0.17 trips/student, 78% inbound, 22% outbound
- PM peak hour trip rate: 0.17 trips/student, 32% inbound, 68% outbound

[4] A 5% trip reduction factor has been applied to reflect the net increase in additional student housing (i.e., number of beds) under Phases I & 2
[5]Aa 15% transit/walking trip reduction factor has been applied to reflect the net increase in student housing (i.e., number of beds) under Phases I & II.
[6] ITE Land Use Code 220 (Apartment) trip generation average rates
- Daily trip rate: 6.65 trips/dwelling unit, 50% inbound, 50% outbound
- AM peak hour trip rate: 0.51 trips/ dwelling unit, 20% inbound, 80% outbound
- PM peak hour trip rate: 0.62 trips/ dwelling unit, 65% inbound, 35% outbound

[7] ITE Land Use Code 210 (Single-family Detached Dwelling) trip generation average rates
- Daily trip rate: 9.52 trips/dwelling unit, 50% inbound, 50% outbound
- AM peak hour trip rate: 0.75 trips/ dwelling unit, 25% inbound, 75% outbound
- PM peak hour trip rate: 0.62 trips/ dwelling unit, 65% inbound, 35% outbound

[8] ITE Land Use Code 710 (General Office Building) trip generation average rates
- Daily trip rate: 11.03 trips/1,000 SF of floor area, 50% inbound, 50% outbound
- AM peak hour trip rate: 1.56 trips/ dwelling unit, 88% inbound, 12% outbound
- PM peak hour trip rate: 1.49 trips/ dwelling unit, 17% inbound, 83% outbound

Table 64 Master Plan Build Out Phases I, II, and III Trip Generation

Land Use	Size	Daily Trip Ends (2) Volumes	AM Peak Hour			PM Peak Hour		
			IN	OUT	Total	IN	OUT	Total
LaVerne Campus								
University/College [3]	971 students	1,660	129	36	165	53	112	165
Less 40% student housing reduction [4]		(664)	(52)	(14)	(66)	(21)	(45)	(66)
Less 15% transit/walk reduction [5]		(150)	(12)	(3)	(15)	(5)	(10)	(15)
Retail/Commercial [6]	89,200 GLSF	3,808	53	33	86	159	172	331
Less 15% Transit/Walk Reduction [5]		(572)	(8)	(5)	(13)	(24)	(26)	(50)
Less 50% Internal Capture Reduction [7]		(1,618)	(23)	(14)	(37)	(68)	(73)	(141)
Less 34% Pass-by Reduction [8]		(550)	(7)	(5)	(12)	(23)	(25)	(48)
Subtotal		1,914	80	28	108	71	105	176
Campus West								
Apartments [6]	170 DU	1,130	17	70	87	68	37	105
Less 5% transit/walk reduction [5]		(114)	(2)	(7)	(9)	(7)	(4)	(11)
Single Family Detached Housing [10]		10	0	1	1	1	0	1
General Office [11]	1 DU	56	7	1	8	1	6	7
Less 10% Transit/Walk Reduction [5]	5,000 GSF	(6)	(1)	0	(1)	0	(1)	(1)
General Office [11]		740	92	13	105	17	83	100
Less 10% Transit/Walk Reduction [5]	67,000 GSF	(74)	(9)	(1)	(10)	(2)	(8)	(10)
Subtotal		1,742	104	77	181	78	113	191
Phase I Net Increase		3,656	184	105	289	149	218	367

[1] Source: ITE 2012
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 550 (University/College) trip generation average rates
- Daily trip rate: 1.71 trips/student, 50% inbound, 50% outbound
- AM peak hour trip rate: 0.17 trips/student, 78% inbound, 22% outbound
- PM peak hour trip rate: 0.17 trips/student, 32% inbound, 68% outbound

[4] A 10% trip reduction factor has been applied to reflect the net increase in additional student housing (i.e., number of beds) under Phase I
[5]Aa 5% transit/walking trip reduction factor has been applied to the proposed uses on the La Verne Campus and Campus West sites
[6] ITE Land Use Code 220 (Apartment) trip generation average rates
- Daily trip rate: 6.65 trips/dwelling unit, 50% inbound, 50% outbound
- AM peak hour trip rate: 0.51 trips/ dwelling unit, 20% inbound, 80% outbound
- PM peak hour trip rate: 0.62 trips/ dwelling unit, 65% inbound, 35% outbound

[7] A 50% internal capture trip reduction factor has been applied to the proposed retail/commercial uses to reflect the synergistic effects of the proposed mixed-use buildings. Internal capture adjustments were applied after the transit/walk reductions were applied.
[8] Pass-by trip reduction adjustment factor was derived based on a review of data provided in Appendix F of the ITE "Trip Generation Handbook", Third Edition, August 2014. Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pursuant to ITE guidelines, pass-by adjustments were applied after transit/walk reductions and internal capture reductions were applied.
[9] ITE Land Use Code 220 (Apartment) trip generation average rates.
- Daily Trip Rate: 6.65 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.51 trips/dwelling units; 20% inbound/80% outbound
- PM Peak Hour Trip Rate: 0.62 trips/dwelling units; 65% inbound/35% outbound

[10] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
- Daily Trip Rate: 9.52 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.75 trips/dwelling units; 25% inbound/75% outbound
- PM Peak Hour Trip Rate: 1.00 trips/dwelling units; 63% inbound/37% outbound

[11] ITE Land Use Code 710 (General Office Building) trip generation average rates.
- Daily Trip Rate: 11.03 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.56 trips/1,000 SF of floor area; 88% inbound/12% outbound
- PM Peak Hour Trip Rate: 1.49 trips/1,000 SF of floor area; 17% inbound/83% outbound

Master Plan Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the project sites have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to key traffic corridors (i.e., Arrow Highway, Bonita Avenue, Wheeler Avenue, D Street, E Street, etc.)
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals
- Existing intersection traffic volumes
- Shifts in existing trips due to the Phase I project closure of C Street (south of Third Street) and Second Street (one-way eastbound section east of C Street)
- Shifts in existing and future trips due to the Phase II project closure of Third Street (from east of Parking Lot A to C Street)
- Existing site access ingress/egress schemes
- Ingress/egress schemes planned for the proposed project
- Nearby population and employment centers

The general, directional traffic distribution patterns for the three project phases are presented in Appendix B of the Traffic Impact Study (TIA), which is included as Appendix E of this EIR. Separate traffic distribution patterns are provided for the La Verne Campus and Campus West sites. In addition, the traffic volume shifts due to the proposed segment closure of C Street and Second Street in Phase I and Third Street in Phase II are also presented in Appendix B of the TIA.

The forecast weekday a.m. and p.m. peak hour traffic volumes associated with Phase I of the proposed project are presented in Figure 24 and Figure 25, respectively. The traffic volume assignments presented in these figures reflect the corresponding traffic distribution characteristics shown in Appendix B of the TIA and the project traffic generation forecasts presented in Table 63.

The forecast weekday a.m. and p.m. peak hour traffic volumes associated with Phases I & II of the proposed project are presented in Figure 26 and Figure 27, respectively. The traffic volume assignments presented in these figures reflect the corresponding traffic distribution characteristics shown in Appendix B of the TIA and the project traffic generation forecasts presented in Table 63.

The forecast weekday a.m. and p.m. peak hour traffic volumes associated with project build-out (Phases I, II, & III) are presented in Figure 28 and Figure 29, respectively. The traffic volume assignments presented in these figures reflect the corresponding traffic distribution characteristics shown in Appendix B of the TIA and the project traffic generation forecasts presented in Table 64.

Figure 25 Phase I Trip Distribution, Weekday Morning Peak Hour

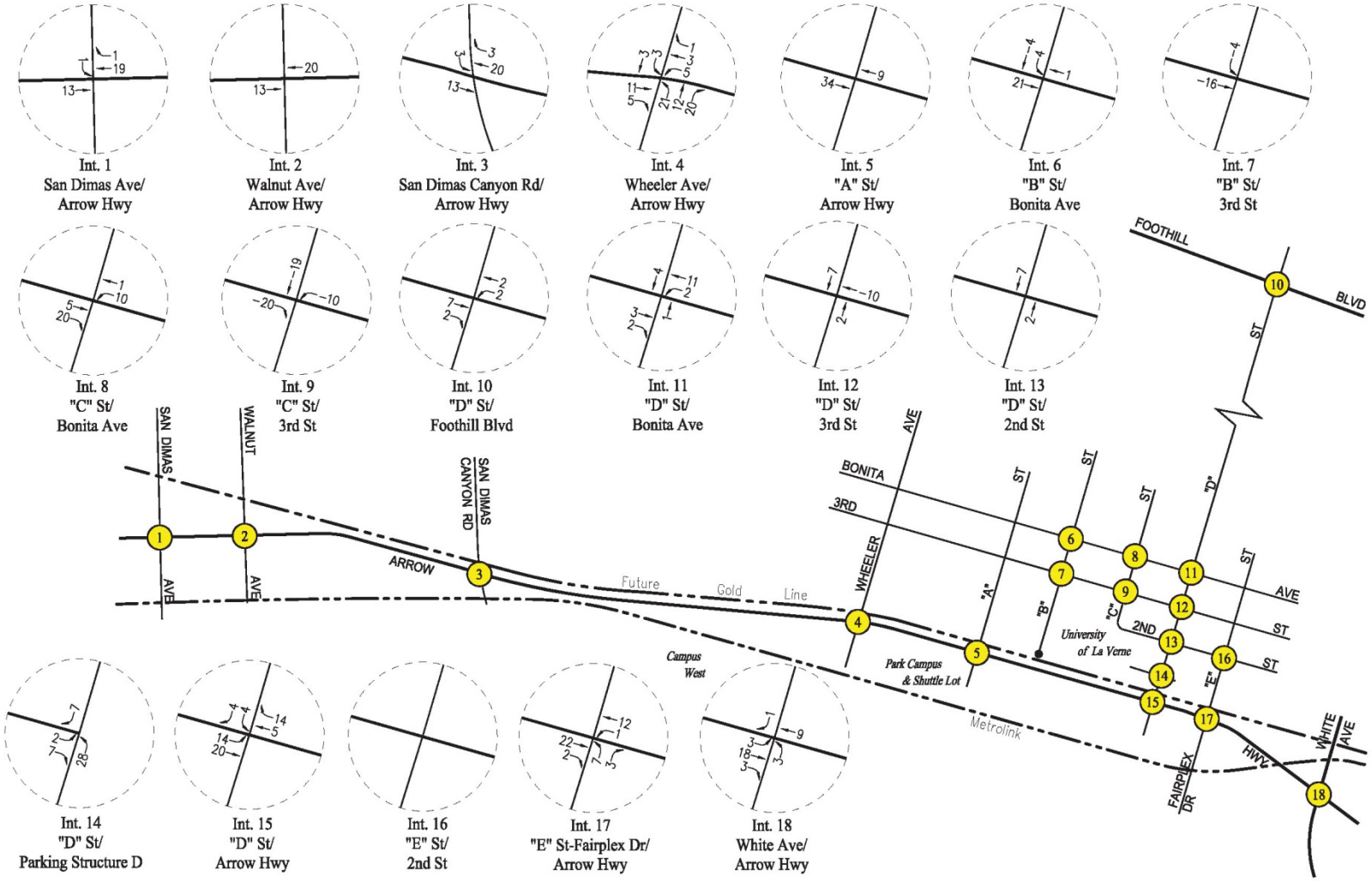


Figure 26 Phase I Trip Distribution, Weekday Afternoon Peak Hour

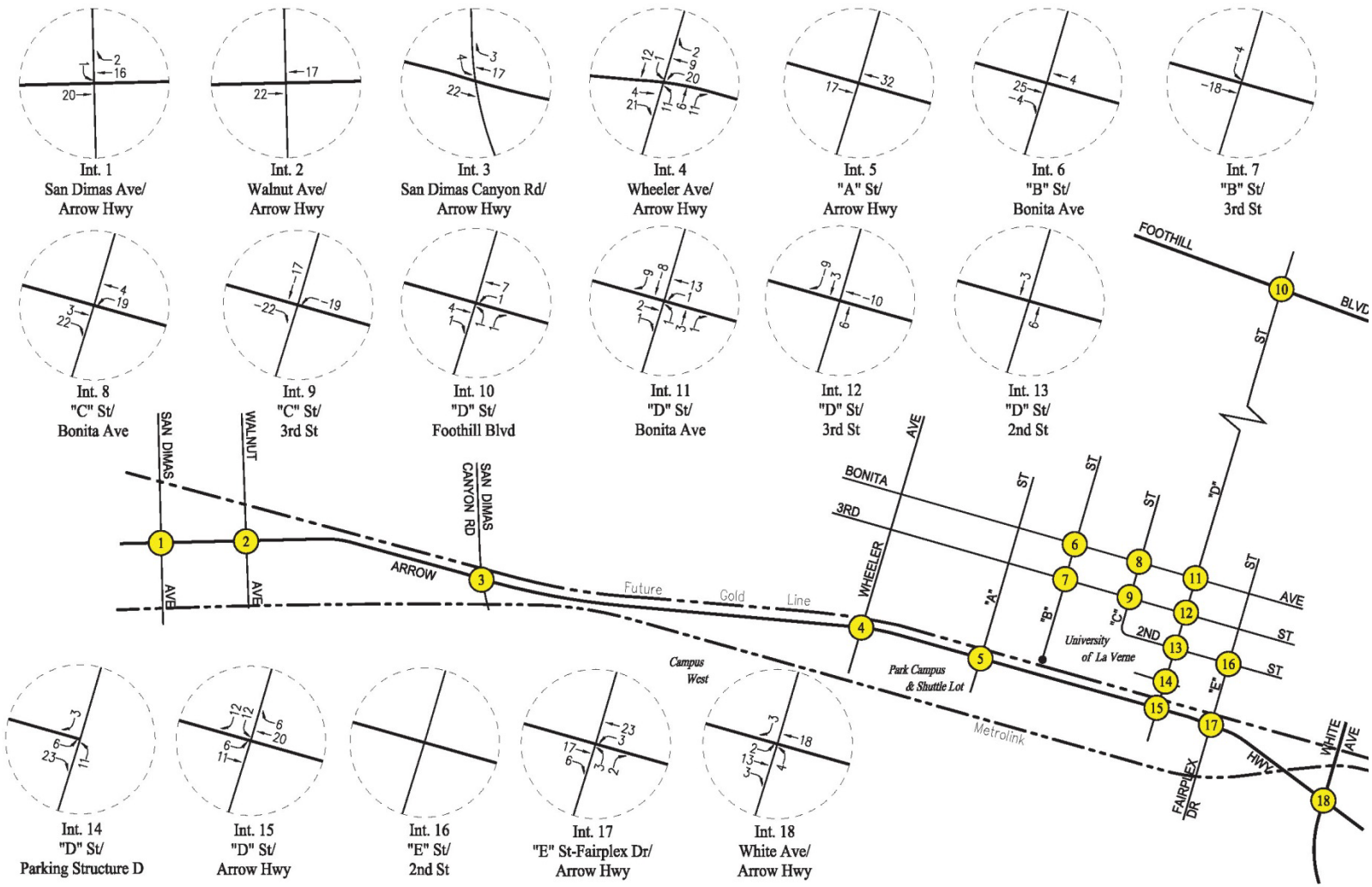


Figure 27 Phase I & II Trip Distribution, Weekday Morning Peak Hour

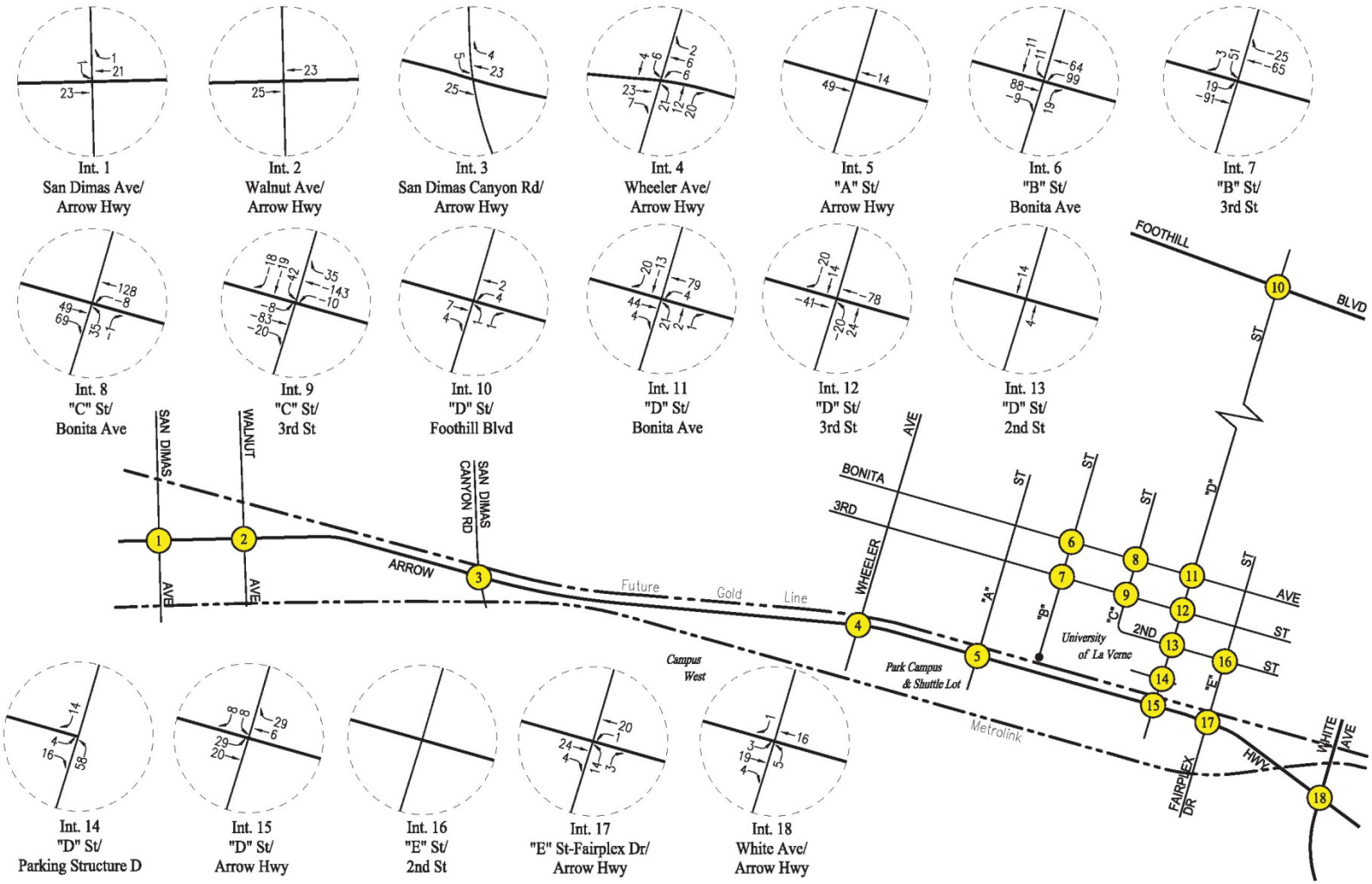


Figure 28 Phase I & II Trip Distribution, Weekday Afternoon Peak Hour

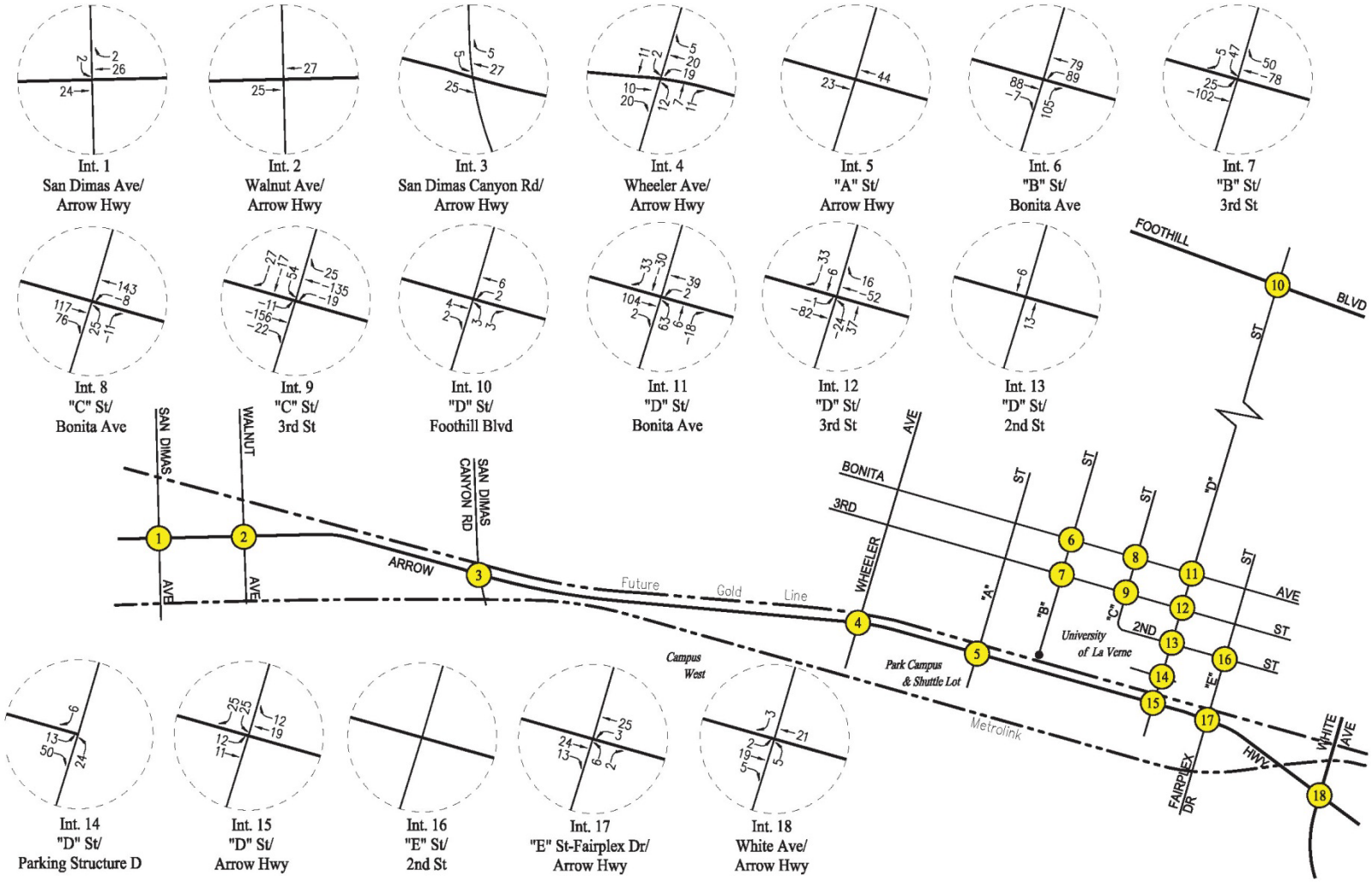


Figure 29 Project Build-Out Trip Distribution, Weekday Morning Peak Hour

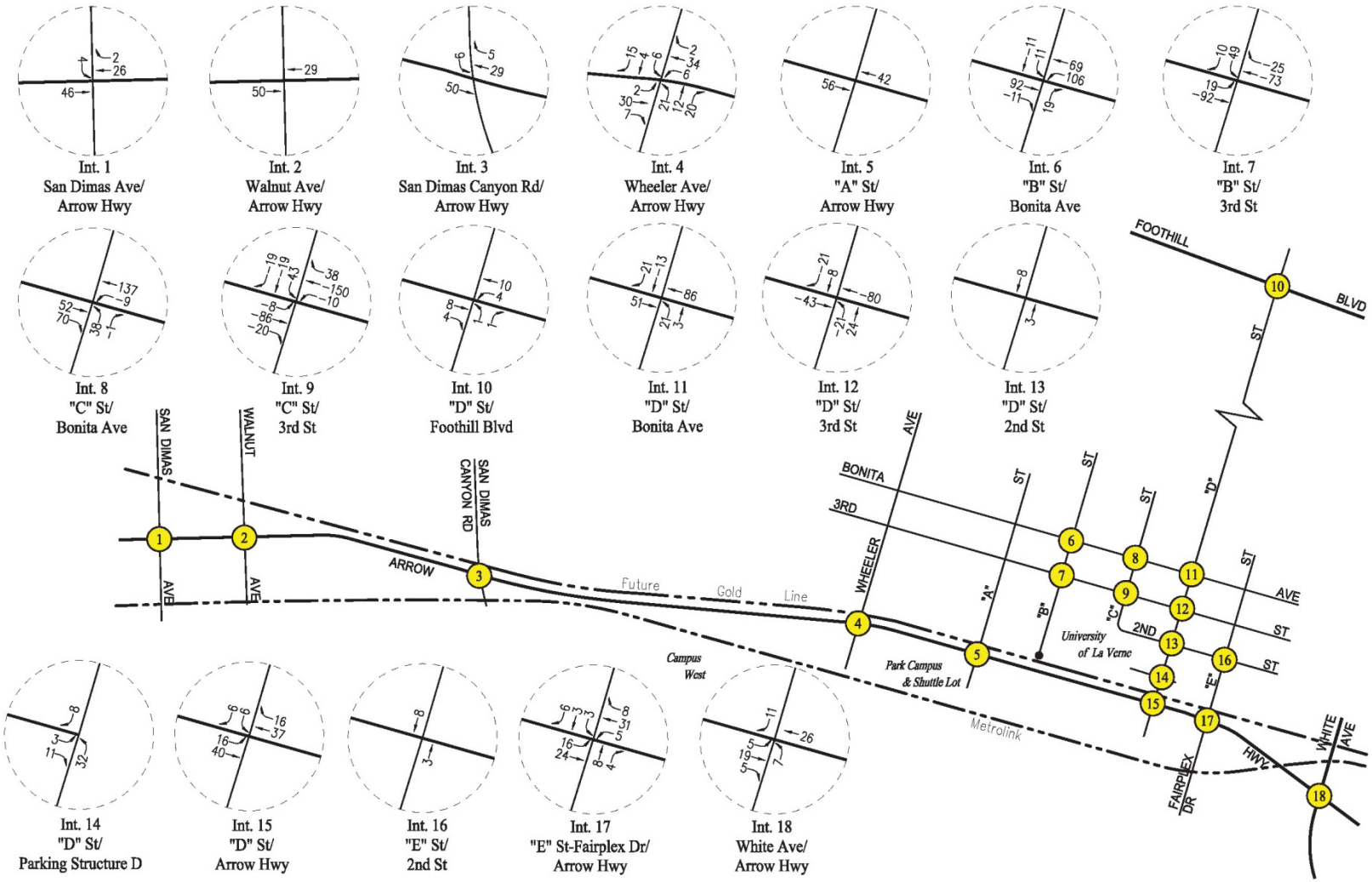
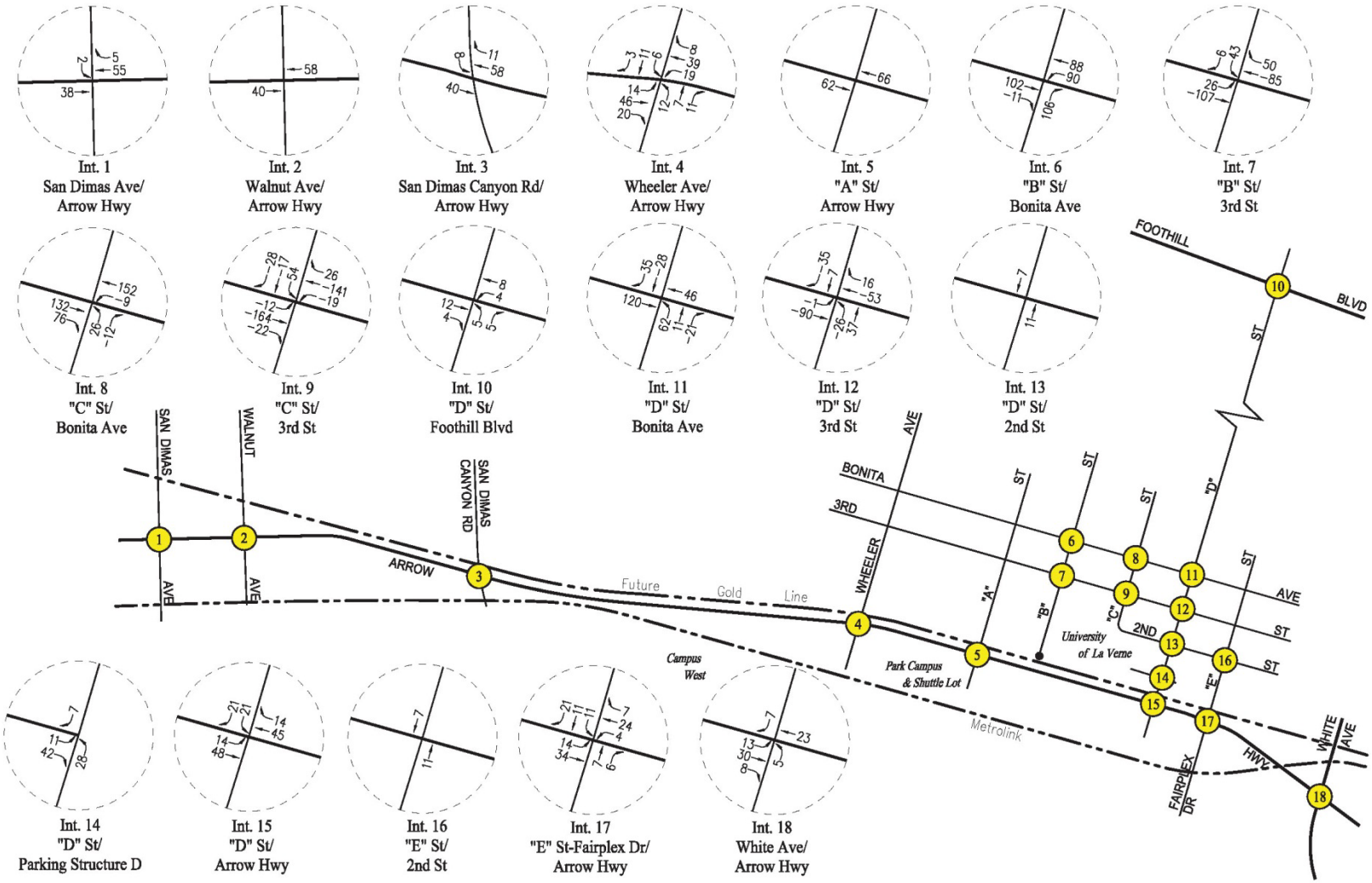


Figure 30 Project Build-Out Trip Distribution, Weekday Afternoon Peak Hour



Traffic Impact Analysis Methodology

The relative impact of the added project traffic volumes generated by the proposed project during the weekday a.m. and p.m. peak hours was evaluated based on analysis of existing and future operating conditions at the 18 key study intersections, without, then with, the proposed project. In conformance with the City of La Verne, City of San Dimas, and Los Angeles County Congestion Management Program requirements, existing weekday a.m. and p.m. peak hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU methodology is intended for signalized intersection analyses and estimates the volume-to-capacity (v/c) relationship for an intersection based on the individual v/c ratios for key conflicting traffic movements.

The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing. The overall intersection v/c ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). Further description of the ICU method and corresponding Level of Service is provided in Appendix C of the TIA.

Pursuant to the City of La Verne, City of San Dimas, and Los Angeles County Congestion Management Program requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and a dual left-turn capacity of 2,880 vph. Additionally, a clearance adjustment factor of 0.10 was added to each LOS calculation.

The *Highway Capacity Manual 2010* (HCM2010) methodology outlined in Chapter 19 of the HCM for unsignalized/two-way stop-controlled (TWSC) and Chapter 20 of the HCM for unsignalized/all-way stop-controlled (AWSC) study intersections was utilized for the analysis of unsignalized intersections. The TWSC methodology estimates the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns and determines the LOS for each constrained movement. It should be noted that LOS is not defined for the overall TWSC intersection because major-street movements with no delays typically result in a weighted average delay that is extremely low. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The average control delay is measured in seconds per vehicle, and includes delay due to deceleration to a stop at the back of the queue from free-flow speed, move-up time within the queue, stopped delay at the front of the queue, and delay due to acceleration back to free-flow speed. Further description of the HCM method and corresponding LOS also is provided in Appendix C of the TIA.

Impact Criteria and Thresholds

The relative impact of the site-related traffic volumes to be generated by the proposed project during the weekday a.m. and p.m. peak hours was evaluated based on analysis of

existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* or delay relationships and service level characteristics at each study intersection.

Fifteen of the 18 study intersections are located wholly in the City of La Verne, two study intersections are located wholly in the city of San Dimas (Intersection Nos. 1 and 2), one study intersection is shared between the two cities (Intersection No. 3), and two are CMP intersections (Intersection Nos. 1 and 17) . All 18 study intersections were evaluated for potential traffic impacts using the City of La Verne (Lead Agency) significant impact thresholds. Additionally, the San Dimas intersections were also evaluated for potential traffic impacts using the City of San Dimas' traffic analysis conditions and impact criteria.

City of La Verne Impact Criteria

The City of La Verne utilizes the following threshold of significance for signalized intersections:

- A significant impact occurs at a signalized intersection if the proposed Project causes an intersection V/C ratio to increase by 0.020 or more with resulting level of service of LOS E or LOS F. No significant impacts are deemed to occur at LOS A through LOS D, as these operating conditions exhibit sufficient surplus capacities to accommodate traffic increases with little effect on traffic delays.

The City of La Verne does not have established thresholds of significance for unsignalized intersections. Unsignalized intersection level of service is based on vehicular delay, but only for those movements that are required to stop. Other traffic may proceed through the subject intersection without delay. If the vehicular delay experienced by the stopped traffic is severe, then the potential improvement consisting of a traffic signal should be investigated. However, if the vehicular delay is experience by a low number of vehicles (typically from the minor/side streets) a traffic signal may not be warranted. Based on coordination with the City of La Verne, the following threshold of significance for unsignalized intersections is utilized:

- A significant impact occurs at an unsignalized intersection if the proposed Project causes the level of service to exceed LOS E, and a traffic signal is warranted. If the level of service is already LOS F without the proposed Project, then a significant impact will occur if the proposed Project causes the vehicular delay to increase by 10 percent or more provided a traffic signal is warranted.

It should be noted that the above thresholds of significance for both signalized and unsignalized intersections are consistent with those utilized in the approved Old Town La Verne Specific Plan EIR project in which La Verne Campus is located.

City of San Dimas Impact Criteria

For the study intersections located wholly or partially within the City of San Dimas, the significance of potential project-generated traffic impacts was identified using the traffic impact analysis guidelines set forth in the Los Angeles County Department of Public Works'

Traffic Impact Analysis Report Guidelines[2]. It should be noted that the City of San Dimas utilizes the same traffic analysis methodologies and significant thresholds as the Los Angeles County Department of Public Works. According to the County's published guidelines, the impact is considered significant if the project-related increase in the v/c ratio equals or exceeds the thresholds presented in Table 65.

Table 65 City of San Dimas Intersection Impact Threshold Criteria

Pre-Project v/c	Level of Service	Project Related Increase in v/c
≥ 0.71 - 0.80	C	equal to or greater than 0.04
≥ 0.81 - 0.90	D	equal to or greater than 0.02
≥ 0.91 or more	E/F	equal to or greater than 0.01

The County's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

City of La Verne Traffic Impact Analysis Scenarios

Level of Service calculations at all 18 study intersections were analyzed for the following impact analysis scenarios, which are consistent with methodologies required by the City of La Verne:

[a] Existing (year 2016) conditions.

[b] Condition [a] with completion and occupancy of the Phase I project.

[c] Condition [b] with implementation of the Phase I project mitigation measures where necessary.

[d] Condition [a] plus 1.60 percent (1.60 percent) annual ambient traffic growth through year 2021 and with completion and occupancy of the related projects (i.e., future year 2021 without project conditions).

[e] Condition [d] with completion and occupancy of the Phase I project (i.e., future year 2021 with Phase I project conditions).

[f] Condition [e] with implementation of the Phase I project mitigation measures, where necessary.

[g] Condition [a] with completion and occupancy of the Phases I & II project.

[h] Condition [g] with implementation of the Phases I & II project mitigation measures where necessary.

[2] *Traffic Impact Analysis Report Guidelines*, County of Los Angeles Department of Public Works, January 1997.

[i] Condition [a] plus 0.92 percent (0.92 percent) annual ambient traffic growth through year 2028 and with completion and occupancy of the related projects (i.e., future year 2028 without project conditions).

[j] Condition [i] with completion and occupancy of the Phases I & II project (i.e., future year 2028 with Phases I & II project conditions).

[k] Condition [j] with implementation of the Phases I & II project mitigation measures, where necessary.

[l] Condition [a] with completion and occupancy of the project at build-out.

[m] Condition [l] with implementation of the Phases I, II & III project mitigation measures where necessary.

[n] Condition [a] plus 0.84 percent (0.84 percent) annual ambient traffic growth through year 2035 and with completion and occupancy of the related projects (i.e., future year 2035 without project conditions).

[o] Condition [n] with completion and occupancy of the project at build-out (i.e., future year 2035 with project build-out conditions).

[p] Condition [o] with implementation of the Phases I, II & III project mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections.

City of San Dimas Traffic Impact Analysis Scenarios

In addition to analyzing all 18 study intersections using the Lead Agency (City of La Verne) analysis methodologies and significant impact criteria, for the study intersections located in the city of San Dimas, LOS calculations have also been prepared for the following impact analysis scenarios pursuant to County of Los Angeles requirements:

[a] Existing (year 2016) conditions.

[b] Condition [a] plus 1.60 percent annual ambient traffic growth through year 2021.

[c] Condition [b] with completion and occupancy of the Phase I project.

[d] Condition [c] with implementation of the Phase I project mitigation measures, where necessary.

[e] Condition [c] with cumulative traffic of other related projects.

[f] Condition [e] with implementation of cumulative mitigation measures, where necessary.

[g] Condition [a] plus 0.92 percent annual ambient traffic growth through year 2028.

[h] Condition [g] with completion and occupancy of the Phases I & II project.

[i] Condition [h] with implementation of the Phases I & II project mitigation measures, where necessary.

[j] Condition [h] with cumulative traffic of other related projects.

[k] Condition [j] with implementation of cumulative mitigation measures, where necessary.

[l] Condition [a] plus 0.84 percent annual ambient traffic growth through year 2035.

[m] Condition [l] with completion and occupancy of the project at build-out.

[n] Condition [m] with implementation of the Phases I, II & II project mitigation measures, where necessary.

[o] Condition [m] with cumulative traffic of other related projects.

[p] Condition [o] with implementation of cumulative mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections.

Congestion Management Program Traffic Impact Criteria

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.

According to Section D.9.1 (Appendix D, page D-6) of the 2010 CMP manual, the criteria for determining a significant transportation impact is listed below:

A significant transportation impact occurs when the proposed project increases traffic demand on a CMP facility by 2 percent of capacity ($V/C \geq 0.02$), causing or worsening LOS F ($V/C > 1.00$); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2 percent of capacity ($V/C \geq 0.02$).

The CMP impact criteria apply for analysis of both intersection and freeway monitoring locations.

Project Impacts and Mitigation Measures

IMPACT T-1. CIRCULATION SYSTEM PERFORMANCE

Full implementation of the Master Plan would increase traffic on the surrounding street network, contributing to increased delay at certain intersections that are projected to operate at unacceptable level of service. These impacts could be mitigated to a less than significant level for all intersections except the intersection of D Street and Bonita Avenue (during Phase II and Phase III peak hour conditions),, where no feasible mitigation measure exists that would reduce the identified impact to a less than significant level. The proposed Master Plan would therefore conflict with City of La Verne standards establishing measures of effectiveness for the performance of the circulation system, and this impact would be Class I, significant and unavoidable.

The results of the traffic impact analysis (carried out by using the ICU methodology for signalized intersections, the HCM methodology for unsignalized intersections, and application of the City of La Verne significant traffic impact criteria) are summarized in Table 66 for the Phase I project condition, Table 67 for the Phases I & II project condition, and Table 68 for the project build-out (Phases I, II & III) condition. The ICU/HCM data worksheets for the analyzed intersections are contained in Appendix C-1 of the TIA.

Table 66 Summary of Volume to Capacity Ratios, Delays, and LOS, Weekday Morning and Afternoon Peak Hours, Phase I

				[1]		[2]				[3]				[4]		[5]				[6]			
				Year 2016 w/ Project		Year 2016 Existing w/ Project				Year 2016 Existing w/ Project Mitigation				Year 2021 Future Pre-Project		Year 2021 Future w/ Project				Year 2021 Future w/ Project			
No.	Intersection	Traffic Control	Peak Hour	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(2)-(1)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(3)-(1)]	Miti-gated	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(5)-(4)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(6)-(4)]	Miti-gated
1	San Dimas Avenue/ Arrow Highway	Signalized	AM	0.525	A	0.530	A	0.005	No	0.530	A	0.005	---	0.570	A	0.575	A	0.005	No	0.575	A	0.005	---
			PM	0.764	C	0.769	C	0.005	No	0.769	C	0.005	---	0.826	D	0.831	D	0.005	No	0.831	D	0.005	---
2	Walnut Avenue/ Arrow Highway	Signalized	AM	0.547	A	0.551	A	0.004	No	0.551	A	0.004	---	0.590	A	0.594	A	0.004	No	0.594	A	0.004	---
			PM	0.654	B	0.659	B	0.005	No	0.659	B	0.005	---	0.707	C	0.711	C	0.004	No	0.711	C	0.004	---
3	San Dimas Avenue/ Arrow Highway	Signalized	AM	0.583	A	0.588	A	0.005	No	0.588	A	0.005	---	0.631	B	0.636	B	0.005	No	0.636	B	0.005	---
			PM	0.603	B	0.610	B	0.007	No	0.610	B	0.007	---	0.658	B	0.665	B	0.007	No	0.665	B	0.007	---
4	Wheeler Avenue/ Arrow Highway	Signalized	AM	0.628	B	0.638	B	0.010	No	0.638	B	0.010	---	0.680	B	0.694	B	0.014	No	0.694	B	0.014	---
			PM	0.705	C	0.727	C	0.022	No	0.727	C	0.022	---	0.807	D	0.833	D	0.026	No	0.833	D	0.026	---
5	"A" Street/ Arrow Highway	Two-Way Stop	AM	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---
			PM	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---
6	"B" Street/ Bonita Avenue [e]	Two-Way Stop	AM	>50.0	F	>50.0	F	[d]	Yes	0.666	B	N/A	Yes	0.713	C	0.714	C	0.001	No	0.714	C	0.001	---
			PM	>50.0	F	>50.0	F	[c]	No	0.656	B	N/A	---	0.688	B	0.701	C	0.013	No	0.701	C	0.013	---
7	"B" Street/ 3rd Street	All-Way Stop	AM	7.7	A	7.6	A	-0.1	No	7.6	A	-0.1	---	7.8	A	7.7	A	-0.1	No	7.7	A	-0.1	---
			PM	7.7	A	7.7	A	0.0	No	7.7	A	0.0	---	7.8	A	7.8	A	0.0	No	7.8	A	0.0	---
8	"C" Street/ Bonita Avenue	Two-Way Stop	AM	34.9	D	37.6	E	2.7	No	37.6	E	2.7	---	44.4	E	48.7	E	4.3	No	48.7	E	4.3	---
			PM	34.7	D	38.5	E	3.8	No	38.5	E	3.8	---	45.2	E	>50.0	F	[f]	No	>50.0	F	[f]	---
9	"C" Street/ 3rd Street	All-Way Stop	AM	7.9	A	7.8	A	-0.1	No	7.8	A	-0.1	---	8.1	A	7.9	A	-0.2	No	7.9	A	-0.2	---
			PM	8.5	A	8.1	A	-0.4	No	8.1	A	-0.4	---	8.6	A	8.3	A	-0.3	No	8.3	A	-0.3	---
10	"D" Street/ Foothill Boulevard	Signalized	AM	0.470	A	0.473	A	0.003	No	0.473	A	0.003	---	0.504	A	0.507	A	0.003	No	0.507	A	0.003	---
			PM	0.730	C	0.732	C	0.002	No	0.732	C	0.002	---	0.784	C	0.786	C	0.002	No	0.786	C	0.002	---
11	"D" Street/ Bonita Avenue	Signalized	AM	0.681	B	0.691	B	0.010	No	0.691	B	0.010	---	0.732	C	0.742	C	0.010	No	0.742	C	0.010	---
			PM	0.767	C	0.773	C	0.006	No	0.773	C	0.006	---	0.829	D	0.836	D	0.006	No	0.836	D	0.006	---
12	"D" Street/ 3rd Street	All-Way Stop	AM	9.7	A	9.7	A	0.0	No	9.7	A	0.0	---	10.3	B	10.3	B	0.0	No	10.3	B	0.0	---
			PM	11.5	B	11.4	B	-0.1	No	11.4	B	-0.1	---	12.6	B	12.5	B	-0.1	No	12.5	B	-0.1	---
13	"D" Street/ 2nd Street	All-Way Stop	AM	9.1	A	9.1	A	0.0	No	9.1	A	0.0	---	9.4	A	9.5	A	0.1	No	9.5	A	0.1	---
			PM	11.0	B	11.1	B	0.1	No	11.1	B	0.1	---	12.0	B	12.2	B	0.2	No	12.2	B	0.2	---
14	"D" Street/ Parking Structure D	Two-Way Stop	AM	13.3	B	13.7	B	0.4	No	13.7	B	0.4	---	14.2	B	14.7	B	0.5	No	14.7	B	0.5	---
			PM	15.0	C	16.2	C	1.2	No	16.2	C	1.2	---	16.6	C	18.3	C	1.7	No	18.3	C	1.7	---

				[1]		[2]				[3]				[4]		[5]				[6]			
				Year 2016 w/ Project		Year 2016 Existing w/ Project				Year 2016 Existing w/ Project Mitigation				Year 2021 Future Pre-Project		Year 2021 Future w/ Project				Year 2021 Future w/ Project			
No.	Intersection	Traffic Control	Peak Hour	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(2)-(1)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(3)-(1)]	Miti-gated	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(5)-(4)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(6)-(4)]	Miti-gated
15	"D" Street/ Arrow Highway	Signalized	AM	0.499	A	0.514	A	0.015	No	0.514	A	0.015	---	0.559	A	0.574	A	0.015	No	0.574	A	0.015	---
			PM	0.603	B	0.613	B	0.010	No	0.613	B	0.010	---	0.673	B	0.682	B	0.009	No	0.682	B	0.009	---
16	"E" Street/ 2nd Street	All-Way Stop	AM	9.4	A	9.4	A	0.0	No	9.4	A	0.0	---	9.8	A	9.8	A	0.0	No	9.8	A	0.0	---
			PM	11.3	B	11.3	B	0.0	No	11.3	B	0.0	---	12.2	B	12.2	B	0.0	No	12.2	B	0.0	---
17	"E" Street-Fairplex Drive/ Arrow Highway	Signalized	AM	0.675	B	0.685	B	0.010	No	0.685	B	0.010	---	0.738	C	0.748	C	0.010	No	0.748	C	0.010	---
			PM	0.745	C	0.753	C	0.008	No	0.753	C	0.008	---	0.832	D	0.840	D	0.008	No	0.840	D	0.008	---
18	White Avenue/ Arrow Highway	Signalized	AM	0.736	C	0.742	C	0.006	No	0.742	C	0.006	---	0.826	D	0.832	D	0.006	No	0.832	D	0.006	---
			PM	0.841	D	0.844	D	0.003	No	0.844	D	0.003	---	0.919	E	0.923	E	0.004	No	0.923	E	0.004	---

[a] Level of Service (LOS) is based on the reported ICU value for signalized intersections and the delay value for unsignalized intersections. Reported control delay value (in seconds per vehicle) for two-way stop controlled intersections represents the delay associated with the most constrained approach of the intersection.

[b] All intersections have been analyzed using the City of La Verne's significant impact criteria. For signalized intersections, an impact is considered significant if the project related increase in the volume-to-capacity ratio equals or exceeds 0.020 and results in a Level of Service (LOS) of E or F. For unsignalized intersections, an impact is considered significant if the project causes the Level of Service to exceed LOS E and a traffic signal is warranted. If the unsignalized intersection was operating at LOS F without the project, then an impact is considered significant if the project causes the delay to increase by ten percent (10%) or more provided a traffic signal is warranted.

[c] Although the project results in an increase in delay of ten percent (10%) or more, a significant impact is not identified because the intersection traffic volumes do not warrant the installation of a traffic signal. Refer to report text and Appendix D.

[d] The project results in an increase in delay of ten percent (10%) or more, and the intersection traffic volumes warrant the consideration of a traffic signal installation.

[e] A traffic signal was installed by the City subsequent to the conduct of the traffic counts.

[f] Although the project causes the Level of Service to exceed LOS E, a significant impact is not identified because the intersection traffic volumes do not warrant the installation of a traffic signal. Refer to report text and Appendix D.

Table 67 Summary of Volume to Capacity Ratios, Delays, and LOS, Weekday Morning and Afternoon Peak Hours, Phases I & II

				[1]		[2]				[3]				[4]		[5]				[6]			
				Year 2016 w/ Project		Year 2016 Existing w/ Project				Year 2016 Existing w/ Project Mitigation				Year 2021 Future Pre-Project		Year 2021 Future w/ Project				Year 2021 Future w/ Project			
No.	Intersection	Traffic Control	Peak Hour	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(2)-(1)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(3)-(1)]	Miti-gated	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(5)-(4)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(6)-(4)]	Miti-gated
1	San Dimas Avenue/ Arrow Highway	Signalized	AM	0.525	A	0.530	A	0.005	No	0.530	A	0.005	---	0.661	B	0.667	B	0.006	No	0.667	B	0.006	---
			PM	0.764	C	0.770	C	0.006	No	0.770	C	0.006	---	0.851	D	0.857	D	0.006	No	0.857	D	0.006	---
2	Walnut Avenue/ Arrow Highway	Signalized	AM	0.547	A	0.552	A	0.005	No	0.552	A	0.005	---	0.638	B	0.643	B	0.005	No	0.643	B	0.005	---
			PM	0.654	B	0.659	B	0.005	No	0.659	B	0.005	---	0.724	C	0.729	C	0.005	No	0.729	C	0.005	---
3	San Dimas Avenue/ Arrow Highway	Signalized	AM	0.583	A	0.589	A	0.006	No	0.589	A	0.006	---	0.644	B	0.650	B	0.006	No	0.650	B	0.006	---
			PM	0.603	B	0.611	B	0.008	No	0.611	B	0.008	---	0.669	B	0.679	B	0.010	No	0.679	B	0.010	---
4	Wheeler Avenue/ Arrow Highway	Signalized	AM	0.628	B	0.641	B	0.013	No	0.641	B	0.013	---	0.699	B	0.715	C	0.016	No	0.715	C	0.016	---
			PM	0.705	C	0.729	C	0.024	No	0.729	C	0.024	---	0.824	D	0.850	D	0.026	No	0.850	D	0.026	---
5	"A" Street/ Arrow Highway	Two-Way Stop	AM	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---
			PM	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---
6	"B" Street/ Bonita Avenue [e]	Two-Way Stop	AM	>50.0	F	>50.0	F	[d]	Yes	0.697	B	N/A	Yes	0.729	C	0.769	C	0.040	No	0.769	C	0.040	---
			PM	>50.0	F	>50.0	F	[d]	Yes	0.786	C	N/A	Yes	0.706	C	0.858	D	0.152	No	0.858	D	0.152	---
7	"B" Street/ 3rd Street	All-Way Stop	AM	7.7	A	7.8	A	0.1	No	7.8	A	0.1	---	7.9	A	7.8	A	-0.1	No	7.8	A	-0.1	---
			PM	7.7	A	7.7	A	0.0	No	7.7	A	0.0	---	8.0	A	7.8	A	-0.2	No	7.8	A	-0.2	---
8	"C" Street/ Bonita Avenue	Two-Way Stop	AM	34.9	D	>50.0	F	[f]	No	>50.0	F	[f]	---	47.2	E	>50.0	F	[f]	No	>50.0	F	[f]	---
			PM	34.7	D	>50.0	F	[f]	No	>50.0	F	[f]	---	48.6	E	>50.0	F	[f]	No	>50.0	F	[f]	---
9	"C" Street/ 3rd Street	All-Way Stop	AM	7.9	A	7.1	A	-0.8	No	7.1	A	-0.8	---	8.2	A	7.1	A	-1.1	No	7.1	A	-1.1	---
			PM	8.5	A	7.4	A	-1.1	No	7.4	A	-1.1	---	8.8	A	7.5	A	-1.3	No	7.5	A	-1.3	---
10	"D" Street/ Foothill Boulevard	Signalized	AM	0.470	A	0.476	A	0.005	No	0.476	A	0.005	---	0.529	A	0.535	A	0.005	No	0.535	A	0.005	---
			PM	0.730	C	0.734	C	0.004	No	0.734	C	0.004	---	0.811	D	0.815	D	0.004	No	0.815	D	0.004	---
11	"D" Street/ Bonita Avenue	Signalized	AM	0.681	B	0.736	C	0.055	No	0.736	C	0.055	---	0.775	C	0.831	D	0.056	No	0.831	D	0.056	---
			PM	0.767	C	0.833	D	0.066	No	0.833	D	0.066	---	0.883	D	0.961	E	0.078	Yes	0.961	E	0.078	No
12	"D" Street/ 3rd Street	All-Way Stop	AM	9.7	A	9.2	A	-0.5	No	9.2	A	-0.5	---	11.8	B	10.5	B	-1.3	No	10.5	B	-1.3	---
			PM	11.5	B	10.4	B	-1.1	No	10.4	B	-1.1	---	15.0	B	13.1	B	-1.9	No	13.1	B	-1.9	---
13	"D" Street/ 2nd Street	All-Way Stop	AM	9.1	A	9.2	A	0.1	No	9.2	A	0.1	---	10.2	B	10.4	B	0.2	No	10.4	B	0.2	---
			PM	11.0	B	11.3	B	0.3	No	11.3	B	0.3	---	14.3	B	14.9	B	0.6	No	14.9	B	0.6	---
14	"D" Street/ Parking Structure D	Two-Way Stop	AM	13.3	B	14.1	B	0.8	No	14.1	B	0.8	---	13.1	B	15.0	B	1.9	No	15.0	B	1.9	---
			PM	15.0	C	18.2	C	3.2	No	18.2	C	3.2	---	20.9	C	30.1	D	9.2	No	30.1	D	9.2	---

				[1]		[2]				[3]				[4]		[5]				[6]			
				Year 2016 w/ Project		Year 2016 Existing w/ Project				Year 2016 Existing w/ Project Mitigation				Year 2021 Future Pre-Project		Year 2021 Future w/ Project				Year 2021 Future w/ Project			
No.	Intersection	Traffic Control	Peak Hour	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(2)-(1)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(3)-(1)]	Miti-gated	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(5)-(4)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(6)-(4)]	Miti-gated
15	"D" Street/ Arrow Highway	Signalized	AM	0.499	A	0.529	A	0.030	No	0.529	A	0.030	---	0.628	B	0.658	B	0.030	No	0.658	B	0.030	---
			PM	0.603	B	0.621	B	0.018	No	0.621	B	0.018	---	0.689	B	0.707	C	0.018	No	0.707	C	0.018	---
16	"E" Street/ 2nd Street	All-Way Stop	AM	9.4	A	9.4	A	0.0	No	9.4	A	0.0	---	10.9	B	10.9	B	0.0	No	10.9	B	0.0	---
			PM	11.3	B	11.3	B	0.0	No	11.3	B	0.0	---	16.0	C	16.0	C	0.0	No	16.0	C	0.0	---
17	"E" Street-Fairplex Drive/ Arrow Highway	Signalized	AM	0.675	B	0.690	B	0.015	No	0.690	B	0.015	---	0.783	C	0.799	C	0.016	No	0.799	C	0.016	---
			PM	0.745	C	0.758	C	0.013	No	0.758	C	0.013	---	0.851	D	0.865	D	0.014	No	0.865	D	0.014	---
18	White Avenue/ Arrow Highway	Signalized	AM	0.736	C	0.745	C	0.009	No	0.745	C	0.009	---	0.914	E	0.923	E	0.009	No	0.923	E	0.009	---
			PM	0.841	D	0.846	D	0.005	No	0.846	D	0.005	---	0.970	E	0.975	E	0.005	No	0.975	E	0.005	---

[a] Level of Service (LOS) is based on the reported ICU value for signalized intersections and the delay value for unsignalized intersections. Reported control delay value (in seconds per vehicle) for two-way stop controlled intersections represents the delay associated with the most constrained approach of the intersection.

[b] For signalized intersections located in the City of La Verne, an impact is considered significant if the project related increase in the volume-to-capacity ratio equals or exceeds 0.020 and results in a Level of Service (LOS) of E or F.

For unsignalized intersections located in the City of La Verne, an impact is considered significant if the project causes the Level of Service to exceed LOS E and a traffic signal is warranted. If the unsignalized intersection was operating at LOS F without the project, then an impact is considered significant if the project causes the delay to increase by ten percent (10%) or more and a traffic signal is warranted.

For intersections located in the City of San Dimas, according to the County of Los Angeles Department of Public Works' *Traffic Impact Analysis Report Guidelines*, January 1, 1997, Page 6: an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:

Pre-Project V/C	LOS	Project Related Increase in v/c
> 0.700 - 0.800	C	equal to or greater than 0.040
> 0.800 - 0.900	D	equal to or greater than 0.020
> 0.900	E/F	equal to or greater than 0.010

[c] Although the project results in an increase in delay of ten percent (10%) or more, a significant impact is not identified because the intersection traffic volumes do not warrant the installation of a traffic signal. Refer to report text for further discussion.

[d] The project results in an increase in delay of ten percent (10%) or more, and the intersection traffic volumes warrant the consideration of a traffic signal installation.

[e] A traffic signal was installed by the City subsequent to the conduct of the traffic counts.

[f] Although the project causes the Level of Service to exceed LOS E, a significant impact is not identified because the intersection traffic volumes do not warrant the installation of a traffic signal. Refer to report text for further discussion.

Table 68 Summary of Volume to Capacity Ratios, Delays, and LOS, Weekday AM and PM Peak Hours, Full Build-Out (Phases I, II, & III)

				[1]		[2]				[3]				[4]		[5]				[6]			
				Year 2016 w/ Project		Year 2016 Existing w/ Project				Year 2016 Existing w/ Project Mitigation				Year 2021 Future Pre-Project		Year 2021 Future w/ Project				Year 2021 Future w/ Project			
No.	Intersection	Traffic Control	Peak Hour	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(2)-(1)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(3)-(1)]	Miti-gated	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(5)-(4)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(6)-(4)]	Miti-gated
1	San Dimas Avenue/ Arrow Highway	Signalized	AM	0.525	A	0.534	A	0.009	No	0.534	A	0.009	---	0.684	B	0.696	B	0.012	No	0.696	B	0.012	---
			PM	0.764	C	0.773	C	0.009	No	0.773	C	0.009	---	0.888	D	0.897	D	0.009	No	0.897	D	0.009	---
2	Walnut Avenue/ Arrow Highway	Signalized	AM	0.547	A	0.553	A	0.006	No	0.553	A	0.006	---	0.664	B	0.670	B	0.006	No	0.670	B	0.006	---
			PM	0.654	B	0.662	B	0.008	No	0.662	B	0.008	---	0.754	C	0.762	C	0.008	No	0.762	C	0.008	---
3	San Dimas Avenue/ Arrow Highway	Signalized	AM	0.583	A	0.590	A	0.007	No	0.590	A	0.007	---	0.671	B	0.678	B	0.007	No	0.678	B	0.007	---
			PM	0.603	B	0.616	B	0.013	No	0.616	B	0.013	---	0.696	B	0.715	C	0.019	No	0.715	C	0.019	---
4	Wheeler Avenue/ Arrow Highway	Signalized	AM	0.628	B	0.648	B	0.020	No	0.648	B	0.020	---	0.729	C	0.752	C	0.023	No	0.752	C	0.023	---
			PM	0.705	C	0.739	C	0.034	No	0.739	C	0.034	---	0.856	D	0.893	D	0.037	No	0.893	D	0.037	---
5	"A" Street/ Arrow Highway	Two-Way Stop	AM	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---	>50.0	F	>50.0	F	[d]	Yes	>50.0	F	[g]	Yes
			PM	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---
6	"B" Street/ Bonita Avenue [e]	Two-Way Stop	AM	>50.0	F	>50.0	F	[d]	Yes	0.699	B	N/A	Yes	0.761	C	0.804	D	0.043	No	0.804	D	0.043	---
			PM	>50.0	F	>50.0	F	[d]	Yes	0.789	C	N/A	Yes	0.736	C	0.894	D	0.158	No	0.894	D	0.158	---
7	"B" Street/ 3rd Street	All-Way Stop	AM	7.7	A	7.8	A	0.1	No	7.8	A	0.1	---	8.0	A	7.8	A	-0.2	No	7.8	A	-0.2	---
			PM	7.7	A	7.7	A	0.0	No	7.7	A	0.0	---	8.1	A	7.8	A	-0.3	No	7.8	A	-0.3	---
8	"C" Street/ Bonita Avenue	Two-Way Stop	AM	34.9	D	>50.0	F	[f]	No	>50.0	F	[f]	---	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---
			PM	34.7	D	>50.0	F	[f]	No	>50.0	F	[f]	---	>50.0	F	>50.0	F	[c]	No	>50.0	F	[c]	---
9	"C" Street/ 3rd Street	All-Way Stop	AM	7.9	A	7.1	A	-0.8	No	7.1	A	-0.8	---	8.2	A	7.2	A	-1.0	No	7.2	A	-1.0	---
			PM	8.5	A	7.4	A	-1.1	No	7.4	A	-1.1	---	8.9	A	7.5	A	-1.4	No	7.5	A	-1.4	---
10	"D" Street/ Foothill Boulevard	Signalized	AM	0.470	A	0.476	A	0.006	No	0.476	A	0.006	---	0.550	A	0.556	A	0.006	No	0.556	A	0.006	---
			PM	0.730	C	0.739	C	0.009	No	0.739	C	0.009	---	0.845	D	0.854	D	0.009	No	0.854	D	0.009	---
11	"D" Street/ Bonita Avenue	Signalized	AM	0.681	B	0.738	C	0.058	No	0.738	C	0.058	---	0.808	D	0.868	D	0.061	No	0.868	D	0.061	---
			PM	0.767	C	0.834	D	0.068	No	0.834	D	0.068	---	0.919	E	1.005	F	0.086	Yes	1.005	F	0.086	No
12	"D" Street/ 3rd Street	All-Way Stop	AM	9.7	A	9.2	A	-0.5	No	9.2	A	-0.5	---	12.3	B	10.7	B	-1.6	No	10.7	B	-1.6	---
			PM	11.5	B	10.4	B	-1.1	No	10.4	B	-1.1	---	16.9	C	13.8	B	-3.1	No	13.8	B	-3.1	---
13	"D" Street/ 2nd Street	All-Way Stop	AM	9.1	A	9.1	A	0.0	No	9.1	A	0.0	---	10.5	B	10.6	B	0.1	No	10.6	B	0.1	---
			PM	11.0	B	11.3	B	0.3	No	11.3	B	0.3	---	15.5	C	16.2	C	0.7	No	16.2	C	0.7	---
14	"D" Street/ Parking Structure D	Two-Way Stop	AM	13.3	B	13.6	B	0.3	No	13.6	B	0.3	---	13.7	B	14.9	B	1.2	No	14.9	B	1.2	---
			PM	15.0	C	18.0	C	3.0	No	18.0	C	3.0	---	23.2	C	34.7	D	11.5	No	34.7	D	11.5	---

				[1]		[2]				[3]				[4]		[5]				[6]			
				Year 2016 w/ Project		Year 2016 Existing w/ Project				Year 2016 Existing w/ Project Mitigation				Year 2021 Future Pre-Project		Year 2021 Future w/ Project				Year 2021 Future w/ Project			
No.	Intersection	Traffic Control	Peak Hour	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(2)-(1)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(3)-(1)]	Miti-gated	V/C or Delay	LOS [a]	V/C or Delay	LOS [a]	Change V/C or Delay [(5)-(4)]	Signif. Impact [b]	V/C or Delay	LOS [a]	Change V/C or Delay [(6)-(4)]	Miti-gated
15	"D" Street/ Arrow Highway	Signalized	AM	0.499	A	0.524	A	0.025	No	0.524	A	0.025	---	0.650	B	0.675	B	0.025	No	0.675	B	0.025	---
			PM	0.603	B	0.626	B	0.023	No	0.626	B	0.023	---	0.716	C	0.740	C	0.024	No	0.740	C	0.024	---
16	"E" Street/ 2nd Street	All-Way Stop	AM	9.4	A	9.5	A	0.1	No	9.5	A	0.1	---	11.4	B	11.5	B	0.1	No	11.5	B	0.1	---
			PM	11.3	B	11.5	B	0.2	No	11.5	B	0.2	---	17.7	C	19.4	C	1.7	No	19.4	C	1.7	---
17	"E" Street-Fairplex Drive/ Arrow Highway	Signalized	AM	0.675	B	0.688	B	0.013	No	0.688	B	0.013	---	0.816	D	0.829	D	0.013	No	0.779	C	-0.037	---
			PM	0.745	C	0.774	C	0.029	No	0.774	C	0.029	---	0.887	D	0.917	E	0.030	Yes	0.873	D	-0.014	Yes
18	White Avenue/ Arrow Highway	Signalized	AM	0.736	C	0.752	C	0.016	No	0.752	C	0.016	---	0.950	E	0.966	E	0.016	No	0.966	E	0.016	---
			PM	0.841	D	0.848	D	0.007	No	0.848	D	0.007	---	1.013	F	1.020	F	0.007	No	1.020	F	0.007	---

[a] Level of Service (LOS) is based on the reported ICU value for signalized intersections and the delay value for unsignalized intersections. Reported control delay value (in seconds per vehicle) for two-way stop controlled intersections represents the delay associated with the most constrained approach of the intersection.
[b] For signalized intersections located in the City of La Verne, an impact is considered significant if the project related increase in the volume-to-capacity ratio equals or exceeds 0.020 and results in a Level of Service (LOS) of E or F.
For unsignalized intersections located in the City of La Verne, an impact is considered significant if the project causes the Level of Service to exceed LOS E and a traffic signal is warranted. If the unsignalized intersection was operating at LOS F without the project, then an impact is considered significant if the project causes the delay to increase by ten percent (10%) or more and a traffic signal is warranted.
For intersections located in the City of San Dimas, according to the County of Los Angeles Department of Public Works' *Traffic Impact Analysis Report Guidelines*, January 1, 1997, Page 6: an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:

Pre-Project V/C	LOS	Project Related Increase in v/c
> 0.700 - 0.800	C	equal to or greater than 0.040
> 0.800 - 0.900	D	equal to or greater than 0.020
> 0.900	E/F	equal to or greater than 0.010

[c] Although the project results in an increase in delay of ten percent (10%) or more, a significant impact is not identified because the intersection traffic volumes do not warrant the installation of a traffic signal. Refer to report text for further discussion.
[d] The project results in an increase in delay of ten percent (10%) or more, and the intersection traffic volumes warrant the consideration of a traffic signal installation.
[e] A traffic signal was installed by the City subsequent to the conduct of the traffic counts.
[f] Although the project causes the Level of Service to exceed LOS E, a significant impact is not identified because the intersection traffic volumes do not warrant the installation of a traffic signal. Refer to report text for further discussion.
[g] The proposed improvement will improve the corresponding southbound approach delay to better than pre-project conditions. Refer to report text for further discussion.

The City of La Verne uses the determination of whether traffic signal warrant analyses are satisfied as part of their criteria for determining whether or not there is a significant impact at unsignalized intersections. Therefore, traffic signal warrant analyses have been prepared to determine whether traffic signals are warranted at the A Street/Arrow Highway and C Street/Bonita Avenue intersections. The determination of whether the installation of a traffic signal is warranted was based on criteria set forth in Chapter 4C of the Manual on Uniform Traffic Control Devices (MUTCD). It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if none of the traffic signal warrants are met, these other factors may be just cause for consideration of a traffic signal installation. The lead agency must carefully consider all aspects related to installation of traffic controls.

Traffic signal warrants were prepared for the A Street/Arrow Highway and C Street/Bonita Avenue intersections. Specifically, Warrant No. 3 (Peak Hour Volume) traffic signal warrants were prepared for both intersections. The traffic signal warrant calculations were based on existing and future a.m. and p.m. peak hour volumes. The traffic signal warrant worksheets are provided in Appendix D of the TIA.

It should be noted that at the time when the intersection turning movement traffic counts were being conducted, the B Street approaches at Bonita Avenue (Int. 6) were operated under stop-sign control. Therefore, this intersection was appropriately analyzed as an unsignalized/two-way stop-controlled intersection under existing conditions and the vehicular delays associated with the most constrained intersection approach were reported. The City of La Verne is completing installation of a new traffic signal at this intersection. The intersection level of service operations are expected to improve upon completion of the traffic signal installation.

Using the information in Table 66, Table 67, and Table 68, the proposed project is expected to result in significant traffic impacts at the following City of La Verne study intersections.

Phase I

- Int. No. 6: B Street/Bonita Avenue (Existing with Project Impact Only)

Phases I & II

- Int. No. 6: B Street/Bonita Avenue (Existing with Project Impact Only)
- Int. No. 11: D Street/Bonita Avenue (Year 2028 with Project Impact Only)

Phases I, II, & III

- Int. No. 5: A Street/Arrow Highway (Year 2035 with Project Impact Only)
- Int. No. 6: B Street/Bonita Avenue (Existing with Project Impact Only)
- Int. No. 11: D Street/Bonita Avenue (Year 2035 with Project Impact Only)
- Int. No. 17: E Street-Fairplex Drive/Arrow Highway (Year 2035 with Project Impact Only)

Section 10.0 of the TIA includes a supplemental analysis for the three study intersections located wholly or partially in the city of San Dimas, using the ICU methodology and application of the City of San Dimas significant traffic impact criteria. This analysis found that traffic from the proposed project, ambient traffic growth, and related projects would not lead to significant impacts at any of the City of San Dimas studied intersections.

The following paragraphs provide an overview of transportation improvement measures that are anticipated to reduce the project's traffic impacts to less than significant levels. Transportation improvement measures typically consist of improvements such as intersection restriping and/or roadway widening to accommodate additional travel lanes, traffic signal installations/modifications, transportation demand management measures aimed at reducing overall trip generation, and enhancements to overall traffic signal coordination systems. These transportation improvement measures are expressed as mitigation measures at the end of this section, except in the case of the installation of a traffic signal at Intersection No. 6: B Street/Bonita Avenue, where a traffic signal is already being installed by the City of La Verne and will be operational shortly, thus reducing existing and potential future impacts to a less than significant level at this intersection.

Intersection No. 5: A Street/Arrow Highway

This intersection is expected to be significantly impacted by the proposed project under the Year 2035 Project Build-out (Phases I, II & III) condition (a.m. peak hour impact). No significant project impacts were identified under the first two phases of project development. As stated in the traffic signal warrant guidelines (refer to the traffic signal warrant analysis worksheets in *Appendix D* of the TIA), the minimum traffic volume threshold to meet the peak hour volume warrant for a minor street approach with one travel lane is 100 vehicles per hour (vph). The total traffic volumes in the year 2035 conditions on the southbound A Street approach (representing the higher approach of the minor street) are forecast to only total 101 vehicles during the a.m. peak hour and 42 vehicles during the p.m. peak hour. As such, the peak hour volume warrant is just marginally satisfied during the a.m. peak hour. Furthermore, it is noted that while the proposed project is anticipated to result in some added traffic along the Arrow Highway corridor (i.e., via eastbound and westbound through movements), it is not expected to contribute any peak hour traffic volume to the subject minor street approaches. Therefore, the minimum traffic volume threshold of 100 vph is forecast to be marginally met in the year 2035 conditions, with or without the proposed project traffic.

Currently, one railroad track (for freight use) traverses across the north leg of the A Street/Arrow Highway intersection in an east-west direction. As part of the Metro Foothill Gold Line Extension project, two additional tracks will be added in order to accommodate one eastbound Gold Line train and one westbound Gold Line train. As the Metro Foothill Gold Line Extension project is currently under advanced conceptual engineering stage, final approved plans are not available at this time.

In consideration of the above, the recommended project mitigation for this intersection consists of restriping the southbound A Street approach from one shared

left/through/right-turn lane to one shared left/through lane and one right-turn only lane. Adequate curb-to-curb width exists to accommodate this restriping measure. This measure is expected to reduce the project's significant traffic impact during the a.m. peak hour to less than significant levels.

From a timing perspective, since the significant traffic impact at the A Street/Arrow Highway intersection is not expected to occur until the year 2035 conditions (i.e., well after the Foothill Gold Line Extension project is proposed to be completed), it is recommended that the University of La Verne continue to coordinate with the City and Metro regarding the final rail line/track design and alignment at this location to determine if the recommended restriping measure can be integrated into Metro's overall design. Furthermore, although the peak hour volume warrant appears to be met in the 2035 conditions (just marginally), it is recommended that additional traffic signal warrant analyses be prepared by Metro and/or the City of La Verne in accordance to MUTCD guidelines (e.g., eight-hour vehicular volume warrant, four-hour vehicular volume warrant), to determine if other signal warrants are met prior to making a final decision regarding any traffic signal installation.

Should the recommended mitigation measure not be reviewed and approved by the City of La Verne (due to potential unknown elements associated with Metro's design), a substitute measure of equal or greater effectiveness would need to be determined. In the event that the proposed mitigation measure is not approved and a substitute measure is not feasible, the impact would remain significant and unavoidable in the Year 2035 Project Build-out (Phases I, II, and III) conditions.

Intersection No. 6: B Street/Bonita Avenue

As analyzed under the current two-way stop-control operations, the intersection of B Street and Bonita Avenue is expected to be significantly impacted by the proposed project during the a.m. peak hour under the Existing With Phase I Project conditions. In addition, this intersection is also expected to be significantly impacted during both the a.m. and p.m. peak hours under the Existing With Phases I & II Project and Existing With Project Build-out (Phases I, II & III) conditions. The City of La Verne is currently completing the installation of a traffic signal at this location. With the near-term completion of the traffic signal installation, this intersection is forecast to operate at LOS C or better during all existing with project conditions. Therefore, installation of the traffic signal, which will be operational shortly, is expected to reduce all existing with project impacts to less than significant levels. Additionally, this intersection is forecast to operate at acceptable conditions (i.e., LOS D or better) under all future year 2021, 2028, and 2035 analysis conditions. As no significant project impacts are identified under any of the future year 2021, 2028, and 2035 with project conditions, no additional mitigation measures are required or recommended at this intersection.

Intersection No. 11: D Street/Bonita Avenue

The D Street/Bonita Avenue intersection is expected to be significantly impacted by the proposed project during the p.m. peak hour under the Year 2028 With Phases I & II Project and Year 2035 With Project Build-out (Phases I, II & III) conditions. No significant project impact was identified under the Year 2021 With Phase I Project conditions.

It should be noted that the traffic study prepared for the Old Town La Verne Specific Plan EIR project also identified a significant impact at this location. The mitigation measures previously considered included restriping the northbound D Street approach to provide a northbound right-turn lane and restriping the westbound Bonita Avenue approach to provide a westbound right-turn lane. As described in the Old Town La Verne Specific Plan EIR traffic study, these measures would require the removal of approximately eight on-street parking spaces. Therefore, the City of La Verne ultimately determined that these measures were not acceptable because of the resulting secondary impacts related to the loss of on-street parking. These will be issues that the City will have to consider in approving this proposed Project.

Another option for potential mitigation measure consists of the installation of an eastbound right-turn only lane. The existing eastbound combination through/right-turn lane is approximately 20 feet in width. While this does not provide the ideal width for a separate right-turn lane (e.g., 12 feet in width) it can be considered. However, it is noted that the resultant right-turn only lane would only be 40 feet in length (adjacent to the existing red curb) due to the existing driveway which is located on the south side of the Bonita Avenue just west of D Street.

While it has been determined from a calculation standpoint that the combination of all three measures (i.e., providing separate northbound, eastbound, and westbound right-turn only lanes), if approved by the City, would reduce the significant Year 2028 With Phases I & II project p.m. peak hour impact to a less than significant level, these measures did not fully reduce the Year 2035 With Project Build-out p.m. peak hour impact to a less than significant level. No other mitigation measures have been determined to be feasible without the acquisition of additional right-of-way which currently does not exist. Therefore, for the above reasons, the project's significant p.m. peak hour impacts in the Year 2028 and Year 2035 conditions will remain significant and unavoidable. It is noted that the Old Town La Verne Specific Plan traffic study also concluded a significant and unavoidable traffic impact at this intersection.

Intersection No. 17: E Street-Fairplex Drive/Arrow Highway

This intersection is expected to be significantly impacted by the proposed project under the Year 2035 Project Build-out (Phases I, II & III) condition (p.m. peak hour impact). No significant project impacts were identified under the first two phases of project development.

It should be noted that the traffic study prepared for the Old Town La Verne Specific Plan EIR project also identified a significant impact at this location. The mitigation measure

previously considered included restriping the southbound E Street approach to provide a southbound right-turn lane. The resultant lane configuration on the southbound E Street approach at Arrow Highway would be one left-turn lane, one through lane, and one right-turn only lane. A review of this previous measure was undertaken to determine if adequate curb-to-curb width exists to accommodate this measure. This measure was determined to be feasible and is also expected to reduce the significant traffic impact during the Year 2035 Project Build-out condition to a less than significant level. Therefore, this measure is recommended.

From a timing perspective, since the significant traffic impact at the E Street-Fairplex Drive/Arrow Highway intersection is not expected to occur until the year 2035 conditions (i.e., well after the Foothill Gold Line Extension project is proposed to be completed), it is recommended that the University of La Verne continue to coordinate with the City and Metro regarding the final rail line/track design and alignment at this location to determine if the recommended restriping measure can be integrated into Metro's overall design. Furthermore, as Phase III of the proposed project involves the demolition of the surface parking lot and Oaks Dormitories and the construction of a future parking structure at the northwest corner of this intersection, coordination between the University of La Verne, City of La Verne, and Metro is also recommended.

Mitigation Measures

Mitigation Measure T-1. Circulation System Performance Improvement

The project applicant shall be responsible for the following improvements:

a. Intersection No. 5: A Street/Arrow Highway

i. Prior to issuance of the first occupancy permit for Phase III development, the applicant shall restripe the southbound A Street approach from one shared left/through/right-turn lane to one shared left/through lane and one right-turn only lane.

b. Intersection No. 11: D Street/Bonita Avenue

i. Prior to issuance of the first occupancy permit for Phase II development, the applicant shall restripe the northbound D Street approach to provide a northbound right-turn lane.

ii. Prior to issuance of the first occupancy permit for Phase II development, the applicant shall restripe the westbound Bonita Avenue approach to provide a westbound right-turn lane.

iii. Prior to issuance of the first occupancy permit for Phase II development, the applicant shall install an eastbound right-turn only lane within the existing eastbound Bonita Avenue approach right-of-way.

c. Intersection No. 17: E Street-Fairplex Drive/Arrow Highway

i. Prior to issuance of the first occupancy permit for Phase III development, the applicant shall restripe the southbound E Street approach to provide a southbound right-turn lane.

The project applicant shall guarantee (e.g. the posting of a bond or other sufficient form of surety) the improvements for the respective phase prior to issuance of a building permit for that phase (as described above). The improvement would need to be constructed prior to issuance of the first certificate of occupancy associated with the respective phase.

Should any of the recommended mitigation measures not be reviewed and approved by the City, a substitute measure of equal or greater effectiveness would need to be determined. In the event that any of the recommended mitigation measures is not approved and a substitute measure is not feasible, the corresponding impact(s) would remain significant and unavoidable during the respective phase.

SIGNIFICANCE AFTER MITIGATION

Mitigation Measure T-1 would reduce the impact of project-related traffic on the performance of the circulation system. After implementation of Mitigation Measure T-1, the impact of project-related traffic on the performance of the circulation system would be reduced to a less than significant level, except at the intersection of D Street and Bonita Avenue, where impacts would remain significant and unavoidable under the Year 2035 With Project Build-out scenario. Although impacts after mitigation would remain significant and unavoidable at the intersection of D Street and Bonita due to the constraints described above, it is important to note that the extent of future cumulative development as well the intensity of future Phase III development envisioned as part of this Master Plan is subject to change due to changes in student enrollment and changes in real estate market demand and financing. This combined with the improvements to automobile technology, increases in the availability of mass transit, and changes in the way traffic impacts are analyzed may reduce the potential future significant and unavoidable impact at the D Street and Bonita Avenue intersection. Therefore, future study of this intersection by the City of La Verne and the University of La Verne is recommended.

IMPACT T-2. CONGESTION MANAGEMENT PLAN CONSISTENCY

Full implementation of the Master Plan would increase traffic on the surrounding street network, including certain intersections included in the Los Angeles County Congestion Management Program (CMP). However, the proposed project would not add a sufficient number of trips to meet the threshold for a potentially significant impact on the CMP highway system. This impact would therefore be Class III, less than significant.

Intersections

The following CMP intersection monitoring locations in the project vicinity have been identified based on the corresponding forecast assignment of Project Build-out (Phases I, II & III) trips during the a.m. and p.m. peak hours as summarized in Table 69.

Table 69 Congestion Management Plan Traffic Impact Assessment

CMP Station	Location	Peak Hour	Project Buildout (Phases I, II, & III) Forecast Project Trips	CMP Traffic Impact Assessment Threshold [1]	CMP Traffic Impact Assessment Required?
No. 29	E Street/Arrow Highway	AM	108	50	Required
	(Study Intersection No. 17)	PM	139	50	Required
No. 132	San Dimas Avenue/Arrow Highway	AM	78	50	Required
	(Study Intersection No. 1)	PM	100	50	Required

[1] Based on procedures outlined in the "2010 Congestion Management Program", County of Los Angeles Metropolitan Transportation Authority, October 2010.

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the weekday a.m. or p.m. peak hours. As shown in Table 69, the proposed project build-out is anticipated to add more than 50 trips at the identified CMP intersections during the a.m. and/or p.m. peak hours. A review of potential impacts at the two CMP monitoring intersections has been prepared.

Review of potential impacts at the two CMP monitoring intersections is based on the overall analysis prepared for the proposed project and application of the CMP threshold criteria. As shown in the traffic impact analysis summarized in Tables 66-68, CMP Station No. 29: E Street/Arrow Highway (also referred to as study intersection No. 17) is forecast to operate at LOS D during the a.m. peak hour and LOS E during the p.m. peak hour under the Year 2035 With Project Build-out conditions. Furthermore, CMP Station No. 132: San Dimas Avenue/Arrow Highway (also referred to as study intersection No. 1) is forecast to operate at LOS B during the a.m. peak hour and LOS D during the p.m. peak hour under the Year 2035 With Project Build-out conditions. Since neither of these CMP study intersections are forecast to operate at LOS F conditions, application of the CMP threshold criteria indicates that the proposed project build-out will not result in any significant CMP impacts at these two study intersections. Furthermore, an additional review of other CMP intersection monitoring locations further away from the project was conducted (e.g., CMP Station No. 124: Garey Avenue/Arrow Highway in the City of Pomona). It was determined that the proposed project build-out would not add 50 or more trips, during the a.m. or p.m. peak hours at any of the other CMP monitoring intersections, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

Freeways

The following CMP freeway monitoring locations in the project vicinity have been identified:

CMP Station	Location
Seg. No. 1020	Interstate 10 at Dudley Street
Seg. No. 1063	Route 210 at San Dimas Avenue

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the weekday a.m. or p.m. peak hours. The proposed project would not add 150 or more trips (in either direction) during either the weekday a.m. or p.m. peak hours to CMP freeway monitoring locations, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

MITIGATION MEASURES

No mitigation measures are required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT T-3. AIR TRAFFIC

Implementation of the Master Plan would not result in an increase in air traffic levels or a change in air traffic patterns. This impact would therefore be Class III, less than significant.

The proposed project would lead to increased enrollment and new facilities in the Plan Area, but these activities would not result in an increase in air traffic levels or a change in air traffic patterns. Brackett Field, a County-owned and operated airport, is located approximately 350 feet south of the southern boundary of Campus West, approximately 0.4 miles south of Park Campus and La Verne Campus. As discussed in Impact HAZ-4 in Section 4.6, *Hazards and Hazardous Materials*, the Plan Area is located within the Brackett Field Airport Influence Area (AIA), and the project would be subject to the Los Angeles County Brackett Field Airport Land Use Compatibility Plan (ALUCP). The ALUCP allows for development in the portions of the Plan Area closest to the airport (which are located in ALUCP Zones D and E), including residential development, educational facilities, athletic fields, and conference facilities within Zones D and E, although certain restrictions for development is these areas would apply (i.e., height of structures). The project would be required to comply with applicable ALUCP requirements, and this requirement would help ensure that no facilities that would interfere with air traffic patterns would occur.

MITIGATION MEASURES

No mitigation measures are required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT T-4. TRAFFIC-RELATED HAZARDS AND EMERGENCY ACCESS

With adherence to applicable City codes and regulations, development carried out under the Master Plan would not increase traffic-related hazards due to a design feature or incompatible uses or result in inadequate emergency access. These impacts would therefore be Class III, less than significant.

The proposed Master Plan does not include any roadway design features, such as sharp curves, that could result in a safety hazard. Implementation of the proposed Master Plan would not involve the use of vehicles that could cause a safety hazard due to incompatibility with on-road traffic, such as tractors. Site access for each campus included in the proposed project is discussed below.

The proposed site access scheme for La Verne Campus site for all project phases is displayed in Figures 2-2, 2-4, and 2-6 of the TIA, found in Appendix E of this EIR. Driveway access to all existing parking areas would be maintained throughout the main campus, with the exception of those parking lots which are proposed to be removed. In addition, as part of the closures of C Street and Second Street under the Phase I project conditions, no vehicular access would be allowed except for service/emergency vehicles. Under Phase I project conditions, vehicular access to the new visitor parking lot is proposed to be provided on the west side of C Street, just north of Third Street. Under Phase III project conditions, vehicular access to the new parking structure is proposed to be provided on the west side of E Street, between 1st Street and Arrow Highway.

The proposed site access scheme for Campus West for all project phases is displayed in Figures 2-3, 2-5, and 2-7 of the TIA. Under Phase I project conditions, vehicular access to the multi-family residential project component is proposed to be provided on the west side of Wheeler Avenue and the south side of the new east-west access roadway. Under Phase II project conditions, vehicular access to the University House is proposed to be provided via the new bridge/extension of the east-west access roadway. Under Phase III project conditions, vehicular access to the new administrative facility is proposed to be provided via the future loop road which will also provide access to Carrion Road to the north and to Puddingstone Drive to the south via a new north-south access road.

No change of use or capacity of existing building or parking capacities at the Park Campus site is proposed. Therefore, existing vehicular access to and from the Park Campus site will be maintained.

Development carried out under the proposed Master Plan would be required to comply with applicable City codes and regulations governing traffic-related design features and uses, driveways and site access. Applicable codes and regulations that may be required include the Uniform Building Code (UBC), CBC, and California Fire Code as adopted by the City of La Verne, and final plan check by the City of La Verne Implementation of standard conditions and regulations which would ensure that adequate design features, uses and sufficient access would be provided in the Plan Area. The proposed project also includes

various features to encourage safe and efficient use of alternative transportation modes, as discussed in Impact T-5. Therefore, no safety hazards related to roadway design, incompatible uses, or inadequate emergency access would occur.

MITIGATION MEASURES

No mitigation measures are required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT T-5. ALTERNATIVE TRANSPORTATION

The Master Plan contains various elements to accommodate and encourage the use of alternative means of transportation, including pedestrian, bicycle and transit modes, and it would therefore not conflict with adopted policies, plans, or programs supporting alternative transportation. This impact would therefore be Class III, less than significant.

Pedestrian Access

The proposed project is designed to encourage pedestrian activity and walking as a transportation mode[3]. La Verne Campus site is planned to provide many facilities and amenities to encourage pedestrian activities, including the Second and C Street pedestrian promenades (which would create a pedestrian "super block" in the interior portions of campus), an outdoor student dining plaza a student life quad, and pedestrian circulation in Phase I; the Third Street pedestrian promenade and a student plaza in Phase II; and additional pedestrian connection, a gateway plaza, and a student court in Phase III. As indicated in Figures 2-2, 2-4, and 2-6 of the TIA, the walkways planned within La Verne Campus would connect to adjacent sidewalks in a manner that promotes walkability. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. There are several criteria that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The widely accepted characteristics of walkability are as follows:

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.
- Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.
- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.

[3] For example, refer to http://www.walkscore.com/, which generates a walkability score of approximately 64 (Somewhat Walkable) out of 100 for the La Verne Campus site and a walkability score of approximately 42 (Car Dependent) for the Campus West site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.

- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of road space to pedestrians.
- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the project site plans and pedestrian walkway network indicates that these five primary characteristics are generally accommodated as part of the proposed project. The main La Verne Campus site is adjacent to and accessible from nearby commercial uses and other amenities along adjacent arterial corridors, as well as adjacent public bus transit stops. The pedestrian walkways within the site and the adjacent sidewalks would be appropriately landscaped and designed to provide a friendly walking environment. Additionally, the walkways would be well lit and include appropriate wayfinding signage. For these reasons, the project is not expected to conflict with any adopted policies, plans, or programs supporting this form of alternative transportation.

Bicycle Access

The proposed Master Plan includes several features that would encourage safe and efficient bicycle transportation. Sustainability Principles and Recommendations from page 20-21 of the Master Plan relating to bicycle access include the following:

- Create pedestrian and bicycle priority on campus
- Develop new safe routes for biking and walking

The closures of portions of Third Street, Second Street, and C Street proposed under the Master Plan would create a pedestrian “super block” in the interior portions of campus, improving safety for bicyclists. Additionally, Mitigation Measure GHG-2 of this EIR includes the following two recommended vehicle trip reduction measures: provide bicycle storage/parking facilities for onsite employees; and provide shower/locker facilities for onsite employees. However, the proposed Master Plan would have a generally positive impact on bicycle access and safety, and this mitigation measure, while required for greenhouse gas reduction, is not required to mitigate Master-Plan related impacts to bicycle access or safety, which would be less than significant without mitigation.

MITIGATION MEASURES

No mitigation measures are required.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

4.13.3 Cumulative Impacts

The traffic modeling used to determine traffic impacts from the project, which is a Master Plan for the development of the University of La Verne through the year 2035, takes into account regional traffic growth and future-year traffic, making the analysis cumulative by

design. Potential impacts related to traffic congestion at the intersection of D Street and Bonita Avenue remain significant and unavoidable because even with mitigation, the impact remains for full project build-out (Phase III) in the PM peak hour. All other impacts would be less than significant or less than significant with mitigation incorporated, and these potential impacts are therefore also not cumulatively considerable.

It is also important to note that the extent of future cumulative development as well the intensity of future Phase III development envisioned as part of this Master Plan is subject to change due to changes in student enrollment and changes in real estate market demand and financing. This combined with the improvements to automobile technology, increases in the availability of mass transit, and changes in the way traffic impacts are analyzed may reduce the potential future significant and unavoidable impacts at the D Street and Bonita Avenue intersection.

4.14 Utilities and Service Systems

This section discusses the proposed Master Plan's potential impacts on utilities, including water supply, wastewater collection and treatment, solid waste, and storm water conveyance facilities. Impacts to public services such as police and fire protection and schools are discussed in Section 4.11, Public Services and Recreation. Impacts to water quality and hydrology are discussed in Section 4.7, Hydrology and Water Quality.

4.14.1 Setting

Water Supply

The City of La Verne receives its water from two main sources: underground water and imported water. The City has eight municipal wells that pump water from two ground basins: Pomona and Live Oak. Water from these underground wells is pumped into booster stations where it is blended with imported water. The underground water is blended with local groundwater and is then pumped to residents and businesses throughout the City of La Verne. The City also extracts ground water from Six Basins which includes: Canyon Basin, Upper Claremont Heights Basin, Lower Claremont Heights Basin, Pomona Basin, Live Oak Basin and Ganesha Basin.

La Verne purchases its water from Three Valleys Water Company and the MWD. The City has a long history with MWD and continues to partner with the District today. The MWD Weymouth water filtration facility, was built in the unincorporated area of West La Verne in 1939, and has been servicing the community for over 70 years. MWD imports water supplies to Southern California from two main sources: the Sacramento and San Joaquin Rivers through the State Water Project and the Colorado River via the Colorado River Aqueduct. (Source: Metropolitan Water District of Southern California, website 2016). Table 70 below summarizes the City's current and projected supplies available from Three Valleys Municipal Water District (Miramar Treatment Plant) and the groundwater extracted from Six Basins.

Table 70 Current and Projected Water Supplies (AFY)

Sources	2015	2020	2025	2030	2035	2040
Purchased from TVMWD	4,661	10,867	10,867	10,867	10,867	10,867
Six Basins (groundwater)	1,908	2,894	2,894	2,894	2,894	2,894
Total	6,569	13,761	13,761	13,761	13,761	13,761

AFY: Acre Feet per Year

Due to extreme, record-setting, drought conditions in recent years, WMD added several new initiatives to its conservation program to target water reduction by public agencies, landscaping, fitness centers, and the commercial and multi-family housing sectors. In January 2014, Governor Edmund G. Brown Jr. issued a drought emergency proclamation calling for Californians to reduce their water use by 20 percent and for water agencies to implement water shortage plans. In February 2014, Metropolitan declared a Water Supply

Alert, calling upon local cities and water agencies to immediately implement extraordinary conservation measures and institute local drought ordinances (Source: Regional Urban Water Management Plan, Metropolitan Water District of Southern California, June 2015). These conservation efforts have been successful and the conservation calculations have been incorporated into future demand projects (see Table 71 through Table 75 for water supply and demand totals).

Table 71 Metropolitan Water Supply in Average, Single Dry, and Multiple Dry in Thousand AFY

	2020	2025	2030	2035	2040
Average Year					
Supply Total	3,448	3,550	3,658	3,788	3,824
MWD Demand Total	1,860	1,918	1,959	2,008	2,047
Surplus (Supply – Demand)	1,588	1,632	1,699	1,780	1,777
Single Dry Year					
Supply Totals	2,584	2,686	2,775	2,905	2,941
MWD Demand Totals	2,005	2,066	2,108	2,160	2,201
Surplus (Supply – Demand)	579	620	667	745	740
Multiple Dry Year					
Supply Totals	2,103	2,154	2,190	2,242	2,260
Demand Totals	2,001	2,118	2,171	2,216	2,258
Surplus (Supply – Demand)	102	36	19	26	2

Source: Tables 2-4, 2-5 and 2-6, Regional Urban Water Management Plan, Metropolitan Water District of Southern California, June 2015.

Table 72 TVMWD Water Supply in Average, Single Dry, and Multiple Dry Years (AFY)

		2020	2025	2030	2035	2040
Normal Year						
Supply Totals		69,260	70,560	71,760	73,060	74,360
Demand Totals		69,260	70,560	71,760	73,060	74,360
Surplus (Supply – Demand)		0	0	0	0	0
Single Dry Year						
Supply Totals		69,260	70,560	71,760	73,060	74,360
Demand Totals		69,260	70,560	71,760	73,060	74,360
Surplus (Supply – Demand)		0	0	0	0	0
Multiply Dry Year						
Year 1	Supply Totals	68,830	67,330	68,00	69,360	70,710
	Demand Totals	68,830	67,330	68,00	69,360	70,710
	Surplus (Supply – Demand)	0	0	0	0	0
Year 2	Supply Totals	67,450	65,980	66,640	67,970	69,300
	Demand Totals	67,450	65,980	66,640	67,970	69,300
	Surplus (Supply – Demand)	0	0	0	0	0
Year 3	Supply Totals	66,100	64,660	65,310	66,610	67,910
	Demand Totals	66,100	64,660	65,310	66,610	67,910
	Surplus (Supply – Demand)	0	0	0	0	0

Source: Tables 3-4, 3-5 and 3-6, DRAFT Urban Water Management Plan 2015, Three Valleys Municipal Water District, adopted May 2016.

Table 73 Projected City of La Verne Average Year Supply/Demand Comparison (AFY)

	2020	2025	2030	2035
Projected Supply	13,779	13,779	13,779	13,779
Projected Demand	6,979	7,242	7,515	7,797
Surplus	6,800	6,537	6,264	5,982

Source: Table 27, 2015 DRAFT Urban Water Management Plan – City of La Verne

Note: As of the date of preparation of this EIR, the City has not formally adopted the Plan; however, projection data is not anticipated to change

Table 74 Projected City of La Verne Single Dry Year Supply/ Demand Comparison (AFY)

Potable Water	2020	2025	2030	2035
Projected Supply	8,091	8,091	8,091	8,091
Projected Demand	6,979	7,242	7,515	7,797
Surplus	1,112	849	576	294

Source: Table 28, 2015 DRAFT Urban Water Management Plan – City of La Verne

Note: As of the date of preparation of this EIR, the City has not formally adopted the Plan; however, projection data is not anticipated to change

Table 75 Projected City of La Verne Multiple Dry Year Supply/Demand Comparison (AFY)

Multiple Dry Year		2020	2025	2030	2035
Year 1	Supply Totals	7,918	7,918	7,918	7,918
	Demand Totals	6,979	7,242	7,515	7,797
	Surplus (Supply – Demanc	939	676	404	122
Year 2	Supply Totals	7,842	7,842	7,842	7,842
	Demand Totals	6,979	7,242	7,515	7,797
	Surplus (Supply – Demanc	863	600	328	46
Year 3	Supply Totals	7,804	7,804	7,804	7,804
	Demand Totals	6,979	7,242	7,515	7,797
	Surplus (Supply – Demanc	825	562	290	8

Source: Table 29, 2015 DRAFT Urban Water Management Plan – City of La Verne

Note: As of the date of preparation of this EIR, the City has not formally adopted the Plan; however, projection data is not anticipated to change

As shown in Table 72, based on the current water supply portfolio, demand would be met during average year, single dry-year, and multiple dry-year water scenarios through 2040. Table 73 shows the projected City of La Verne average year supply/demand comparison for every five years until year 2035. Each year, the purchase of imported water is designed to meet the projected demand.

As indicated in Table 74 and Table 75, the City is able to supply enough water to meet demand through the year 2035. Imported water supplies are projected to meet demand because MWD and, therefore, TVMWD accounted for future demands within the City and analyzed reliability under single and multiple dry year scenarios in the Regional Urban Water Management Plan and the Urban Water Management Plan 2015.

Waste Water Collection and Treatment

The City of La Verne Public Works Department (Sewer Division) maintains main sewers within the City, including the Plan Area. In addition, the City is located in the County Sanitation District of Los Angeles County (LACSD) and in the District No. 21 service boundary. Wastewater generated by the proposed project would be collected in City

sewers and discharged to a regional trunk sewer pipeline owned by the Los Angeles County Sanitation Districts (LACSD) where it flows by gravity to either the Pomona Water Reclamation Plant or the San Jose Creek Water Reclamation Plant.

The Pomona Water Reclamation Plant (WRP) is a regional wastewater treatment facility located at 295 Humane Way in the City of Pomona. This facility is operated by the Sanitation Districts of Los Angeles County and is a part of the Sanitation Districts of Los Angeles County's Joint Outfall System. The Pomona WRP provides primary, secondary, and tertiary treatment for 15 million gallons of wastewater per day and serves a population of approximately 130,000 people. Approximately 8 million gallons per day of the reclaimed water is reused at over 190 different reuse sites for landscape irrigation, dust control, and industrial uses.

The United States Environmental Protection Agency and the California Regional Water Quality Control Board for the Los Angeles Region regulate the water reclamation operations at the Pomona WRP. The Pomona WRP issued Waste Discharge Requirements (Order No. R4-2009-0076) with guidelines for the operation and maintenance of facilities and effluent discharge standards, as well as a National Pollutant Discharge Elimination System permit (NPDES No. CA0053619). The receiving water for discharge is the South Fork San Jose Creek.

Wastewater generated by La Verne Campus currently discharges into the local City sewer line and is then conveyed to the LACSD's La Verne-"B" Street Trunk Sewer, located in "B" Street from Bonita Avenue to Arrow Highway. This 12-inch diameter trunk sewer has a design capacity of 1.78 million gallons per day (mgd) and conveyed a peak flow of 0.7 mgd when last measured in 2005. This wastewater is then treated in the Pomona Water Reclamation Plant.

Solid Waste

The City of La Verne is part of the Los Angeles County Sanitation District. The City has a contract with Waste Management to provide refuse and recycling collection services to the City of La Verne's local residents and businesses. Waste Management San Gabriel/Pomona Valley office is located at 13940 E. Live Oak Avenue in the City of Baldwin Park. Waste Management reports diverting over 4,900 tons of recyclable material from the waste stream in the first half of 2016. According to Waste Management's projects, the company could manage up to 20 million tons of material by 2020 (Waste Management website, 2016)

Based on a per employee commercial solid waste generation rate of approximately 10.53 pounds per day (City of Los Angeles Thresholds Guide, 2006), solid waste from the Los Angeles County Sanitation District can be taken to Mesquite Landfill, located in Imperial County. Mesquite Landfill can receive up to 20,000 tons of waste per day and has an operating life of 100 years. Other available landfills available to service the City's waste include landfills serving the City of Claremont include Azusa Land Reclamation County Landfill, Bakersfield Metropolitan, California Street Landfill, Chiquita Canyon Sanitary Landfill, Colton Sanitary Landfill, El Sobrante Landfill, Lancaster Landfill and Recycling

Center, Mid-Valley Sanitary Landfill, Olinda Alpha Sanitary Landfill, Puente Hills Landfill, San Timoteo Sanitary Landfill, and Victorville Sanitary Landfill.

The California Integrated Waste Management Act of 1989 (AB 939), requires each city or county's source reduction and recycling element to include an implementation schedule showing that a city or county must divert 50 percent of solid waste from landfill disposal or transformation on and after January 1, 2000. SB 1016, passed in 2008, now requires the 50 percent diversion requirement to be calculated in a per capita disposal rate equivalent. Table 76 shows the City La Verne's diversion rates from 2007 through 2014.

Table 76 City of La Verne Per Capita Solid Waste Diversion Rates

Reporting Year	Per Capita Landfill Disposal (lbs./person/day)	Target Diversion Requirement to meet 50 percent Reduction (lbs./person/day)	Percent Diversion Rate (percent)
2007	5.9	6.4	53.90
2008	5.1	6.4	60.15
2009	4.5	6.4	64.84
2010	4.6	6.4	64.06
2011	4.8	6.4	62.50
2012	4.2	6.4	67.19
2013	4.0	6.4	68.75
2014	3.8	6.4	70.31

Source: CalRecycle Disposal reporting Database, website 2016.

As indicated in Table 76, the City has maintained a diversion rate of over 50 percent since 2007. In recent years, the City's diversion rate has continued to rise with the implementation of the City's 35 diversion programs. Some of the City's diversion programs include source reduction programs such as residential curbside recycling, government recycling, xeriscaping and government source reduction programs.

Storm Water Conveyance

La Verne's storm drain system was designed to prevent flooding by transporting excess rainwater from city streets. Most of the City's urban run-off is captured in a system of below ground concrete channels and underground drainage systems.

Marshall Canyon creek is an existing drainage facility that borders the Project site on the west. Other nearby drainage facilities includes the Live Oak Flood Control Channel, which runs north-south adjacent to "B" Street along the Main Campus' western boundary. Existing storm drains run along Wheeler Avenue north of the Project site, and Puddingstone Drive south of the site. Los Angeles County also owns and maintains several storm drain facilities within La Verne, including all open channels.

4.14.2 Regulatory Setting

The City's General Plan outlines specific policies for fire facilities, which will apply to the University Master Plan and individual project which will result in further City review. The applicable General Plan policies include:

- Community Facilities Policy 2.2: Protect our groundwater quality
  - *Community Facilities Policy 2.2 (a)* Enforce National Pollutant Discharge Elimination System (NPDES).
  - *Community Facilities Policy 2.2 (b):* Reduce nitrate contamination to city groundwater.
  - *Community Facilities Policy 2.2 (f):* Require all new developments to be on the sewer system.
- Resource Management Policy 7.1 – Recycle solid waste

4.14.3 Impact Analysis

To analyze impacts to utilities, the anticipated development potential under the proposed Master Plan was compared to the available capacity of utility infrastructure that serves the Plan Area.

Methodology and Significance Thresholds

The proposed Master Plan would have a significant effect on water supplies if demand associated with projected growth would result in any of the following conditions, as listed in Appendix G of the *State CEQA Guidelines*:

- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Fail to have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.
- Exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Result in a determination that the wastewater treatment provider does not have adequate capacity to serve projected demand in addition to existing commitments.
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Fail to comply with federal, state, and local statutes and regulations related to solid waste.
- 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.

Project Impacts and Mitigation Measures

IMPACT UTL-1 INCREASED WATER USAGE

Full Implementation of the proposed Master Plan would create an incremental increase in water use per year. Based on the 2015 Urban Water Management Plan , adequate water supply exists to meet projected demand through the year 2040. Therefore, impacts to water supply would be Class III, Less than significant.

The City's 2015 Urban Water Master Plan indicates that water deliveries to the University of La Verne Campus and other government uses totaled 1,112 acre-feet in 2015. Projected water deliveries to the University of La Verne and other government uses would be 1,279 acre-feet in 2020 and up to 1,429 acre-feet in 2035. The University of La Verne Master Plan would provide for up to 668 additional student beds on campus and a total increase of 782 total students. Therefore, full implementation of the proposed Master Plan would result in a net increase 475,577 square feet of facilities to the Plan Area, including 240,927 square feet of academic facility development, 234,650 square feet of residential halls and up to 170 multi-family housing units. As shown in Table 77, the Master Plan would result in a net increase in water demand of 212.2 AFY.

As shown in Table 71, MWD has a surplus of 1.78 million AFY in 2035 during average years, a surplus of 745,000 AFY in 2035 during single dry year conditions and a surplus of 26,000 AFY in 2035 under multiple dry year conditions. Therefore, the net increase in water demand associated with full buildout of the Master Plan would be approximately 0.012 percent of the MWD surplus during average years, 0.28 percent of the MWD surplus during single dry year conditions, and 0.8 percent of the MWD surplus during multiple dry year conditions. As discussed above, in the event that additional water supplies would be needed, Three Valleys Water District can purchase water from MWD, whose surplus is substantially beyond the demand anticipated for the Master Plan.

Table 77 Estimated Master Plan Water Demand

		Water Demand Factor		Water Demand
Use	**Units**	**Quantity**	**Unit**	**(AFY)**
Increase in Proposed Facilities				
Academic Facilities	240,927 sf	0.46[1]	AFY/ksf	110.8
Residence Halls	234,650 sf	0.28[1]	AFY/ksf	65.7
Campus West Residential	170	0.21[2]	AFY/Unit	35.7
Total Net Increase (AFY)				**212.2**

[1] Water duty factors are based on 2011 water demand factors (which in turn are based on actual on-campus water usage) of a similar private university, Claremont McKenna College, located in the City of Claremont.

[2] Multi-family residential water duty factors assume 120 percent of wastewater demand factors presented in Table XX below. Source: Table 1, Loadings for Each Class of Land Use, of the LACSDs' Will Serve Program Instructions.

Note: Parking lot space was not included in these calculations as this use does not generate water demand. Water-consuming uses that would replace parking lot space are reflected in the above calculations.

sf = square feet

ksf = thousand square feet

As projects are incrementally carried out under the Master Plan, it is anticipated that some upgrades to the existing water conveyance infrastructure would be necessary. The precise location and connections would be determined at the time each project is proposed. In addition, should any new connections or upgrades be required, such upgrades would occur within existing utility easements and would not result in new areas of disturbance. The City would require that any future line size modifications or connections would be designed in accordance with applicable provisions of the Municipal Code and to the satisfaction of the City Engineer. Therefore, impacts to water and water conveyance facilities would be less than significant.

MITIGATION MEASURE

Because impacts to water service facilities would be less than significant, no mitigation is necessary.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT UTL-2 INCREASED DEMAND ON WASTEWATER AND SEWER FACILITIES

Full implementation of the proposed Master Plan would incrementally increase the demand on wastewater and sewer facilities; however, the increase will not exceed the wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board. The implementation of the project will not require the construction of new wastewater treatment facilities or expansion of existing facilities. The current wastewater treatment provides has adequate capacity to serve projected demand. Therefore, impacts to wastewater and sewer facilities would be Class III, less than significant.

The University of La Verne Master Plan would increase the student residence hall capacity from 874 beds up to a maximum of 1,542 beds (668 new beds) and account for a total increase of 782 full time students. Full implementation of the proposed Master Plan would result in a net increase 475,577 square feet of facilities to the Plan Area, including 240,927 square feet of non-residential development and up to 170 multi-family housing units. Using the wastewater duty factors provided by the Sanitation Districts of Los Angeles County, Table 78 shows the estimated wastewater generated by the proposed project. The net increase in wastewater generated from full buildout of the proposed project would be 112,599 gallons per day or approximately 0.11 million gallons/day.

Table 78 Estimated Master Plan Wastewater

Use	Units	Water Demand Factor[1]		Water Demand
		Quantity	Unit	(AFY)
Increase in Proposed Facilities				
Academic Facilities	240,927 sf	200	GPD/ksf	48,185
Residence Halls	668 Beds (equivalent to 243 housing units)[2]	156	GPD/unit	37,894
Campus West Housing	170 units	156	GPD/unit	26,520
Total Net Increase (AFY)				**112,599**

[1] Wastewater Demand factors are based upon factors provided in Table 1, Loadings for Each Class of Land Use, of the LACSDs' Will Serve Program Instructions.

[2] The Master Plan would result in up 668 additional beds. To derive the number of housing units this is equivalent to, the total number of beds was divided by the average persons per household for the City of La Verne (2.75 according to Department of Finance, 2016), which equates to 243 units

sf = square feet

ksf = thousand square feet

The Pomona Water Reclamation Plant currently services the Plan Area. The facility is currently managing approximately 8.57 million gallons per day and has the capacity to manage 15 million gallons of wastewater per day. Therefore, the increase in wastewater that may result with the increase in students and facilities would not have a significant impact on wastewater facilities.

The proposed Master Plan has a policies goal to create a landscape plan that preserves the legacy and features of the University while transitioning to a drought-tolerant (native and adaptive) planting palette, using the water-intensive material with purpose and particular care (University of La Verne Master Plan, 2016). Since much of the University's water usage is for landscaping, the drought-tolerant and water-conscious plan would decrease water demand as well as run-off.

Individual projects to be developed under the Master Plan would be reviewed by the City to ensure compliance with all development standards, including Public Works standards for the sizing of wastewater conveyance infrastructure. Therefore, the implementation of the proposed Master Plan would not have a significant impact on wastewater or sewer facilities.

Mitigation Measure

Impacts to wastewater and sewer facilities would be less than significant; therefore, no mitigation is necessary.

Significance After Mitigation

Impacts would be less than significant without mitigation.

IMPACT UTL-3 INCREASE SOLID WASTE GENERATION

Full implementation of the proposed Master Plan would generate approximately 211 tons of solid waste per year that would need to be disposed of at a landfill. However, projected future solid waste generation would remain within the capacity of local landfills. Impacts would therefore be Class III, less than significant.

Full implementation of the proposed Master Plan would result in an enrollment increase of 782 full-time students; up to 668 new student beds on campus; 403,577 square feet of facilities to La Verne Campus and 72,000 square feet to Campus west, for a total of 475,577 square feet to the Plan Area.

Implementation of the proposed Master Plan would result in increased generation of solid waste and increased demand for solid waste services. Total solid waste generated by implementation of the proposed Master Plan is estimated to be 585 tons per year. Table 79 shows the estimated solid waste generated by the proposed Master Plan.

Table 79 Estimated Solid Waste Generation

Solid Waste Generator	Solid Waste Generation Rate	Tons Generated per Year
243 new student units[1]	0.66 tons/year/unit	160
240,927 sf square feet of academic facilities	0.0013 tons/year/sf	313
170 multi-family units on Campus West	0.66 tons/year/unit	112
Total Waste Generated		**585**
Total Waste Diverted[2]		374
Total Waste Disposed at Landfill		211

[1] The Master Plan would result in up to 668 additional beds. To derive the number of housing units this is equivalent to, the total number of beds was divided by the average persons per household for the City of La Verne (2.75 according to Department of Finance, 2016), which equates to 243 units.

[2] Based on a 64 percent diversion rate (city average between 2007 and 2014).

As discussed above, full implementation of the proposed Master Plan would generate approximately 585 tons of new waste per year. The majority of this waste would be diverted. However, 211 tons of new waste per year, or approximately 0.58 tons per day, would need to be disposed of in a landfill. The Mesquite Landfill can receive up to 20,000 tons of waste per day and has an operating life of 100 years. The waste needs of the proposed project would be 0.0079 percent of the landfills daily capacity. Therefore, the projected solid waste generation would remain within the capacity of local landfills.

MITIGATION MEASURE

Because impacts to wastewater and sewer facilities would be less than significant, no mitigation is necessary.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

IMPACT UTL-4 INCREASED OFFSITE CONVEYANCE OF STORM WATER

Full implementation of the proposed Master Plan would not result in increased offsite conveyance of storm water. Impacts would be Class III, less than significant.

Full implementation of the proposed Master Plan would occur in an urbanized area with existing storm drain facilities in place. Future development under the Master Plan would utilize the existing storm water conveyance facilities. Marshall Canyon creek is an existing drainage facility that borders the Project site on the west. Other nearby drainage facilities includes the Live Oak Flood Control Channel, which runs north-south adjacent to "B" Street along La Verne Campus' western boundary. Existing storm drains run along Wheeler Avenue north of the Project site, and Puddingstone Drive south of the site. Los Angeles County also owns and maintains several storm drain facilities within La Verne, including all open channels.

As projects are incrementally carried out under the Master Plan, it is anticipated that some upgrades to the existing storm water conveyance infrastructure would be necessary. Development under the Master Plan would to a certain extent replace existing impervious surfaces, and would be located in an urbanized area wherein impervious surfaces are prominent. One of the goals of the Master Plan is to decrease overall impervious coverage by introducing new multi-story buildings in certain areas of campus and adding multi-story parking structures. As a result, the proposed project is not expected to result in an increase in storm water runoff because increases in pervious surface area would minimize peak flow runoff and allow storm water to infiltrate into the ground prior to flowing offsite into conveyance facilities. Because the project is planned to reduce overall impervious surface area and storm water runoff is expected to be reduced, no additional storm water conveyance facility capacity would be required. Therefore, impacts related to storm water conveyance facilities would be less than significant.

The precise location and connections would be determined at the time each project is proposed. General physical ground disturbance associated with these improvements are discussed throughout this EIR in the associated impact areas. In addition, should any new connections or upgrades be required, such upgrades would occur within existing utility easements and would not result in new areas of disturbance. The City would require that any future line size modifications or connections would be designed in accordance with applicable provisions of the Municipal Code and to the satisfaction of the City Engineer. Therefore, impacts to storm water conveyance facilities would be less than significant.

Mitigation Measure

Because impacts would be less than significant; no mitigation is necessary.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Impact UTL-5 Need for New Sources of Natural Gas or Electricity

Implementation of the proposed Master Plan would not require major new sources of natural gas or electricity such that new or expanded gas or electricity power plants would be required. Impacts would therefore be Class III, less than significant.

The proposed Master Plan would increase demand for natural gas and electricity as development occurs over the next 20 years. The project is located in a highly urbanized area, with existing access to natural gas and electricity. It is anticipated that natural gas and electricity would be provided to the campus via existing major natural gas and electrical supply lines. Minor underground conduit runs may be necessary to provide electricity to future buildings; however, these lines would ultimately be supplied by major existing lines and ground disturbances associated with these conduit runs would occur within the Master Plan project area. Although peak demand may increase, there are no unusual aspects of the project that would require electricity or natural gas usage beyond common peak demand factors for university buildings. Therefore, impacts related to natural gas and electricity would less than significant.

MITIGATION MEASURE

Because impacts would be less than significant; no mitigation is necessary.

SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant without mitigation.

4.14.4 Cumulative Impacts

For this analysis, the cumulative and related projects are described Section 3.3 Cumulative Development and listed in Table 12. In summary, cumulative development would result in the future development of approximately 425,000 square feet of commercial and industrial development, 184 residential units, and a 600 space parking structure to support the future Gold Line Transit Station.

Water

Cumulative project buildout would demand approximately 298 AFY (based on a demand factor of 0.46 AFY/1,000 square feet for non-residential and 0.56 AFY/unit). Combined with the proposed Master Plan, water demand would total 510 AFY. Total water demand projected by the La Verne UWMP accounts for population growth within its jurisdictional boundaries, which is primarily determined by buildout potential of a given area as facilitated by the General Plan. As shown in Table 73, La Verne Water has adequate surplus to meet demand through the year 2035. As such, adequate water supply would be available to accommodate cumulative development within the City of La Verne. In addition, as development incrementally occurs under the General Plan, upgrades to water conveyance facilities may be required. The precise location and connection would need to be determined at the time development is proposed. Should any new connections or upgrades be required, such upgrades would be subject to subsequent environmental review. Any future line size modifications or connections would be designed in accordance with applicable provisions of the Municipal Code and La Verne Water. Therefore, cumulative impacts to water supply and water conveyance facilities would not be significant.

Wastewater

Cumulative project buildout would require wastewater treatment services for an additional 506 people (184 residential dwellings x 2.75 persons/household). At 77 gallons per day per person, the additional 506 people would result in 38,962 gallons per day or 0.038 million gallons per day. As previously discussed, the proposed project would generate 0.114 million gallons per day. Combined with full buildout of the cumulative projects, the total additional wastewater generated would be 0.152 million gallons per day. The WRP currently has capacity to treat an additional 6.4 million gallons per day. Therefore, adequate capacity would be available to accommodate cumulative development. In addition, should sewer pipeline upgrades eventually be necessary as development occurs within the City, such upgrades would likely occur within existing utility easements and would not result in new areas of disturbance. In addition, such upgrades would be subject to subsequent environmental review, wherein potential impacts, if any, would be addressed accordingly. The City of La Verne and Los Angeles County Department of Public Works would require that localized system deficiencies are adequately addressed by the responsible project. Any future upgrades would be designed in accordance with applicable provisions of the Municipal Code and to the satisfaction of the City Engineer and the Los Angeles County Department of Public Works. Therefore, cumulative impacts to wastewater treatment and conveyance facilities would not be significant.

Solid Waste

Cumulative development would increase solid waste generation. Based on the generation rate of 0.66 tons per year per unit, cumulative residential development would generate approximately 121 tons per year or 0.33 tons per day of solid waste. Based on the generation rate of 0.0013 tons per year square foot, cumulative non-residential development would generate approximately 552 tons per year or 1.5 tons per day of solid waste. Cumulative development combined with the proposed project would generate approximately 856 tons of solid waste per year. Accounting for the state-mandated diversion rate of 50 percent, cumulative development would generate 428 tons per day. As indicated above, Mesquite Landfill can receive up to 20,000 tons of waste per day and has an operating life of 100 years. Therefore, adequate capacity would be available to accommodate cumulative development and cumulative impacts would not be significant.

Storm water Conveyance

Cumulative development resulting from buildout of the General Plan could increase the amount of impervious surfaces and increase storm water runoff volumes. However, the City of La Verne is highly urbanized and has existing storm water infrastructure throughout the City, as owned, operated and maintained by Los Angeles County Flood Control District. Cumulative development would utilize existing storm water infrastructure. Should storm water infrastructure upgrades eventually be necessary as development occurs within the City, such upgrades would likely occur as upgrades to existing infrastructure and would not result in new areas of disturbance. In addition, such upgrades would be subject to subsequent environmental review, wherein potential impacts, if any, would be addressed

accordingly. As discussed above, the proposed Master Plan would not significantly impact storm water infrastructure. Therefore, cumulative impacts to storm water infrastructure would not be significant.

Natural Gas and Electricity

Cumulative development resulting from buildout of the General Plan could result in increased demands on electrical and/or natural gas services and facilities within the City of La Mirada. Individual future projects would be required to request service from applicable service provider. As previously discussed, utility providers are required by law to provide service. Connections to existing natural gas and/or electrical infrastructure may be necessary. However, the potential impacts associated with these connections would be addressed at the time the project is proposed. Therefore, impacts related to natural gas and electricity would not be significant.

5 Effects Found Not to Be Significant

Section 15128 of the State CEQA Guidelines requires an EIR to briefly describe any possible significant effects that were determined not to be significant and were therefore not discussed in detail. This section addresses the potential environmental effects of the proposed project that were determined not be significant. The topics listed below that were found not to be significantly affected by the proposed project are drawn from the environmental checklist form included in Appendix G of the State CEQA Guidelines. Any items not addressed in this section are addressed in Sections 4.1 through 4.14 of this EIR.

5.1 Agriculture and Forest Land

The Plan Area encompasses the entirety of the University of La Verne, which is approximately 97 acres and includes three campuses: La Verne Campus, Park Campus, and Campus West. The Plan Area has two General Plan land use designations: Commercial Business Park and Community Facilities. The zoning regulations are subject to three separate Specific Plans: Old Town La Verne Specific Plan (OTLVSP), Lordsburg Specific Plan (LSP), and Arrow Corridor Specific Plan (ACSP), which do not include zoning districts for agricultural or forestry purposes by the City's municipal code.

The Plan Area is designated as Urban and Built-Up Land by the Farmland Mapping and Monitoring Program (FMMP) Los Angeles County Important Farmland 2014 map (California Department of Conservation [DOC] 2016). Moreover, the Plan Area is not located in an area with land designated as Prime or Unique Farmland, or Farmland of Statewide Importance (California DOC 2016). The Plan Area is not subject to a Williamson Act Contract (California DOC 2015). The project site does not meet the definition of forest land or timberland under Public Resources Code section 12220(g), Public Resources Code section 4526, or Government Code section 51104(g). Therefore, the Master Plan would not lead to the loss or conversion of farmland, forest land, or timberland, and would not produce 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 forestland to non-forest use. No impacts associated with farmland, forest land, or timberland would occur.

5.2 Biological Resources

5.2.1 Special Status Species

La Verne Campus consists of academic buildings, residence halls, dining halls, and recreational fields, as well as landscaped open spaces, parking lots, and pathways. The campus is dominated by urban development and ornamental landscaping and surrounded by residential and commercial development as well as heavily travelled transportation corridors such as Arrow Highway. Because of historic and existing disturbance the site is not

suitable for sensitive plant species. However, mature trees and campus buildings may provide suitable roosting habitat for special status bat species including pocketed free-tailed bat (*Nyctinomops femorosaccus*), western yellow bat and big free-tailed bat (*Nyctinomops macrotis*). Roosting habitat is considered low quality due to the historic and existing disturbance from development as a college campus and location in the center of urban development in the City of La Verne. Development under the Master Plan may involve removal of trees and/or demolition of existing buildings that may provide low quality roosting habitat for sensitive bat species. The sensitive bat species listed above are not geographically restricted to the vicinity of the Plan Area and the loss of low quality roosting habitat would not significantly affect the species. Furthermore, loss of habitat or injury/death to limited individuals would not be expected to contribute towards a trend toward federal listing or a loss of viability of sensitive bat species. Given the low potential for occurrence onsite, small disturbance footprint and the location of the Plan Area adjacent to disturbed/developed areas, the Master Plan is not likely to have population-wide negative effects on sensitive bat species. Impacts to sensitive bat species would be less than significant. La Verne Campus would not provide suitable habitat for any other sensitive wildlife species. Impacts would be less than significant.

Park Campus contains satellite parking for the main campus as well as two buildings used for instructional space. The campus is completely developed and surrounded by residential and commercial development as well as heavily travelled transportation corridors such as Arrow Highway. Because of historic and existing disturbance, as well as proximity to urban development and transportation corridors, the site is not suitable for sensitive plant or animal species. Furthermore, the Master Plan does not propose any changes to Park Campus. Impacts would be less than significant.

Campus West consists of 14 acres developed with the University's Athletic Complex, including ball fields and associated dugouts, locker rooms, training rooms, restrooms, and a parking lot. The remaining 40 acres to the west and south of the Athletic Complex are currently vacant. Based on a review of aerial photographs the vacant land has been consistently disturbed by mowing since at least 1994. Because of this historic and existing disturbance, the site is not suitable for sensitive plant species. The western portion of the Campus West campus was previously analyzed under the Campus West Athletic Complex EIR (SCH No. 2008051069) (2008) which found that the proposed Athletic Complex would not result in significant impacts to any special status plant or wildlife species. However, the western portion of Campus West includes trees and open areas which may provide suitable roosting habitat for sensitive bat species including pocketed free-tailed bat, western yellow bat and big free-tailed bat, as well as suitable foraging habitat for sensitive bat and avian species, including hoary bat (*Lasiurus cinereus*), western mastiff bat (*Eumops perotis californicus*), pallid bat (*Antrozous pallidus*), Yuma myotis (*Myotis yumanensis*), merlin (*Falco columbarius*), and rufus-crowned sparrow (*Aimophila ruficeps canescens*). Future development under the Master Plan may result in the removal of trees and open space. As such, the Master Plan would result in loss of low quality roosting and foraging habitat as well as potential injury or death to individuals. As mentioned above, habitat is low quality and there is a low potential for occurrence onsite due to the history of previous

development/disturbance. The sensitive bat and avian species mentioned above are not geographically restricted to the vicinity of the project area and the loss of low quality foraging and roosting habitat would not significantly affect the species. Furthermore, loss of habitat or injury/death to limited individuals would not be expected to contribute towards a loss of viability of sensitive bat or avian species. Given the low potential for occurrence onsite, small disturbance footprint and the location of the proposed project adjacent to disturbed/developed areas, the Master Plan is not likely to have population-wide negative effects on sensitive bat or avian species. Compliance with the Migratory Bird Treaty Act (MBTA) would further reduce impacts to avian species, by ensuring that no actual mortality of birds occurs as a result of development facilitated by the Master Plan. Impacts would be less than significant. Campus West would not provide suitable habitat for any other sensitive wildlife species. Impacts would be less than significant.

Campus West is located adjacent to Puddingstone Reservoir which is surrounded by mapped Critical Habitat for coastal California gnatcatcher (*Polioptila californica californica*), a federally threatened species under the Endangered Species Act. Coastal California gnatcatcher requires coastal sage scrub habitat, which is not found on the Campus West site, however, future development on the Campus West site may have indirect effects on coastal California gnatcatcher habitat in the vicinity of Puddingstone Reservoir. Under the Master Plan, future development at Campus West would consist of multi-family residential units to the south, a new University House with an associated 60-space parking lot, and a new Administrative Facility to the west. Future development at Campus West may result in indirect effects on adjacent coastal California gnatcatcher Critical Habitat including, increases in the amount of runoff, toxics (household cleaning products, yard waste and fertilizers, etc.), lighting, and noise in the vicinity of the Critical Habitat. Future development under the Master Plan would result in the conversion of vacant land to developed university facilities and therefore, may result in increased impervious services, alteration of drainage patterns and an increase in pollutants (i.e., household cleaning products, yard waste and fertilizers, etc.) at Campus West.

All future development on the campus would be subject to NPDES requirements and applicable water quality management programs, with new facilities requiring a SUSMP, Storm Water Pollution Prevention Plans (SWPPPs), and BMPs. Furthermore, because the parts of the Plan Area slated for development under the proposed Master Plan are already mostly developed, implementation of the proposed Master Plan would not substantially alter drainage patterns or degrade water quality. Compliance with the requirements of applicable NPDES permits would reduce potential impacts from erosion and pollutant laden storm water discharges during construction and operational activities to a less than significant level. Future development under the Master Plan may result in increased lighting associated with residential units and pathways. The Campus West site and the adjacent Critical Habitat are currently surrounded by many sources of light including residential development, street lighting, and lighting for the Bracket Field Airport. New sources of lighting would be required to comply with Chapter 18.76.090 of the La Verne Municipal Code regulates exterior lighting on private property as well as the standards and design guidelines in the Arrow Corridor Specific Plan designed to prevent light and glare impacts.

Therefore, future development at Campus West would not substantially increase the effects of lighting on the adjacent Critical Habitat. Development proposed under the Master Plan may increase noise levels at the Campus West site as a result of new residential units and increased human activity on the campus. However, the Campus West site and the adjacent Critical Habitat are currently surrounded by noise-generating land uses including residential developments, heavily travelled roadways, and the Bracket Field Airport. Therefore, future development at Campus West would not substantially increase the effects of noise on the adjacent Critical Habitat. As detailed above, future development at Campus West would not result in significant impacts to adjacent Critical Habitat for the coastal California gnatcatcher. Impacts would be less than significant.

As described above, La Verne Campus and Campus West contain mature trees and other vegetation. While these areas would not provide suitable habitat for sensitive avian species, they may provide suitable nesting habitat for several common avian species that occur within the Plan Area and the immediate vicinity. Nesting birds are protected by the California Fish and Game Code (CFGC) 3503 and the MBTA. Future vegetation removal and construction activities facilitated by the Master Plan could result in the inadvertent destruction of nests, eggs, or nestlings of common bird species. Because no special-status bird species are expected to occur within the Plan Area, this impact would not rise to the level of significance under CEQA. Furthermore, impacts of this nature are prohibited by the MBTA and applicable sections of the CFGC, and must be avoided. As such, future development under the Master Plan would be required to comply with the MBTA and applicable sections of the CFGC which would include limiting vegetation trimming and removal activities to be conducted outside of the nesting bird season, pre-construction nesting bird surveys during the nesting bird season, and establishment of no-work buffers if nests are identified. Impacts would be less than significant.

5.2.2 Riparian Habitat, Wetlands, and Sensitive Natural Communities

The Plan Area does not contain riparian habitat, potentially jurisdictional drainages, wetlands, or sensitive plant communities. A County-maintained municipal storm water channel (Live Oak Wash) traverses along the western boundary of La Verne Campus and connects to Puddingstone Reservoir south of the Plan Area. The Campus West site is also located adjacent to a county-maintained municipal storm water channel (Puddingstone Channel) which traverses along the western boundary of Campus West and connects to Puddingstone Reservoir south of the Plan Area. Live Oak Wash and Puddingstone Reservoir are separated from the Plan Area and are not proposed to be impacted by the Master Plan. Several smaller storm water drains traverse La Verne Campus and Campus West, none of which are proposed to be impacted by the Master Plan. Marshall Canyon Drain (county-maintained municipal storm water channel) traverses north to south through Campus West and connects with Puddingstone Reservoir south of the Plan Area. The Master Plan proposes to install a new bridge across the Marshal Canyon storm water channel to provide east-west access to the currently undeveloped land of Campus West. The Marshal Canyon storm water channel is a concrete-lined channel, which is devoid of vegetation and dry

during most of the year, except when it conveys flows through the city following storm events. No fish or wildlife habitat is present within the Marshal Canyon storm water channel; therefore, direct and indirect (due to shading) impacts to fish or wildlife would not are not expected. Impacts would be less than significant.

5.2.3 Wildlife Movement

The CDFW BIOS (2016) does not include any mapped essential habitat connectivity areas within the immediate vicinity of the Plan Area. The closest mapped essential habitat connectivity area is located approximately three miles north of the Plan Area in the vicinity of Live Oak Reservoir which extends between the San Gabriel Mountains to the west and San Bernardino Mountains to the east. The Plan Area is separated from this habitat connectivity area by urban development and heavily travelled roadways, including I-210. Furthermore, La Verne Campus and Park Campus are surrounded by residential and commercial development and heavily travelled transportation corridors, including Arrow Highway. Thus, these campuses are not within locations that serve or would serve as a native resident or migratory wildlife corridor. Campus West is located on the southern edge of the City of La Verne and borders Puddingstone Reservoir to the south, which may provide suitable habitat for wildlife species. However, despite its proximity to suitable wildlife habitat, Campus West would not serve as a wildlife movement corridor or habitat connectivity area due to its lack of vegetation cover and close proximity to urban development (Arrow Highway to the north, industrial development to the east, Bracket Field Airport to the south, and residential development to the west).Impacts would be less than significant.

Local Policies or Ordinances

The City of La Verne General Plan Resource Management Element (1998) contains policies and implementation measures designed to protect biological resources including wildlife corridors, trees, and native plant communities and habitats. As described above, the Plan Area does not contain wildlife corridors and the Master Plan would not result in significant impacts related to native plant communities or habitats. Municipal Code Chapter 18.78 Preservation, Protection and Removal of Trees requires permits for the removal and pruning of significant and heritage trees except in emergencies and requires replacement planting when significant and heritage trees are removed. Future development facilitated by the Master Plan would be required to comply with the tree preservation, protection and removal requirements identified in the Municipal Code. Therefore, implementation of the proposed project would not conflict with local policies protecting biological resources identified in the General Plan or Municipal Code. Impacts would be less than significant.

Habitat Conservation Plans

According to the U.S. Fish & Wildlife Service (USFWS), the Plan Area is not within an area subject to an adopted Habitat Conservation Plan (USFWS, 2015). According to the California Department of Fish and Wildlife (CDFW), the Plan Area is not within an area subject to an adopted Natural Community Conservation Plan (CDFW, 2015). No other approved local,

regional, or State conservation plans apply to the Plan Area. Therefore, there would be no impact related to conflicts with such a plan.

5.2.4 Mineral Resources

The Plan Area encompasses the University of La Verne and is not utilized for mineral extraction. The Resource Management chapter of the City's General Plan does not identify any mineral resources within the City. In addition, according to the California Geological Survey, the majority of the Plan Area is classified as MRZ-1 which is the Mineral Resource Zone where areas of geologic data indicate that little likelihood exists for the presence of significant mineral resources (California Geological Survey 2007). Therefore, the activities under the Master Plan would not result in the loss of availability of a known mineral resource and there would be no impact on mineral resources.

6 Other CEQA Required Discussions

6.1 Growth Inducing Effects

Section 15126(d) of the CEQA Guidelines requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create substantial physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The proposed project's growth effects are considered significant if they could result in significant physical effects in one or more environmental issue areas. The most commonly cited example of how a growth effect might create a physical change is where economic growth in one area could create blight conditions elsewhere by causing existing competitors to go out of business and the buildings to be left vacant.

6.1.1 Economic and Population Growth

As discussed in Section 2.0, Project Description, full implementation of the proposed Master Plan over its life (20 years from the date of City approval of the Master Plan) would involve an enrollment increase of approximately 782 full-time equivalent students, 132 additional faculty and a net increase of up to 668 additional beds in student residences. Compared to existing levels, this would increase enrollment by 16 percent and student beds by 74 percent. Full implementation of the proposed Master Plan would lead to a net increase of 475,577 gross square feet (gsf) of built facilities on campus, a 76 percent increase compared to the existing structural square footage of 626,554 gsf.

Such development would generate temporary employment opportunities at the University over the life of the proposed Master Plan. However, this would not be expected to draw a substantial number of new employees to the community, because it is anticipated that, given the extent and time frame of development, most, if not all, construction jobs would be filled by the workforce already existing in the area at the time of construction.

As described in Section 4.10, Population and Housing, for the proposed Master Plan, housing and population growth created or facilitated by implementation of the proposed Master Plan would be consistent with the forecasts contained in the RCP of the Southern California Association of Governments (SCAG). The proposed Master Plan's consistency with the goals and policies of the City of La Verne General Plan, the Old Town La Verne Specific Plan, and the Arrow Corridor Specific Plan is analyzed in Section 4.8, Land Use and Planning. As determined under impact discussion LU-2 and LU-3 in Section 4.8.3, with implementation of the mitigation measures identified throughout this EIR, the proposed Master Plan would be consistent with these goals and policies. It is the specific purpose of the La Verne General Plan to accommodate the orderly development of La Verne, including

within the Plan Area. Moreover, the Old Town La Verne Specific Plan and the Arrow Corridor Specific Plan provide further guidance on how development should occur within the Plan Area. Therefore, by their nature, the General Plan, the Old Town La Verne Specific Plan, and the Arrow Corridor Specific Plan are intended to reduce the potential for uncontrolled growth and associated environmental impacts, including within the Plan Area.

6.1.2 Removal of Obstacles to Growth

As discussed above, the proposed Master Plan would accommodate increases in enrollment and built square footage over the life of the Master Plan. As discussed in Section 4.14, Utilities and Service Systems, the Plan Area is already served by full municipal services and utilities including roads, water, sewer, and other infrastructure, and no substantial expansion of these facilities is proposed or needed to accommodate buildout of the Master Plan. Environmental impacts of minor extensions or changes in connection points of utilities and municipal services to the Plan Area would not be significant in this EIR, and such extensions would not induce growth or remove any obstacles to growth because they would not require new or expanded facilities such as wastewater treatment plants, or require procurement of additional resources such as new water supplies. The proposed Master Plan would therefore not require or induce extension of utilities or other services into undeveloped areas within or around the Plan Area that would induce growth that would not otherwise occur. The proposed Master Plan would not have any significant effect from removing obstacles to growth.

6.2 Irreversible Environmental Effects

The CEQA Guidelines require that EIRs evaluating projects involving amendments to public plans, ordinances, or policies contain a discussion of significant irreversible environmental changes. CEQA also requires decision makers to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. This section addresses non-renewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the proposed development.

Construction activity associated with the proposed Master Plan would involve the use of building materials and energy, some of which are non-renewable resources. Consumption of these resources would occur with any development in the region and are not unique to the Plan Area. The addition of new residential and non-residential development in the Plan Area would irreversibly increase local demand for non-renewable energy resources such as petroleum and natural gas. Increasingly efficient building fixtures and automobile engines, as well as implementation of policies included in the proposed Master Plan, the La Verne General Plan, and the applicable specific plans, are expected to offset this demand to some degree. As discussed below, it is not anticipated that the development envisioned by the proposed Master Plan would significantly affect local or regional energy supplies.

Growth associated with the proposed Master Plan would require an irreversible commitment of law enforcement, fire protection, water supply, wastewater treatment, and

solid waste disposal services. However, as discussed in Sections 4.12 and 4.14, impacts related to public services and utilities would be less than significant.

Additional vehicle trips generated by implementation of the proposed Master Plan would incrementally increase local traffic, noise levels and regional air pollutant emissions. As discussed in Section 4.2, Air Quality, emissions associated with proposed Master Plan implementation would be below applicable significance thresholds. As discussed in Section 4.9, Noise, increased noise levels from traffic associated with implementation of the proposed Master Plan would not expose sensitive receptors to noise levels exceeding applicable standards, and this impact would be less than significant. Construction noise impacts would be significant and unavoidable, but would be temporary and therefore reversible. Finally, as discussed in Section 4.13, Transportation, implementation of the proposed Master Plan would have significant traffic-related impacts at certain local intersections which currently operate, or are projected to operate in the future, at an unacceptable level of service. Implementation of Mitigation Measure T-1, would reduce the impact of project-related traffic on the performance of the circulation system to a less than significant level, except at the intersection of D Street and Bonita Avenue, where impacts would remain significant and unavoidable under the Year 2035 With Project Build-out scenario. Development carried out under the proposed Master Plan would be required to comply with applicable City codes and regulations governing traffic-related design features and uses, driveways and site access. Applicable codes and regulations that may be required include the Uniform Building Code (UBC), CBC, Uniform Fire Code, and final plan check by the City of La Verne Implementation of standard conditions and regulations would ensure that adequate design features, uses and sufficient access would be provided within the Plan Area. The proposed project also includes various features to encourage safe and efficient use of alternative transportation modes, as discussed in Impact T-5. Therefore, no safety hazards related to roadway design, incompatible uses, or inadequate emergency access would occur.

6.2.1 Energy

This section describes the supply and use of energy as a result of implementation of the proposed Master Plan, as well as local actions to conserve energy and use it more efficiently.

Appendix F of the CEQA Guidelines requires that EIRs analyze energy conservation consistent with Public Resources Code section 21100(b)(3). According to the CEQA Guidelines, energy impacts that have already been analyzed need not be repeated in later EIRs and EIRs do not need to address “lifecycle emissions,” such as those embedded in the production of building materials used in projects. Lifecycle emissions under CEQA would normally represent “emissions beyond those that could be considered indirect effects of a project as that term is defined in section 15358 of the State CEQA Guidelines” (California Natural Resources Agency, 2009).

Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

The following describes the federal regulatory context used in this analysis.

National Energy Act

The National Energy Act of 1978 was a legislative response by the U.S. Congress to the 1973 energy crisis. It includes the following statutes, which are described below:

- Public Utility Regulatory Policies Act (PURPA) (Public Law 95-617)
- Energy Tax Act (Public Law 95-318)
- National Energy Conservation Policy Act (NECPA) (Public Law 95-619)
- Power Plant and Industrial Fuel Use Act (Public Law 95-620)
- Natural Gas Policy Act (Public Law 95-621)

Public Utility Regulatory Policies Act (PURPA)

PURPA was passed by Congress in 1978 as part of the National Energy Act to promote greater use of renewable energy. This law created a market for non-utility electric power producers to permit independent power producers to connect to their lines and to pay for the electricity that was delivered. Although PURPA is a federal law, implementation was left to the states and a variety of regulatory regimes developed.

Energy Tax Act

The Energy Tax Act was also passed by Congress in 1978 as part of the National Energy Act. It was a response to the 1973 oil crisis and promoted fuel efficiency and renewable energy through taxes and tax credits.

National Energy Conservation Policy Act (NECPA)

NECPA is a statute signed into law in 1978 as part of the National Energy Act. NECPA requires utilities to provide residential consumers with energy conservation audits and other services to encourage slower growth of electricity demand. NECPA was amended in 1985 by the Energy Policy and Conservation Act Amendments of 1985 (Public Law 99-58).

Federal Energy Management Program

The U.S. Department of Energy's Federal Energy Management Program works to reduce the cost and environmental impact of the federal government by advancing energy efficiency and water conservation, promoting the use of distributed and renewable energy, and improving utility management decisions at federal sites.

Energy Policy Act

The Energy Policy Act of 1992, recent executive orders, and presidential directives require federal agencies to meet a number of energy and water management goals, among other requirements. Federal agencies were directed to reduce their energy use by 35 percent by

2010 in comparison to 1985 levels. Federal agencies rely on effective coordination and sound guidance to help meet this requirement. The Federal Energy Management Program reports agencies' progress annually, manages interagency working groups, and offers policy guidance and direction. The Energy Policy Act was amended in 2005 (Public Law 109-190) to increase the supply of energy primarily through subsidies.

Federal Energy Regulatory Commission (FERC)

FERC regulates and oversees energy industries in the economic, environmental, and safety interests of the American public. FERC is the federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, and oil pipeline rates. FERC also reviews and authorizes liquefied natural gas terminals, interstate natural gas pipelines, and non-federal hydropower projects. Production of electricity is overseen by the states; however, FERC has jurisdiction over certain matters (FERC 2016).

State Plans, Policies, Regulations, and Laws

The following describes the state regulatory context used in this analysis.

California's Renewable Portfolio Standards (RPS)

RPS, established in 2002 by Senate Bill (SB) 1078 (Chapter 516, Statutes of 2002), requires electricity providers to procure an annual increase of at least 1 percent of their electricity supplies from renewable resources so as to achieve a 20 percent renewable mix by no later than 2017. The Energy Action Plan, approved by California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and the California Power Authority (CPA), accelerated the 20 percent target date to 2010.

California Energy Commission (CEC)

Established in 1974 by the Warren-Alquist Act (Public Resources Code Section 25000 et seq.), CEC is the state's primary energy policy and planning agency. The CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatt (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the state response to an energy emergency. California offered tax subsidies in the early 1980s for renewable power development. The state also ordered utilities to not only buy electricity from independent power generators, but also directed utilities to set a price and offer standard contracts. California's subsidies and the standard offer contracts launched the commercial wind industry in the country.

In 2003, the CEC released a report on renewable resource development summarizing technical potential and projected development from 2003 to 2017 (CEC 2003). The goal was to provide some preliminary statewide estimates for increasing renewable generation based on new resource assessments. The renewable resource report summarizes accelerated renewable energy needs to meet the statewide Energy Action Plan RPS goal of

20 percent by 2010, although it does not account for infrastructure improvements or operational enhancements needed to increase the use of renewable resources.

California Energy Code

The California Energy Code (Title 24, Part 6, of the CCR, California's Energy Efficiency Standards for Residential and Nonresidential Buildings), provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. The Code applies to the building envelope, space-conditioning systems, and water-heating and lighting systems of buildings and appliances. The Code provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. The Code provides guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements, including appliances; water and space heating and cooling equipment; and insulation for doors, pipes, walls and ceilings. The Code emphasizes saving energy at peak periods and seasons, and improving the quality of installation of energy efficiency measures.

California Green Building Standards Code

The California Building Standards Code is published in its entirety every three years by order of the California Legislature. The California Legislature delegated authority to various State agencies, boards, commissions and departments to create building regulations to implement the State's statutes. These building regulations or standards have the same force of law, and generally apply to all new building construction in California. A city, county, or city and county may establish more restrictive standards reasonably necessary because of local climatic, geological or topographical conditions.

On July 17, 2008, the California Building Standards Commission adopted the California Green Building Standards Code for all new construction statewide. A voluntary implementation period was intended to give builders, local governments, and communities' time to adapt to the new rules. The Code sets targets for: energy efficiency; water consumption; dual plumbing systems for potable and recyclable water; diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including ecofriendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels.

Updates to the California Green Building Standards Code in 2013 took effect on January 1st, 2014. The updated Code sets minimum standards for all new structures as part of a broad effort to reduce California's carbon emissions. The updated Code also has a two-tiered system for jurisdictions that wish to adopt codes that go beyond the State mandatory provisions for energy use and potable water use, parking for clean-air vehicles, cool roofs, construction waste diversion, recycling, and other topics.

State of California Energy Action Plan

In 2003, the three key energy agencies in California— the CEC, the CPA, and the CPUC— jointly adopted an Energy Action Plan (EAP) that listed goals for California's energy future

and set forth a commitment to achieve these goals through specific actions. In 2005, the CPUC and the CEC jointly prepared the EAP II to identify the further actions necessary to meet California's future energy needs. EAP II describes the priority sequence for actions to address increasing energy needs, also known as "loading order." The loading order identifies energy efficiency and demand response as the State's preferred means of meeting growing energy needs. After cost-effective efficiency and demand response, the State is to rely on renewable sources of power and distributed generation, such as combined heat and power applications. To the extent that efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, the EAP II supports the use of clean and efficient fossil-fired generation. The EAP II recognizes that concurrent improvements are required to the bulk electricity transmission grid and distribution facility infrastructure to support growing demand centers and the interconnection of new generation, both on the utility and customer side of the meter. The EAP II identifies key actions to be taken in all of these areas in order to meet the state's growing energy requirements.

Environmental Setting

Electricity Use

California used 296,628 gigawatt-hours (GWh) of electricity in 2013. Since the early 1970s, electricity consumption per capita in California has stayed nearly constant, while rising steadily for the US as a whole. California consumes 45 percent less electricity per person compared to the national average (CA Energy Almanac, 2010).

Most of the electric energy used in Southern California is imported to the region from coal-fired and hydroelectric generating facilities located elsewhere in California and out-of-state. Utilities in Southern California participate in power-sharing arrangements with many other entities throughout the western United States. In 2005, the SCAG region consumed almost 128,000 GWh of electricity, which was approximately 48 percent of the total consumption of the State. Electricity consumption in Southern California has been increasing approximately 1.3 percent per year (SCAG 2007).

The existing Plan Area's electricity use is primarily related to use in campus buildings. Table 80 provides an estimate of annual electricity consumption on the campus using default values from the CEC sponsored CEUS and RASS studies that are built into the CalEEMod model that was used for the air quality and greenhouse gas emissions calculations (please see sections 4.2, *Air Quality*, and 4.5 *Greenhouse Gases*, for explanation of the CalEEMod model). Based on existing conditions, it is estimated that the Plan Area currently uses approximately 9,946,170 kilowatts per hour (kWh) per year.

Table 80 Existing Annual Electricity Use

Source	Annual Electricity Use (kWh)
Plan Area	9,946,170

Source: CalEEMod output provided in the Air Quality Study

Natural Gas Use

In 2007, California used an average of over 6.9 billion cubic feet of natural gas per day (CEC 2009). The natural gas was used to produce electricity (50 percent), in industrial uses (18 percent), in commercial uses (nine percent), and in residential uses (22 percent). Approximately 14 percent of the natural gas was produced within California, with the balance imported from other western states (63 percent) and Canada (23 percent) (CEC 2009). As noted, 50 percent of the natural gas used by California was used to produce electricity. This results in peak seasonal demands for natural gas not only during the winter months for heating but also during the peak electricity-demand period in summer when cooling needs are greatest (CEC 2009). Natural gas usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all gas-consuming devices within a building.

Recent technological advancements in exploration, drilling, and hydraulic fracturing have transformed shale formations from marginal natural gas producers to substantial and expanding contributors to the natural gas portfolio. Combined natural gas reserve estimates were downgraded from 348 trillion to 323 trillion cubic feet in 2012, a 12-year supply at today's consumption rates (EIA 2015). While natural gas production from shale formations has substantially increased domestic production, there is ongoing investigation of potential environmental concerns related to shale gas development, including carbon emissions and possible groundwater contamination. As recently as two years ago, domestic natural gas production and imports to California were on the decline, and liquefied natural gas was seen as a source to better serve the natural gas needs of California. The recent development of natural gas shale formations has contributed to increased domestic production of natural gas, and liquefied natural gas is being identified as an export (CEC 2014).

The existing Plan Area's natural gas use is estimated in Table 81, which uses default values from the CEC sponsored CEUS and RASS studies which are built into the CalEEMod model (please see sections 4.2, Air Quality, and 4.5, Greenhouse Gases, for explanation of the CalEEMod model). Based on existing conditions, it is estimated that the Plan Area currently uses approximately 25.4 billion British Thermal Units (BTU) per year.

Table 81 Existing Natural Gas Use

Source	Annual Natural Gas Use (billion BTU)
Plan Area	25.4

Source: CalEEMod output provided in the Air Quality Study

Transportation Fuel

In California, petroleum use accounts for approximately 42 percent of all energy consumption. Californians presently consume roughly 49.5 million gallons of gasoline and diesel fuel each day. This is a 53 percent increase over 20 years ago. The primary factors contributing to this increase are: (1) population growth; (2) declining per-mile cost of

gasoline; (3) land use patterns that have increased the distance between jobs and housing; and (4) a shift in consumer preferences to larger, less fuel-efficient motor vehicles. Approximately 53 percent of petroleum use is for motor vehicle fuel. The average fuel economy for the fleet of light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from about 12.6 miles per gallon (mpg) in the mid-1970s to 20.7 mpg today.

Although no new refineries have been constructed in California since 1969, supply has kept pace with demand though a combination of refinery upgrades/modernizations and out-of-state imports. According to the CEC (2009), the demand for gasoline between 2007 and 2030 will fall by 8.5 to 13.3 percent while the demand for diesel will increase by 35 to 42 percent.

The existing Plan Area's transportation fuel use is estimated in Table 82, which uses default values from the ITE rate for average daily trips for a college campus consistent with the project's traffic study prepared by LLG Engineers (included as Appendix E) and by the total vehicle miles traveled (VMT) estimated in CalEEMod (see Appendix B). Based on existing conditions, it is estimated that the Plan Area currently uses approximately 1,592,965 gallons of petroleum per year.

Table 82 Existing Annual Fuel Consumption

Vehicle Type	Percent of Vehicle Trips	Annual Vehicle Miles Traveled	Average Fuel Economy (miles/gallons)	Total Annual Fuel Consumption (Gallons)
Passenger Cars	51	14,008,187	23.2	603,801
Light/Medium Trucks	38	10,437,473	17.1	610,378
Heavy Trucks/Other	10	2,746,703	7.3	376,260
Motorcycles	0.4	109,868	43.5	2,526
Total Annual Fuel Consumption				1,592,965

Source: Annual trips and vehicle miles traveled provided by CalEEMod output provided in the Air Quality Analysis.

Average fuel economy provided by the United States Department of Transportation, Bureau of Transportation Statistics (2014). Available http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/index.html

Impact Analysis

Methodology and Significance Thresholds

Energy use associated with the proposed Master Plan was estimated using the same data utilized in the Air Quality Analysis and contained in Appendix B. For the purpose of this analysis, the following applicable thresholds of significance have been used to determine whether implementing the proposed Master Plan would result in a significant impact. These thresholds of significance are based on Appendix F of the CEQA Guidelines. An impact on

energy resources or energy conservation is considered significant if implementation of the proposed Master Plan would do any of the following:

- Develop land uses and patterns causing wasteful, inefficient, and unnecessary consumption of energy
- Result in the need for new systems or substantial alterations to electrical, natural gas, or communication systems infrastructure, the construction or operation of which would have significant impacts

Project Impacts

Effects on Energy Consumption from Land Use Locations and Patterns

Implementation of the proposed Master Plan would result in an increased demand for energy. New structures and residences will increase local energy demands. As shown in Table 83 through Table 85, development facilitated by the proposed Master Plan would result in an annual increase of approximately 4,769,504 kWh of electricity, 2.3 billion BTUs of natural gas, and 548,966 gallons of fuel.

Table 83 Proposed Annual Electricity Use

Source	Annual Electricity Use (kWh)
Existing Use	9,946,170
Additional Use	4,769,504
Total Proposed Annual Electricity Use	14,715,674

Source: CalEEMod output provided in the Air Quality Study

Table 84 Proposed Annual Natural Gas Use

Source	Annual Natural Gas Use (kBTU)
Existing Use	25.4
Additional Use	2.3
Total Proposed Annual Natural Gas Use	27.7

Source: CalEEMod output provided in the Air Quality Study

Table 85 Proposed Annual Fuel Consumption

Vehicle Type	Percent of Vehicle Trips	Annual Vehicle Miles Traveled	Average Fuel Economy (miles/gallons)	Total Annual Fuel Consumption (Gallons)
Passenger Cars	51	4,827,488	23.2	208,081
Light/Medium Trucks	38	3,596,952	17.1	210,348
Heavy Trucks/Other	10	946,566	7.3	129,667
Motorcycles	0.4	37,863	43.5	870
Total Additional Annual Fuel Consumption				548,966
Total Existing Annual Fuel Consumption				1,592,965
Total Proposed Annual Fuel Consumption				2,141,931

Source: Annual trips and vehicle miles traveled provided by CalEEMod output provided in the Air Quality Analysis.

Average fuel economy provided by the United States Department of Transportation, Bureau of Transportation Statistics (2014). Available http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/index.html

Although implementation of the proposed Master Plan would result in an increase in demand for energy, one of the guiding principles is: “Design a plan that demonstrates a commitment to sustainability and environmental conservation and engages and tests new ideas.” Therefore, the Master Plan contains the following vision and goals for sustainability to increase energy efficiency and reduce the energy demand from what it would be with more traditional, less energy-efficient development patterns. The following provides a summary of the energy efficient measures contained in the Master Plan.

- Adopt measurable standards for planning and building design for existing and new projects that eliminate “green washing.”
- Promote a culture of efficiency and decision-making supported by measurable performance of building and campus systems.
- Maintain and improve the existing campus character defined by the relationship between building massing and mature landscape and streetscape (gray versus green ratios).
- Encourage density as means to maximize energy and available land resources. Buildings that concentrate more square footage with a small footprint allow for larger campus open spaces, optimal ground water infiltration, natural ventilation and reduced heat-island effect.
- Divide and then centralize campus infrastructure and utilities into similar usage areas to increase efficiency and reduce the cost and maintenance expenses of a “piece-meal” approach to infrastructure.
- Establish a culture of long-range decision-making and life-cycle approach to facilities investment and construction.

- Explore and adopt alternative means of transportation and energy generation.
- Create a landscape plan that preserves the legacy and features of the University while transitioning to a dough-tolerant (native and adaptive) planting palette, using the water-intensive material with purpose and particular care.

With the energy efficient design elements and energy conservation measures included in the proposed Master Plan and with implementation of State building and energy efficiency standards, development under the Master Plan would not result in inefficient, excessive, or unnecessary consumption of energy. Potential impacts would be less than significant.

Project Impact

Increased Energy Demand and Need for Additional Energy Infrastructure

As shown in Table 80 through Table 85 above, implementation of the proposed Master Plan would increase energy demand. However, policies and initiatives within the Master Plan, as well as existing regulations and project-level review would help reduce this increase in energy demand. In addition, the increase in energy demand (an increase of approximately 48 percent for electricity, nine percent for natural gas, and 35 percent for gallons of fuel compared to current conditions on campus as outlined in Section 6.2.1) would not require new construction and operation of energy-related facilities that would have potentially significant impacts. As implementation of the proposed Master Plan would occur over a 20-year period, the projected incremental electric and gas demand would be incorporated into Southern California Edison and The Gas Company forecasts and would not require new energy infrastructure. The impact would be less than significant.

7 Alternatives

As required by Section 15126.6 of the *CEQA Guidelines*, this section of the EIR examines a range of reasonable alternatives to the proposed Master Plan that would feasibly attain most of its basic objectives but would avoid or substantially lessen any of its significant effects on the environment. Section 15126.6 also requires consideration of the "No Project" alternative, regardless of whether it would achieve the project objectives or lessen its environmental effects. The overarching objective of the proposed Master Plan is to serve as a guide for a 20-year program of campus development in support of the University's Strategic Vision. Within this overarching framework, the Master Plan is designed to achieve the following objectives:

- Create a plan that enables and supports the Initiatives of the 2020 Strategic Vision.
- Create a plan that maximizes the academic and educational experience and provides for appropriate and flexible classrooms and laboratories that are technologically capable of supporting increasing technology in the learning experience.
- Utilize a planning process that is inclusive and engaging of campus and community stakeholders and is guided by data as well as the aspiration to fulfill the promise of the University of La Verne.
- Design a plan that demonstrates a commitment to sustainability and environmental conservation and engages and tests new ideas.
- Create a plan that defines physical and technological connections between and among La Verne regional campuses, the online community and with the main campus.
- Identify a plan for the utilization and development of Campus West, including a convenient and attractive linkage that integrates Campus West as a part of the core campus.
- Create a campus coherence that emphasizes an intimate sense of place with safe pedestrian scale that promotes personal interaction, community identify and a welcoming experience for the diversity of La Verne students.
- Provide vehicle parking and circulation that meets the needs of the campus community and is compatible with the residential and business community adjacent to the main campus.
- Create a campus that has vitality and encourage co-curricular activities such as recreation, arts, clubs and athletics as well as quiet spots for conversation and reflection.
- Develop a campus plan that creates a positive interface between the University and La Verne community, including the support of a vibrant downtown La Verne and the opening of the Gold Line light rail system.
- Create a plan that strategically integrates the role of technology into the University's teaching and learning experience and administrative operational processes.

Implementation of the proposed Master Plan would result in unavoidably significant impacts related to historic resources and construction noise. Alternatives were selected for

analysis that could potentially reduce these impacts as well as other impacts determined to be less than significant in this EIR, either with or without mitigation incorporated. The following alternatives are evaluated in this EIR:

- Alternative 1: No Project
- Alternative 2: Increased Specific Plan Consistency
- Alternative 3: Preservation, Reuse, or Relocation of Historic Structures

A detailed description of the alternatives is included in the impact analysis for each alternative provided in the following sub-sections. As required by CEQA, this section also includes a discussion of the "environmentally superior alternative" among those studied.

7.1 Alternative 1: No Project

7.1.1 Description

The No Project Alternative assumes that the proposed Master Plan would not proceed. If the Master Plan does not proceed, the University of La Verne may eventually pursue projects described in the Master Plan individually, and some of those projects could be approved by the City and built by the University. However, it is not known what projects would be pursued or approved on an individual basis; therefore, for the purposes of analyzing a No Project alternative under the requirements of CEQA, it is assumed that enrollment at University of La Verne would not increase, and that the proposed demolition and renovation of existing facilities and construction of new facilities would not occur on either La Verne Campus or Campus West.

The No Project Alternative would avoid all environmental impacts associated with physical development and enrollment increases envisioned under the proposed Master Plan and thus would avoid associated environmental effects to aesthetics, air quality, cultural resources, greenhouse gas emissions, hazardous materials, land use plans, and noise, as well as from increased lighting, traffic, and vehicular emissions. The No Project Alternative would not achieve most of the project objectives because it would not include any of the elements of the proposed Master Plan designed to achieve those objectives. For example, it would not enable and support the initiatives of the 2020 Strategic Plan; maximize the academic and educational experience or provide appropriate and flexible classrooms and laboratories that are technologically capable of supporting increasing technology in the learning experience; define physical connections between and among La Verne's regional campuses, the online community, and with the main campus; utilize and develop Campus West, including integrating it as a part of the core campus; provide vehicle parking and circulation that meets the needs of the campus community and is compatible with the residential and business community adjacent to the main campus; or fully support a vibrant Old Town La Verne and the opening of the Gold Line light rail system. The objectives the University might achieve without implementing the Master Plan would include the University's commitment to sustainability and environmental conservation, including engaging in and testing new ideas; emphasizing an intimate sense of place with safe pedestrian scale that promotes personal interaction, community identify, and a welcoming

experience for the diversity of La Verne students; encouraging co-curricular activities such as recreation, arts, clubs and athletics, as well as quiet spots for conversation and reflection; and integrating technology into the University's teaching and learning experience and administrative operational processes.

7.1.2 Impact Analysis

Aesthetics

The No Project Alternative would not include any of the physical development proposed in the Master Plan, and would therefore have no impact related to aesthetics. This alternative would result in fewer physical changes to the Plan Area than under the proposed Master Plan. Because implementation of the proposed Master Plan would not result in a significant change to scenic vistas or view corridors (see impact discussion AES-1 and AES-2 in Section 4.1, Aesthetics), the No Project Alternative would not be substantially different to the proposed Master Plan in this regard.

This alternative would preserve the Plan Area's existing scenic resources, such as mature trees and the three identified historical/visual landmarks located within or adjacent to the Plan Area – the Hanawalt House, Miller Hall, and the Carrion Adobe, to a greater extent than under the proposed Master Plan. The proposed Master Plan would include a Heritage Tree Plan in compliance with City of La Verne Municipal Code Chapter 18.78 Preservation, Protection and Removal of Trees to mitigate for impacts to mature or heritage trees; however, the No Project Alternative would eliminate the need to replace removed mature trees. Additionally, Mitigation Measures CR-6 through CR-88 would not be required to mitigate the effects of potential alterations to or demolition of historic buildings.

Without construction of the various projects envisioned in the proposed Master Plan, the Plan Area would experience less development and retain more of its current visual character and quality. This alternative would also not involve the construction of new lighting, and would therefore not require implementation of Mitigation Measures AES-2 and AES-3. The overall aesthetic impacts of the No Project Alternative would therefore be less than those of the proposed Master Plan.

Air Quality

Because the No Project Alternative would not include any of the physical development or enrollment increase proposed in the Master Plan, it would have no impact on air quality. This alternative would result in less physical development in and around the Plan Area than the proposed Master Plan, and therefore would not result in impacts requiring mitigation associated with construction emissions as would the proposed Master Plan. Also, because the No Project Alternative would not increase enrollment at the University of La Verne and would result in less physical development, it would have incrementally lower operational air quality emissions from increased traffic and the operation of physical facilities than the proposed Master Plan. Unlike the proposed Master Plan, this alternative would not include any increase in enrollment, faculty, and staff, so it would have less potential to induce population growth than the proposed Master Plan. However, neither the proposed Master

Plan nor this alternative would exceed growth forecasts upon which the South Coast Air Quality Management District's (SCAQMD) 2016 Draft Air Quality Management Plan (AQMP) is based. Therefore, both alternatives would be consistent with the AQMP. Overall, the No Project Alternative's impacts related to air quality would be less than those of the proposed Master Plan.

Cultural Resources

Because the No Project Alternative would not include any of the physical development proposed in the Master Plan, it would have no impact on any of the on-campus locations or buildings that have been identified as cultural resources in this EIR, and would thus avoid the mitigation measures that would be required under the Master Plan to protect these resources. It would also avoid the proposed Master Plan's significant and unavoidable impact related to the twenty-five existing buildings within the University of La Verne campus that would be directly impacted either as a result of demolition or renovation, including eight buildings that have previously been found to be historical resources in accordance with CEQA. Thus, it would eliminate the requirement for Mitigation Measures CR-6 through CR-8. Overall, the No Project Alternative would have less impact on cultural resources than the proposed Master Plan because it would avoid one of the proposed Master Plan's significant unavoidable impacts.

Geology and Soils

Because the No Project Alternative would not include any of the physical development or the enrollment increase proposed in the Master Plan, it would have no impact related to geology and soils. Under the No Project Alternative, the Plan Area would be less intensively developed than under the proposed Master Plan. This would lead to less structural development or new students being exposed to the risks of seismic shaking, its associated effects, or other geologic hazards. Because it would not involve the physical development proposed in the Master Plan, the No Project Alternative would not result in grading and other soil disturbing activities that could result in erosion or loss of topsoil. Overall, the No Project Alternative's impacts related to geology and soils would be less than those of the proposed Master Plan, although such impacts would be less than significant in either case.

Greenhouse Gas Emissions

Because the No Project Alternative would not include any of the physical development or enrollment increase proposed in the Master Plan, it would not increase emissions and would therefore have no impact related to greenhouse gas (GHG) emissions. The No Project Alternative would result in fewer operational and construction emissions than the proposed Master Plan, including GHG. As with the proposed Master Plan, this alternative would be consistent with the GHG reduction strategies set forth by the Climate Action Team GHG reduction strategies, the 2008 Attorney General Greenhouse Gas Reduction Measures, and the University's Climate Action Plan. Overall, the No Project Alternative would have less impact related to GHG emissions than the proposed Master Plan.

Hazards and Hazardous Materials

Because the No Project Alternative would not include any of the physical development or the enrollment increase proposed in the Master Plan, it would have no impact related to potential upset or accident conditions involving hazardous materials; exposure to lead or asbestos from demolition, remodeling, or renovation of existing buildings; the use or transport of hazardous materials; impairment or physical interference with an adopted emergency response plan; or potential site contamination. The proposed Master Plan's impacts in these areas would also be less than significant, except for the potential to expose people to hazards through the development of Campus West, which would be mitigated to a less than significant level. However, the No Project Alternative would have no impacts which would be significant, and therefore impacts would be less than those of the proposed Master Plan.

Hydrology and Water Quality

Because the No Project Alternative would not include any of the physical development proposed in the Master Plan, it would have no impact on hydrology and water quality. Development of the proposed Master Plan would involve demolition and construction activities, both of which would involve excavation and grading that could result in erosion of onsite soils and sedimentation, with consequent temporary impacts to surface water quality. Because the No Project Alternative would not result in the physical development proposed in the Master Plan, it would eliminate these impacts.

Development envisioned under the proposed Master Plan would increase impermeable surfaces within the Plan Area, which would potentially increase storm water runoff. However, the proposed Master Plan includes or allows for the implementation of several measures, such as bioswales, that would help retain storm water on site, which would not be built under the No Project Alternative. For this reason, both alternatives would have similar potential to increase erosion or exceed the capacity of existing or planned storm water systems by altering existing drainage patterns or increasing the rate or amount of surface runoff.

Neither the proposed Master Plan nor this alternative would have significant impacts related to hydrology and water quality requiring mitigation. However, because the No Project Alternative would involve less overall development and fewer changes to/disturbance of the ground surface of the Plan Area, it would have less impact on hydrology and water quality.

Land Use and Planning

Because the No Project Alternative would not include any of the physical development or enrollment increase proposed in the Master Plan, it would have no impact related to land use and planning. The No Project Alternative, like the proposed Master Plan, would be generally compatible with existing adjacent institutional, commercial and residential land uses. However, unlike the proposed Master Plan, this alternative would not require potential revisions to Specific Plans to achieve consistency with building height standards or

permitted uses or the incorporation of mitigation measures to address impacts related to aesthetics, air quality, cultural resources, greenhouse gas emissions, hazards and hazardous materials, noise, and traffic. While these impacts have been determined to be less than significant in this EIR through implementation of existing regulations, project elements, and mitigation measures (except for impacts to historic buildings and from construction noise, which were determined to be significant and unavoidable even with incorporated mitigation), the No Project Alternative would avoid these potential impacts altogether. Therefore, this alternative would have fewer impacts related to potential land use compatibility issues. Overall, the No Project Alternative would have less impact on land use and planning impacts than the proposed Master Plan.

Noise

Because the No Project Alternative would not include any of the physical development or enrollment increase proposed in the Master Plan, it would have no impact related to noise. For example, the No Project Alternative would not include construction of buildings within 50 feet of sensitive receptors, which would result in significant and unavoidable construction noise impacts. This alternative would also not lead to the increases in enrollment, staff, and faculty or the increase in the amount of built facilities anticipated under the proposed Master Plan, although the proposed Master Plan's impacts in this regard would be less than significant. Therefore, this Alternative would lead to lower operational noise levels from both traffic and facilities than the proposed Master Plan. Overall, this alternative's impacts related to noise would be less than those of the proposed Master Plan.

Population and Housing

Because the No Project Alternative would not include any of the physical development or enrollment increase proposed in the Master Plan, it would not contribute direct impacts to population and housing, as opposed to the less than significant impacts of the proposed Master Plan. The No Project Alternative would not add to population growth and would create less demand for housing because it would not allow for the increase in enrollment, faculty, and staff at University of La Verne. However, regionally, it is anticipated that the area will see a pattern of population growth and housing needs whether or not development under the Master Plan occurs due to the underlying plans for development established by the Old Town Specific Plan and the Arrow Corridor Specific Plan. Allowing the proposed development of new student housing and multi-family residential units would increase the amount of housing available on-campus, which in turn could potentially create new housing opportunities for non-students in the greater City of La Verne by freeing up off-campus housing previously occupied by students. The addition of on-campus student housing opportunities and the potential addition of approximately 170 residential units on Campus West would help alleviate the growing demand for housing within the City of La Verne. Nevertheless, the No Project Alternative's impacts on population and housing would be less than the proposed Master Plan.

Public Services

Because the No Project Alternative would not include the physical development or enrollment increase proposed in the Master Plan, it would have no impact on public services, as opposed to the less than significant impact of the proposed Master Plan. The No Project Alternative would create less demand for public services (such as fire and police protective services, schools, libraries, and recreational facilities) because it would not allow for the increase in enrollment, faculty, and staff and built facilities proposed under the Master Plan. Overall, the No Project Alternative's impacts on public would be less than the proposed Master Plan.

Recreation

Because the No Project Alternative would not include any of the physical development or enrollment proposed in the Master Plan, it would have no impact recreation, as opposed to the less than significant impact of the proposed Master Plan. The No Project Alternative would create less demand for recreational facilities and opportunities because it would not allow for the increase in enrollment, faculty, and staff and built facilities at University of La Verne proposed under the Master Plan. Overall, the No Project Alternative's impacts on recreation would be less than the proposed Master Plan although such impacts would be less than significant in either case.

Traffic/Circulation

Because the No Project Alternative would not include any of the development or enrollment increase proposed in the Master Plan, it would have no traffic impacts. Therefore, its traffic impacts would be less than those of the proposed Master Plan, which requires mitigation for contributing trips to the intersections of B Street and Bonita Avenue and D Street and Bonita Avenue under the Existing Plus Project scenario at buildout of Phases I and II, as well as the intersections of A Street and Arrow Highway, D Street and Bonita Avenue, and E Street-Fairplex Drive and Arrow Highway during the future year cumulative plus project scenario at buildout of Phase I, III, and III (2035) . This alternative would also have no impact on CMP-monitored intersections, which would be a less than significant impact under the proposed Master Plan. While the layout of the existing campus does not create significant issues related to design features, incompatible uses, or emergency access, the proposed Master Plan does include features designed to improve pedestrian safety and accessibility that would not be included under the No Project Alternative (e.g., the Second and C Street pedestrian promenade and the Third Street pedestrian promenade) . Existing alternative transportation systems would be adequate to serve either the proposed Master Plan or the No Project Alternative, so impacts related to alternative transportation and consistency with adopted policies, plans, or programs supporting alternative transportation would be similar to those of the proposed Master Plan and similarly less than significant. Overall, impacts of the No Project Alternative on transportation and circulation would be less than those of the proposed Master Plan due to the fact that this alternative, unlike the proposed Master Plan, would not require mitigation to offset impacts at the above-referenced intersections.

Utilities and Service Systems

Because the No Project Alternative would not involve any of the physical development or increase in enrollment envisioned in the proposed Master Plan, it would have no impact on utilities and service systems, rather than the less than significant impacts of the proposed Master Plan. This alternative would therefore create less demand for and on these services and infrastructure systems than the proposed Master Plan.

7.2 Alternative 2: Increased Specific Plan Consistency

7.2.1 Description

This alternative was chosen to avoid or reduce the proposed Master Plan's potential inconsistency with the Old Town La Verne Specific Plan resulting from the construction of buildings up to 60 feet in height, where the applicable Old Town La Verne Specific Plan land use district only permits building heights up to 30 feet. In addition, it would avoid the potential inconsistency resulting from the development of up to 170 multi-family residential units within Campus West, which is not a permitted use within the Arrow Corridor Specific Plan.

The Increased Specific Plan Consistency Alternative assumes that the proposed Master Plan would reduce the height of the buildings within the Old Town Mixed Use and Historic Fabric Mixed Use land use districts to 32 feet and 30 feet, respectively. Four structures as proposed in the Master Plan would be reduced in height, and therefore size and potential capacity, in order to comply with the Old Town La Verne Specific Plan. The differences are detailed in Table 86 below. In addition, the proposed multi-family housing land use would be removed from Campus West to achieve consistency with uses permitted in the Arrow Corridor Specific Plan. This alternative also assumes any development proposed under the Master Plan that is currently designed in conformance with the land use and design standards of the Specific Plans would proceed as outlined in the Master Plan and assessed under this EIR.

Table 86 Building Changes: Proposed Master Plan vs. Increased Old Town La Verne Specific Plan Consistency

Building	Proposed Height	Alternative Building Height	Proposed Square Footage	Alternative Building Square Footage
Parking Structure II	55 feet max. 6 stories	32 feet max. 3 stories	Max. 258,000 sf (43,000 sf footprint)	Max. 129,000 sf (43,000 sf footprint)
Attached mixed-use	35 feet max. 2 stories	32 feet max. 2 stories	17,000 sf	17,000 sf
Residence Hall II	50 feet max. 4 stories	30 feet max. 3 stories	Max. 108,000 sf	81,000sf
Gateway Tower	Unknown	32 feet max.	N/A	N/A

7.2.2 Impact Analysis

Aesthetics

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan, and would therefore have less impact related to aesthetics. This alternative would result in fewer physical changes to the visual character of the Plan Area than under the proposed Master Plan. Because implementation of the proposed Master Plan would not result in a significant change to scenic vistas or view corridors (see impact discussion AES-1 and AES-2 in Section 4.1, Aesthetics), the Increased Specific Plan Consistency Alternative would not be substantially different than the proposed Master Plan and impacts would be similar.

This alternative would impact the Plan Area's existing scenic resources, such as mature trees and the identified historical/visual landmarks located within or adjacent to the Plan Area – Brandt Residence Hall, Interfaith Chapel, Stu-Han Residence Hall, Maniero/La Fetra Building, Davenport Dining, Miller Hall, Woody Hall and the Arts and Communications Building. Similar to the proposed project, this alternative would require a Heritage Tree Plan in order to comply with City of La Verne Municipal Code Chapter 18.78 Preservation, Protection and Removal of Trees to mitigate for impacts to mature or heritage trees. Additionally, Mitigation Measures CR-6 through CR-88 would be required to mitigate the effects of potential alterations to or demolition of historic buildings.

Without the construction of the 170 multi-family residential units within the Arrow Corridor Specific Plan area and the reduced height of proposed buildings within the Old Town Mixed Use and Historic Fabric Mixed Use land use districts, the Plan Area would retain more of its current visual character and quality. However, the Increased Specific Plan Consistency Alternative would not preclude the University from developing these areas and, could in fact allow for industrial or commercial development within Campus West. Therefore, the overall aesthetic impacts of the Increased Specific Plan Consistency Alternative would be equal to those of the proposed Master Plan.

Air Quality

Because the Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height and square footage of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan, it would reduce impacts on air quality. This alternative would result in less physical development in and around the Plan Area than the proposed Master Plan, but would still result in impacts requiring compliance with construction stage air quality mitigation measures similar to those required of the proposed Master Plan. Due to the potential decrease in student enrollment associated with the Increased Specific Plan Consistency Alternative (due to less available student housing and instructional space as proposed), it would have incrementally lower operational air quality emissions due to the

resulting decrease in traffic and the reduction in emission generating facilities than the proposed Master Plan. However, neither the proposed Master Plan nor this alternative would exceed growth forecasts upon which the South Coast Air Quality Management District's (SCAQMD) 2016 Draft Air Quality Management Plan (AQMP) is based. Therefore, both alternatives would be consistent with the AQMP. Overall, the Increased Specific Plan Consistency Alternative's impacts related to air quality would be less than those of the proposed Master Plan.

Cultural Resources

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan. However, it would have equal impact on the on-campus buildings that have been identified as significant cultural resources in this EIR, and would thus require the same mitigation measures required for the Master Plan to reduce impacts on these resources. Similar to the proposed Master Plan, impacts to historic resources would remain significant and unavoidable after mitigation due to the potential demolition or renovation of twenty-five buildings within La Verne Campus, including eight buildings that have been identified as potentially historical resources. Thus, the requirement for Mitigation Measures CR-6 through CR-8 would remain. Overall, cultural resource impacts associated with the Increased Specific Plan Consistency Alternative would be similar to impacts of the proposed Master Plan, and would remain significant and unavoidable.

Geology and Soils

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan. Similar to the proposed Master Plan, this alternative would ultimately increase the number of facilities on the University campuses, which would increase the exposure of people and buildings to the risks of seismic shaking, its associated effects, or other geologic hazards. Under this alternative, residential development within Campus West would be eliminated, but commercial or industrial development could occur in compliance with the Arrow Corridor Specific Plan. This could result in a higher concentration of buildings than proposed in the Master Plan. Therefore, a similar development footprint is anticipated and the Increased Specific Plan Consistency Alternative would therefore result in similar grading and other soil disturbing activities that could result in erosion or loss of topsoil. Overall, the Increased Specific Plan Consistency Alternative's impacts related to geology and soils would be similar or equal to those of the proposed Master Plan. Similar to the proposed Master Plan, impacts would be less than significant.

Greenhouse Gas Emissions

Because the Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed

within the superblock located south of Second Street, between D Street and E Street in the Master Plan, it would generate fewer emissions and would therefore have less impact related to greenhouse gas (GHG) emissions. As discussed above under Air Quality, the Increased Specific Plan Consistency Alternative would result in fewer construction emissions than the proposed Master Plan and would incrementally reduce operational air emissions, including GHGs. Similar to the proposed Master Plan, this alternative would be consistent with the GHG reduction strategies set forth by the Climate Action Team GHG reduction strategies, the 2008 Attorney General Greenhouse Gas Reduction Measures, and the University's Climate Action Plan. Overall, the Increased Specific Plan Consistency Alternative would have less impact related to GHG emissions than the proposed Master Plan.

Hazards and Hazardous Materials

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan. Within La Verne Campus, future development would still occur in proximity to sites that have been previously known to contain hazardous materials and demolition could potentially encounter asbestos or other hazardous materials. Therefore, this alternative's impacts would be less than significant, similar to the proposed Master Plan's impacts. Under this alternative, future commercial or industrial development could still occur in Campus West and thus impacts related to the potential to expose people to hazards during site development would be similar to the proposed Master Plan and impacts would remain less than significant after mitigation. Overall, hazards and hazardous materials impacts associated with Increased Specific Plan Consistency Alternative would be similar to those of the proposed Master Plan.

Hydrology and Water Quality

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan. However, this alternative would result in a similar development footprint as the proposed Master Plan, and therefore, impacts on hydrology and water quality would remain the same. Development of this alternative would involve demolition and construction activities, both of which would involve excavation and grading that could result in erosion of onsite soils and sedimentation, with consequent temporary impacts to surface water quality. These impacts would be similar to those identified in the Master Plan.

Development envisioned under the proposed Master Plan and the Increased Specific Plan Consistency Alternative would increase impermeable surfaces within the Plan Area, which would potentially increase storm water runoff. However, the proposed Master Plan envisions the implementation of several low impact development storm water management measures, such as bioswales, which would help retain and cleanse storm water on site. It is assumed that a similar level of drainage improvements would be built

under the Increased Specific Plan Consistency Alternative. For this reason, both alternatives would have less than significant impacts on erosion and the capacity of existing or planned storm water systems due to the alternation of existing drainage patterns or increasing the rate or amount of surface runoff. Overall, the Increased Specific Plan Consistency Alternative would have a similar impact on hydrology and water quality.

Land Use and Planning

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan and eliminate the need for land use mitigation measures requiring the adoption of amendments to the Arrow Corridor and Old Town La Verne Specific Plans. Therefore, this alternative would reduce land use and planning compatibility impacts. The Increased Specific Plan Consistency Alternative, like the proposed Master Plan, would be generally compatible with existing adjacent institutional, commercial and residential land uses. This alternative would require the incorporation of similar mitigation measures to address impacts related to aesthetics, air quality, cultural resources, greenhouse gas emissions, and traffic. These impacts have been determined to be less than significant in this EIR through implementation of existing regulations, project elements, and mitigation measures (except for impacts to cultural resources, construction noise, and traffic, which were determined to be significant and unavoidable after mitigation). The Increased Specific Plan Consistency Alternative would have less impact on land use and planning impacts than the proposed Master Plan due to its increased consistency with building height standards within the Old Town La Verne Specific Plan and permitted land use limitations within the Arrow Corridor Specific Plan.

Noise

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan, which would reduce the impacts from noise. However, the Increased Specific Plan Consistency Alternative would still include construction or renovation of buildings within 50 feet of sensitive receptors, which would result in significant and unavoidable construction noise impacts. This alternative would also reduce increases in enrollment, staff, and faculty when compared the proposed Master Plan. Therefore, this Alternative would have lower operational noise impacts from traffic and facilities than the proposed Master Plan. Overall, this alternative’s impacts related to noise would be less than those of the proposed Master Plan, but temporary, significant and unavoidable construction noise impacts would still occur.

Population and Housing

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed

within the superblock located south of Second Street, between D Street and E Street in the Master Plan. Therefore, its contribution to population and housing growth would be reduced when compared to the proposed Master Plan. This alternative would reduce the demand for housing because it would not allow for the same increase in enrollment, faculty, and staff at University of La Verne. However, University housing is currently in short supply, to the extent that the University currently houses some students in a local hotel to help meet current on-campus housing demands. The Increased Specific Plan Consistency Alternative would restrict the size of residence halls on La Verne Campus and multi-family housing within Campus West and thus would not address the University's current housing shortage. Under the proposed Master Plan, the projected 914 additional combined students, faculty, and staff would represent approximately 2.3 percent of the future population and would be within the projections of the City of La Verne Housing Element forecasts. The impacts of the Master Plan related to directly inducing population growth beyond projections would be less than significant. Under this alternative, the population growth would be less than the proposed Master Plan and therefore, also within the projection of the Housing Element. Impacts would remain less than significant.

In addition, it is anticipated that the area regionally will see a pattern of population growth and housing needs whether or not development under the Master Plan occurs due to the underlying plans for development established by the Old Town Specific Plan and the Arrow Corridor Specific Plan. Allowing the proposed development of new student housing and multi-family residential units would increase the amount of housing available on-campus, which in turn could potentially create new housing opportunities for non-students in the greater City of La Verne by freeing up off-campus housing previously occupied by students. The addition of on-campus student housing opportunities and the potential addition of approximately 170 residential units on Campus West would help alleviate the growing demand for housing within the City of La Verne. The elimination of the 170 multi-family units from the Master Plan would reduce this potentially beneficial housing impact. Overall, impacts on population and housing from the Increased Specific Plan Consistency Alternative's would be greater than the proposed Master Plan.

Public Services

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan. The Increased Specific Plan Consistency Alternative would create less demand for public services (such as fire and police protective services, schools, libraries, and recreational facilities) because it would not allow for the same increase in enrollment, faculty, and staff and built facilities under the Master Plan. However, development would still occur and impacts on public services would be less than significant, similar to the proposed Master Plan.

Recreation

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan. The Increased Specific Plan Consistency Alternative would create less demand for recreational facilities because it would eliminate the development of 170 multi-family housing units within Campus West and would incrementally reduce increases in enrollment, faculty, and staff. Overall, the Increased Specific Plan Consistency Alternative's impacts on recreation would be less than the proposed Master Plan. Impacts would remain less than significant.

Traffic and Circulation

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan. This would reduce total daily vehicle trips by 1,074, a.m. peak hour vehicle trips by 82 and p.m. peak hour vehicle trips by 100. Therefore, traffic impacts would be less than those of the proposed Master Plan. Although this alternative would still require mitigation for contributing trips to impacted intersections under the Existing Plus Project scenario, as well as the 2035 cumulative plus project scenario, it would eliminate the significant and unavoidable impact at D Street and Bonita Avenue under the 2035 cumulative plus project scenario. This alternative would also have no impact on CMP-monitored intersections, which would be a less than significant impact under the proposed Master Plan. Existing alternative transportation systems would be adequate to serve either the proposed Master Plan or the Increased Specific Plan Consistency Alternative, so impacts related to alternative transportation and consistency with adopted policies, plans, or programs supporting alternative transportation would be similar to those of the proposed Master Plan and would remain less than significant. Overall, impacts of the Increased Specific Plan Consistency Alternative on transportation and circulation would be less than those of the proposed Master Plan. However, mitigation measures would still be required at the intersections of B Street/Bonita Avenue, D Street/Bonita Avenue, A Street/Arrow Highway, and E Street-Fairplex Drive/Arrow Highway to reduce impacts to a less than significant level.

Utilities and Service Systems

The Increased Specific Plan Consistency Alternative would eliminate the physical development of 170 multi-family dwellings and reduce the height of the buildings proposed within the superblock located south of Second Street, between D Street and E Street in the Master Plan. Therefore, this alternative would reduce increases in enrollment, faculty, and staff and thus would incrementally reduce impacts on utilities and service systems, when compared to the Master Plan.

7.3 Alternative 3: Preservation, Reuse, or Relocation of Historic Structures

7.3.1 Description

The Preservation, Reuse, or Relocation of Historic Structures Alternative would prevent the demolition or renovation of the locally designated Heritage University Buildings located within the superblock south of Bonita Avenue, between B Street and C Street and north of Second Street, which includes the Brandt Residence Hall, Interfaith Chapel, Stu-Han Residence Hall, Maniero/La Fetra Building, Davenport Dining, Miller Hall, and Woody Hall; and the renovation of the Arts and Communications Building unless these historic resources are relocated to an appropriate alternate location or renovated pursuant to the Secretary of the Interior's Standards and Guidelines for Historic Preservation. Table 87 details which buildings would be directly or indirectly significantly impacted under this alternative. This alternative assumes that development proposed under the Master Plan that would not demolish or significantly alter a historic structure would proceed as outlined in the Master Plan and as assessed under this EIR. In addition, the proposed renovation of current buildings listed below would be assumed to proceed as outline in the Master Plan as long as renovation occurs in accordance with Secretary of the Interior's Standards and Guidelines for Historic Preservation.

Table 87 Buildings No Longer Proposed for Demolition

Impacted Building Name	Eligibility Status	Proposed Action	Alternative Action
Interfaith (Dant) Chapel	Individually eligible for CRHR and locally designated as a Heritage University Building	Demolish in Phase I	Historical resources assessment; Ensure that individual projects requiring relocation, rehabilitation, or alteration of a historical resource not impair its significance. The application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the PQS. Prior to any construction activities that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the University. No demolition shall be permitted.
Stu-Han Residence Hall	Locally designated as a Heritage University Building	Demolish in Phase I	
Brandt Residence Hall	Individually eligible for CRHR and locally designated as a Heritage University Building	Renovate in Phase I	
Davenport Dining	Individually eligible for CRHR and locally designated as a Heritage University Building	Demolish in Phase II	
Maniero Hall/La Fetra Building	Locally designated as a Heritage University Building	Renovate in Phase I	
Miller Hall	Locally designated as a Heritage University Building	Renovate in Phase I	
Woody Hall	Locally designated as a Heritage University Building	Demolish in Phase II	
Arts and Communications Building (Lemon Growers Assoc. Packing House)	Eligible for CRHR as a district contributor and locally designated as a Heritage Citrus Industry Building	Renovate in Phase II;	

Modified from Table 17, Section 4.3 Cultural Resources

7.3.2 Impact Analysis

Aesthetics

Because the Preservation, Reuse, or Relocation of Historic Structures Alternative would significantly limit the construction of new, larger buildings on La Verne Campus, particularly within the block located south of Bonita Avenue between B Street and C Street, it would result in fewer physical changes to the Plan Area than under the proposed Master Plan. The implementation of the proposed Master Plan would not result in a significant change to scenic vistas or view corridors (see impact discussion AES-1 and AES-2 in Section 4.1, Aesthetics), and therefore the Preservation, Reuse, or Relocation of Historic Structures Alternative would not be substantially different than the proposed Master Plan and thus impacts would be similar.

This Alternative would minimize impacts on the Plan Area's existing scenic resources, such as mature trees and the identified historical/visual landmarks located within or adjacent to the Plan Area – Brandt Residence Hall, Interfaith Chapel, Stu-Han Residence Hall, Maniero/La Fetra Building, Davenport Dining, Miller Hall, Woody Hall and the Arts and Communications Building, when compared to the proposed Master Plan because less demolition and new construction of larger facilities would occur. In addition, Mitigation Measures CR-6 through CR-8 would still be required to mitigate the effects of potential alterations to historic buildings.

Without construction of a number of new buildings envisioned in the proposed Master Plan, the Plan Area would experience less development and retain more of its current visual character and quality. This alternative would still require implementation of Mitigation Measures AES-1, AES-2, and AES-3 to ensure that impacts to visual character and impacts from light and glare would be less than significant. The overall aesthetic impacts of the Preservation, Reuse, or Relocation of Historic Structures Alternative would be less than to those of the proposed Master Plan.

Air Quality

Because the Preservation, Reuse, or Relocation of Historic Structures Alternative would reduce the physical development proposed in the Master Plan, it would have less impact on air quality. This alternative would result in a reduction in onsite demolition and less physical development in and around the Plan Area than the proposed Master Plan, and therefore would result in fewer impacts requiring mitigation associated with construction emissions as would the proposed Master Plan. The Preservation, Reuse, or Relocation of Historic Structures Alternative would result in less physical development and would limit enrollment increases, which would incrementally lower operational air quality emissions from increased traffic and the operation of physical facilities than the proposed Master Plan. Neither the proposed Master Plan nor this alternative would exceed growth forecasts upon which the South Coast Air Quality Management District's (SCAQMD) 2016 Draft Air Quality Management Plan (AQMP) is based. Therefore, both alternatives would be consistent with the AQMP. Overall, the Preservation, Reuse, or Relocation of Historic Structures Alternative's impacts related to air quality would be less than those of the proposed Master Plan.

Cultural Resources

Because the Preservation, Reuse, or Relocation of Historic Structures Alternative would not involve the demolition of buildings considered eligible for listing by the State Historic Preservation Office or locally designated as a Heritage University Building as proposed in the Master Plan, it would have less direct and indirect impacts on cultural resources, and would thus avoid the mitigation measures that would be required under the Master Plan to protect these resources. It would also avoid the proposed Master Plan's significant and unavoidable impact on historic resources as a result of the demolition of up to the historical/visual landmarks within La Verne Campus. However, Mitigation Measures CR-6 through CR-8 would still be required to ensure that impacts would be less than significant

during the planned renovations. Overall, the Preserve, Reuse, or Relocate Historic Structures Alternative would have less impact on cultural resources than the proposed Master Plan because and it would eliminate one of the proposed Master Plan's significant and unavoidable impacts.

Geology and Soils

The Preservation, Reuse, or Relocation of Historic Structures Alternative would reduce the extent of physical development proposed in the Master Plan. This alternative would, however, maintain the existing University facilities, which are already exposed to the risks of seismic shaking, its associated effects, or other geologic hazards. Under this alternative, development of Campus West would be able to continue as proposed in the Master Plan. Because it would not involve the same level of physical development proposed in the Master Plan, the Preservation, Reuse, or Relocation of Historic Structures Alternative would not result in as much grading and other soil disturbing activities that could result in erosion or loss of topsoil. Overall, the Preservation, Reuse, or Relocation of Historic Structures Alternative's impacts related to geology and soils would be similar or equal to those of the proposed Master Plan, and such impacts would remain less than significant.

Greenhouse Gas Emissions

The Preservation, Reuse, or Relocation of Historic Structures Alternative would reduce the physical development envisioned in the Master Plan. It would generate fewer emissions and would therefore reduce greenhouse gas (GHG) emissions. As discussed above under Air Quality, the Preservation, Reuse, or Relocation of Historic Structures Alternative would result in significantly fewer construction emissions than the proposed Master Plan and would maintain similar levels of operational emissions. As with the proposed Master Plan, this alternative would be consistent with the GHG reduction strategies set forth by the Climate Action Team GHG reduction strategies, the 2008 Attorney General Greenhouse Gas Reduction Measures, and the University's Climate Action Plan. Overall, the Preservation, Reuse, or Relocation of Historic Structures Alternative would reduce GHG impacts when compared to the proposed Master Plan.

Hazards and Hazardous Materials

The Preservation, Reuse, or Relocation of Historic Structures Alternative would reduce the physical development envisioned in the Master Plan, and therefore would reduce impacts related to potential upset or accident conditions involving hazardous materials; exposure to lead or asbestos from demolition, remodeling, or renovation of existing buildings; the use or transport of hazardous materials; impairment or physical interference with an adopted emergency response plan; or potential site contamination. The proposed Master Plan's impacts in these areas would be less than significant, except for the potential to expose people to hazards through the development of Campus West, which after mitigation, would be less than significant. This impact scenario would not change under this alternative as development on Campus West would still occur. Overall, the Preservation, Reuse, or

Relocation of Historic Structures Alternative would have similar impacts for hazards and hazardous materials when compared to proposed Master Plan.

Hydrology and Water Quality

The Preservation, Reuse, or Relocation of Historic Structures Alternative would reduce the physical development envisioned in the Master Plan and therefore would have less of an impact on hydrology and water quality. Development of the proposed Master Plan would involve demolition and construction activities, both of which would involve excavation and grading that could result in erosion of onsite soils and sedimentation, with consequent temporary impacts to surface water quality. Because the Preservation, Reuse, or Relocation of Historic Structures Alternative would not allow for demolition of historic structures and would limit the physical development proposed in the Master Plan, erosion impacts would be reduced when compared to the proposed Master Plan.

Development envisioned under the proposed Preservation, Reuse, or Relocation of Historic Structures Alternative would increase impermeable surfaces within the Plan Area, which would potentially increase storm water runoff. However, this alternative and the proposed Master Plan would implement several low impact development drainage improvement measures, such as bioswales, that would help retain storm water on site. For this reason, both alternatives would have the potential to increase erosion or exceed the capacity of existing or planned storm water systems by altering existing drainage patterns or increasing the rate or amount of surface runoff. However, impacts would remain less than significant.

Overall, the Preservation, Reuse, or Relocation of Historic Structures Alternative would reduce the amount of onsite development and thus fewer changes to/disturbance of the ground surface would occur when compared to the proposed Master Plan. Therefore, impacts on hydrology and water quality would be reduced when compared to the proposed Master Plan.

Land Use and Planning

The Preservation, Reuse, or Relocation of Historic Structures Alternative would limit the physical development in the Master Plan. This alternative would be generally compatible with existing adjacent institutional, commercial and residential land uses, as it is currently. This alternative would still require the incorporation of mitigation measures to address impacts related to aesthetics, air quality, cultural resources, greenhouse gas emissions, and traffic. Under the proposed Master Plan, these impacts have been determined to be less than significant in this EIR through implementation of existing regulations, project elements, and mitigation measures (except for impacts from construction noise and traffic which were determined to be significant and unavoidable even with incorporated mitigation), and these same requirements would apply to the Preservation, Reuse, or Relocation of Historic Structures Alternative. This alternative would still require an amendment to the Old Town La Verne Specific Plan to allow for additional building height in the Old Town Mixed use and Historic Fabric Mixed Use land use districts, as well as an amendment to the Arrow Corridor Specific Plan in order to allow for the construction of 170

multi-family residential units on Campus West. The Preservation, Reuse, or Relocation of Historic Structures Alternative would have similar impacts on land use and planning and land use compatibility when compared to the proposed Master Plan.

Noise

The Preservation, Reuse, or Relocation of Historic Structures Alternative would limit the physical development proposed in the Master Plan, which would reduce temporary construction impacts and long-term operational noise impacts. However, the Preservation, Reuse, or Relocation of Historic Structures Alternative would still include construction or renovation of buildings within 50 feet of sensitive receptors, which would result in significant and unavoidable construction noise impacts. This alternative would decrease the amount of new noise-generating facility infrastructure anticipated under the proposed Master Plan. Therefore, this Alternative would reduce operational noise levels resulting from building operation below those anticipated as part of the proposed Master Plan. Overall, this alternative's impacts related to construction noise and operational would be less than those of the proposed Master Plan. However, temporary construction noise impacts would remain significant and unavoidable.

Population and Housing

The Preservation, Reuse, or Relocation of Historic Structures Alternative would limit the physical development. However, the potential for growth in student enrollment would remain similar to growth projections included in the Master Plan. Therefore, it would not reduce impacts to population and housing.

In addition, it is anticipated that the area regionally will see a pattern of population growth and housing needs whether or not development under the Master Plan occurs due to the underlying plans for development established by the Old Town La Verne Specific Plan and the Arrow Corridor Specific Plan. Allowing the proposed development of new multi-family residential units would increase the amount of housing available on-campus. One result of housing University students on-campus is the potential for creating new housing opportunities for non-students in the city of La Verne. The addition of approximately 170 residential units on Campus West would help alleviate the growing demand for housing within the City of La Verne. The new residence halls proposed within the southeast portion of La Verne Campus would remain under this alternative and thus the potentially beneficial housing impact would remain. Overall, impacts on population and housing from the Preservation, Reuse, or Relocation of Historic Structures Alternative's would be similar to the proposed Master Plan.

Public Services

The Preservation, Reuse, or Relocation of Historic Structures Alternative would lead to the same potential for population increase associated with increases in students, faculty, staff, but would lead to a lower total structural square footage because it would not include demolition of the Brandt Residence Hall, Interfaith Chapel, Stu-Han Residence Hall, Maniero/La Fetra Building, Davenport Dining, Miller Hall, Woody Hall and the Arts and

Communications Building; This could lead to an incrementally lower demand on public services than under the proposed Master Plan. Although impacts to public services would be less than significant in either case, this alternative would have less impact on Public Services and Recreation than the proposed Master Plan.

Recreation

The Preservation, Reuse, or Relocation of Historic Structures Alternative would limit the physical development envisioned in the Master Plan. Therefore, it would reduce impacts on recreation when compared to the proposed Master Plan. Impacts would remain less than significant.

Traffic and Circulation

The Preservation, Reuse, or Relocation of Historic Structures Alternative would limit the physical development envisioned in the proposed Master Plan. However, because the number of trips generated by the proposed project is based largely on the proposed increase in enrollment and the new commercial mixed-use buildings that would still be constructed as part of this alternative, trip generation under this alternative would be similar to what is proposed as part of the Master Plan. This alternative would therefore require the same mitigation as that required of the proposed Master Plan for contributing trips to impacted intersections under the Existing Plus Project scenario, as well as future year cumulative plus project scenarios. For the same reason, this alternative would have the same less than significant impact on CMP-monitored intersections as the proposed Master Plan. This alternative would retain the proposed Master Plan features designed to improve pedestrian safety and accessibility. Existing alternative transportation systems would be adequate to serve either the proposed Master Plan or the this alternative, so impacts related to alternative transportation and consistency with adopted policies, plans, or programs supporting alternative transportation would be the same as the less than significant impacts of the proposed Master Plan. Overall, impacts of this alternative on transportation and circulation would be the same as those of the proposed Master Plan.

Utilities and Service Systems

The Preservation, Reuse, or Relocation of Historic Structures Alternative would reduce the physical development between B and D Streets and therefore would have a less than significant impact on utilities and service systems. This project alternative would require provision of utilities and service systems (e.g., water, wastewater, solid waste, and storm water conveyance) to the areas identified for new development and continued services to existing buildings would be retained. Utilities and service systems would remain readily accessible from neighboring properties as part of this alternative. This alternative's impacts on utilities and service systems would be less than those of the proposed Master Plan.

7.4 Alternative Sites

The California Supreme Court, in *Citizens of Goleta Valley v. Board of Supervisors* (1990), indicated that a discussion of alternative sites is needed if a project "may be feasibly accomplished in a successful manner considering the economic, environmental, social, and technological factors involved" at another site. As suggested in *Goleta*, several criteria form the basis of whether alternative sites need to be considered in detail. These criteria take the form of the following questions:

1. Could the size and other characteristics of another site physically accommodate the project?
2. Is another site reasonably available for acquisition?
3. Is the timing of carrying out development on an alternative site reasonable for the applicant?
4. Is the project economically feasible on another site?
5. What are the land use designation(s) of alternative sites?
6. Does the lead agency have jurisdiction over alternative sites?
7. Are there any social, technological, or other factors that may make the consideration of alternative sites infeasible?

The University of La Verne is pursuing the proposed Master Plan in order to respond to its current and future needs at its current campuses. One of the fundamental objectives of the Master Plan (stated at the beginning of Section 7.0) is to "create a plan that enables and supports the Initiatives of the 2020 Strategic Vision." Others include creating "a plan that defines physical and technological connections between and among La Verne regional campuses, the online community and with the main campus" and developing "a campus plan that creates a positive interface between the University and La Verne community, including the support of a vibrant Old Town La Verne and the opening of the Gold Line light rail system." Developing a disconnected, alternative site for future campus growth and improvements would not be consistent with the Master Plan nor would it maximize the academic and educational experience or provide appropriate and flexible classrooms and laboratories that are technologically capable of supporting increasing technology in the learning experience; utilize and develop Campus West, including integrating it as a part of the core campus; provide vehicle parking and circulation that meets the needs of the campus community and is compatible with the residential and business community adjacent to the main campus. Utilizing an alternative site would not enrich the campus experience as effectively as the proposed Master Plan or the other alternative considered in this section of the EIR because it would preclude many improvements necessary to carry out these and other fundamental project objectives. Therefore, analysis of alternative sites for the entirety of the improvements called for under the proposed Master Plan is not warranted.

7.5 Alternatives Considered but Rejected

Section 15126.6 (c) of the CEQA Guidelines requires that an EIR identify those alternatives that were considered but rejected by the lead agency because they either did not meet the objectives of the project, were considered infeasible, or could not avoid or substantially lessen one or more significant effects of the proposed project. During the public review period for the Draft EIR, several commenters requested that the City consider keeping Third Street as a through street and one commenter suggested buffering the Carrion Adobe property (southwest of Campus West) with landscaping and a solar field. These alternatives have been considered, but rejected for the reasons described below.

No Street Closure Alternative. A traffic impact study was prepared to identify and evaluate the potential impacts of traffic generated by the proposed Master Plan (LLG, 2016). Under the proposed Master Plan, a section of C Street and a section of Second Street would be closed as part of the Phase I project, while a section of Third Street (from east of Parking Lot A to C Street) would be closed as part of the Phase II project. These areas would be converted to pedestrian promenades while maintaining service/emergency vehicle access. The portions of C Street and Second Street proposed for closure are located in the heart La Verne Campus and primarily serve on-campus traffic circulation. However, Third Street is currently used by the general public as an alternative to Bonita Avenue for vehicular access to Old Town area of La Verne. The closure of Third Street would shift traffic primarily onto Bonita Avenue.

Project traffic volumes, both entering and existing the Plan Area, were analyzed in the traffic study and the analysis considered the shift in existing and future vehicle trips due to the Phase II closure of Third Street. All traffic study intersections were evaluated for potential traffic impacts using the City of La Verne significant impact thresholds. Under existing conditions, 16 of the 18 study intersections operate at level of service (LOS) D or better during the weekday a.m. and p.m. peak hours, while the remaining two intersections operate at LOS F (A Street/Arrow Highway and B Street/Bonita Avenue). It should be noted that the City of La Verne is completing the installation of a new traffic signal at B Street/Bonita Avenue and the intersection level of service operations are expected to improve upon completion of the traffic signal installation (LLG, 2016).

As discussed in Section 4.13, Traffic and Circulation, it was determined that, at full build out, the proposed project would be expected to result in traffic impacts at seven La Verne intersections, including two nearest the proposed Third Street closure: B Street/Bonita Avenue and D Street/Bonita Avenue. As no significant project impacts at this intersection were identified under any of the future year 2021, 2028, and 2035 with project conditions, no additional mitigation measures would be required or recommended at the B Street/Bonita Avenue intersection. However, the D Street/Bonita Avenue intersection would be significantly impacted by the proposed project during the p.m. peak hour under the Year 2028 With Phases I & II Project and Year 2035 With Project Build-out (Phases I, II & III) conditions. It should be noted that the traffic study prepared for the Old Town La Verne

Specific Plan EIR project also identified a significant impact at this location (LLG, 2016) without the proposed street closure.

Mitigation measures previously considered in the Old Town La Verne Specific Plan EIR included providing northbound and westbound right-turn lanes. However, these measures would have required the removal of on-street parking spaces and therefore, the City of La Verne ultimately determined that those measures were not acceptable due to the resulting secondary impacts related to the loss of on-street parking. In addition to these previously considered measures, the traffic study recommended the installation of an eastbound right-turn only lane, to address the significant impacts to the D Street/Bonita Avenue intersection. While it has been determined that the combination of all three measures (i.e., providing separate northbound, eastbound, and westbound right-turn only lanes), if approved by the City, would reduce the significant Year 2028 With Phases I & II project p.m. peak hour impact to a less than significant level, these measures did not fully reduce the Year 2035 With Project Build-out p.m. peak hour impact to a less than significant level.

No other mitigation measures have been determined to be feasible without the acquisition of additional right-of-way which currently does not exist. The project's significant p.m. peak hour impacts in the Year 2028 and Year 2035 conditions would remain significant and unavoidable. The No Street Closure Alternative would not alleviate the significant impacts expected from the implementation of the Master Plan. Therefore, this alternative was not pursued.

Solar Field Relocation Alternative. A solar field was previously considered on the northern portion of Campus West. However, the University subsequently determined that the development of a solar field would be infeasible and therefore the Master Plan was revised to exclude this design option. Relocating the solar field to the southern portion of Campus West was considered as a viable project alternative. However, the Master Plan was revised to establish a "buffer" between the Carrion Adobe and Campus West in the form of a landscape buffer along the western and southern property boundaries. Eliminating the previously proposed solar field and establishing a landscaping buffer would minimize land use compatibility impacts and historic resource impacts when compared to previously considered solar field design. Therefore, this alternative was not pursued.

These alternatives would pose no advantage to the alternatives chosen for analysis in this EIR, and have therefore been rejected for inclusion in this EIR. No other alternatives were identified that would feasibly attain most of the basic project objectives and would also avoid or substantially lessen the significant effects of the project.

7.6 Environmentally Superior Alternative

CEQA requires the identification of the environmentally superior alternative among the options studied. When the "No Project" alternative is determined to be environmentally superior, CEQA also requires identification of the environmentally superior alternative among the development options.

The No Project Alternative would not achieve most of the project's objectives. The other alternatives would meet most but not all of the project objectives. Each of the alternatives would reduce but not avoid the proposed Master Plan's significant, unavoidable impact related to construction noise near sensitive residential receptors. The No Project Alternative would avoid the proposed Master Plan's significant, unavoidable impact related to the demolition of City Heritage Buildings.

Table 88 indicates whether each alternative's environmental impact is greater than, less than, or similar to those of the proposed Master Plan. As shown in Table 88, when taking every environmental impact area into account, the No Project Alternative is the environmentally superior alternative, followed by Alternative 3, and finally, Alternative 2. Using this method of analysis, all three Alternatives are environmentally superior to the proposed Master Plan.

Table 88 Impact Comparison of Alternatives

Issue	Proposed Project Highest Impact Classification	Alternative 1: No Project	Alternative 2: Specific Plan Consistency	Alternative 3: No Impacts to City Heritage University Buildings
Aesthetics	II	+	=	+
Air Quality	II	+	+	+
Cultural Resources	I	+	=	+
Geology and Soils	III	+	=	=
Greenhouse Gas Emissions	II	+	+	+
Hazards and Hazardous Materials	III	+	=	=
Hydrology and Water Quality	III	+	=	+
Land Use and Planning	II	+	+	=
Noise	I	+	+	+
Population and Housing	III	-	-	=
Public Services	III	+	=	+
Recreation	III	+	+	+
Traffic and Circulation	I	+	+	=
Utilities and Service Systems	III	+	+	+

+ Superior to the proposed Master Plan (reduced level of impact)
- Inferior to the proposed Master Plan (increased level of impact)
= Similar level of impact to the proposed Master Plan (same level of impact)

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