Campus Crest Student Housing

(P12-038)

Initial Study / Mitigated Negative Declaration

PREPARED FOR THE

PREPARED BY RANEY PLANNING & MANAGEMENT, INC.
SACRAMENTO, CALIFORNIA

MAY 2013

CAMPUS CREST STUDENT HOUSING PROJECT

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION FOR ANTICIPATED PROJECTS UNDER THE 2030 GENERAL PLAN MASTER EIR

This Initial Study has been prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (Title 14, Section 15000 *et seq.* of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

ORGANIZATION OF THE INITIAL STUDY

This Initial Study is organized into the following sections:

SECTION I - BACKGROUND: Provides summary background information about the project name, location, sponsor, and the date this Initial Study was completed.

SECTION II - PROJECT DESCRIPTION: Includes a detailed description of the proposed project.

SECTION III - ENVIRONMENTAL CHECKLIST AND DISCUSSION: Reviews proposed project and states whether the project would have additional significant environmental effects (project-specific effects) that were not evaluated in the Master EIR for the 2030 General Plan.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Identifies which environmental factors were determined to have additional significant environmental effects.

SECTION V - DETERMINATION: States whether environmental effects associated with development of the proposed project are significant, and what, if any, added environmental documentation may be required.

REFERENCES CITED: Identifies source materials that have been consulted in the preparation of the Initial Study.

APPENDICES: Technical reports or resources that have been prepared for and utilized in the Initial Study.

RESPONSE TO COMMENTS: Letters and responses to the comments received on the Initial Study during the public review period.

SECTION I - BACKGROUND

Project Name and File Number:	Campus Crest Student Housing
Project Location:	3075 Redding Avenue Sacramento, CA 95817 APN 015-0101-021
Project Applicant:	Campus Crest Development PO Box 58838 Webster, TX 77598-8838
Project Planner:	Antonio Ablog, City of Sacramento
Environmental Planner:	Dana Allen, Environmental Planning Services
Date Initial Study Completed:	May 2013

This Initial Study was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 1500 *et seq*.). The Lead Agency is the City of Sacramento.

The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that the proposed project is an anticipated subsequent project identified and described in the 2030 General Plan Master EIR and is consistent with the land use designation and the permissible densities and intensities of use for the project site as set forth in the 2030 General Plan. See CEQA Guidelines Section 15176 (b) and (d).

The City has prepared the attached Initial Study to: (a) review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the 2030 General Plan Master EIR to determine their adequacy for the project (See CEQA Guidelines Section 15178(b),(c)); and (b) identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any.

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (CEQA Guidelines Section 15177(d)). The Master EIR mitigation measures that are identified as appropriate are set forth in the applicable technical sections below.

This analysis incorporates by reference the general discussion portions of the 2030 General Plan Master EIR, and associated technical reports for environmental analysis (CEQA Guidelines Section 15150(a)). The Master EIR and technical reports used to draft this Initial Study are available for public review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, and on the City's web site at: www.cityofsacramento.org/dsd/planning/environmental-review/eirs/.

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Due to the time limits mandated by state law, your response must be sent at the earliest possible date, but no later than the 30-day review period ending Tuesday, July 3, 2013.

Please send written responses to:

Dana Allen, Associate Planner
Environmental Planning Services
Community Development Department
City of Sacramento
300 Richards Boulevard
Sacramento, CA 95811
Direct Line: (916) 808-2762
Dallen@cityofsacramento.org

SECTION II - PROJECT DESCRIPTION

Introduction

The Project Description section of the Initial Study provides a description of the Campus Crest Student Housing Project (proposed project) components.

Project Background

The project site has historically been used as a golf driving range. The golf driving range operated until 2004, at which time the South 65th Street Area Plan and associated EIR was certified and adopted. The project site is located within the northeast quadrant of the South 65th Street Area Plan. The South 65th Street Area Plan is a land use plan for approximately 107 acres covering the area north of San Joaquin Road, south of the United States Highway 50 (U.S. 50) corridor, east of Kroy Way and 65th Street, and west of the Union Pacific Railroad (UPRR) tracks. The South 65th Street Area Plan was intended to encourage transit supportive mixed land uses for the area south of the 65th Street Light Rail station, including a mix of housing types and commercial mixed use development opportunities, while reinforcing the close proximity to Sacramento Municipal Utility District (SMUD), the California State University Sacramento (CSUS), and U.S. 50. Since the closure of the golf driving range in 2004, the project site has been vacant grassland.

The project site is also within the 65th Street Station Area Plan, the goal of which is provide a plan for the overall circulation network for the project area that supports the goals and vision of the previously approved plans, including the South 65th Street Area Plan. The 65th Street Station Area Plan comprehensively addresses how to implement transportation and circulation improvements in the area including new streets, street widenings, street extensions, bicycle and pedestrian facilities, and grade-separated under-crossings. The 65th Street Station Area Plan encompasses the area located in the eastern part of the City and is bounded by the UPRR tracks and Folsom Boulevard to the north, Power Inn Road to the east, 14th Avenue to the south, and 59th Street to the west. The 65th Street Station Area Plan utilizes smart growth principles to support the vision of pedestrian-friendly, transit-oriented development in the 65th Street area in concurrence with previously adopted public policy, namely the Sacramento 2030 General Plan.

Although the South 65th Street Area Plan was repealed and replaced with the 65th Street Station Area Plan, for analysis purposes within this Initial Study/Mitigated Negative Declaration (IS/MND), the South 65th Street Area Plan EIR, as well as the 65th Street Station Area Plan and associated EIR, each of which was certified by the City, are referenced for the environmental assessment and development of mitigation measures for the proposed project.

The project site was previously proposed as student housing in 2004, when the Jefferson Lofts Initial Study/Mitigated Negative Declaration (IS/MND) was presented to the City. The Jefferson Lofts proposal consisted of student housing, and had similar project components to that of the Campus Crest Student Housing Project. However, the Jefferson Lofts IS/MND was not adopted and project entitlements were never approved by the City.

Project Description

The proposed project would consist of construction and operation of a 224-unit market rate student housing development, containing 12 buildings, a clubhouse, activity area, and green space (See Figure 3, Conceptual Site Plan). The project would provide a safe and convenient

student housing opportunity for a number of students in the area, and specifically for CSUS. At completion of the proposed project, the project site would be gated and comply with the City's gating standards, and would provide on-site parking for its residents. The 224-unit housing development would include up to 600 individual beds and the number of available parking spaces would match the number of proposed beds for the project site, resulting in an approximate 1.01 parking spaces per bed ratio (604 parking spots) and avoiding overflow parking impacts on the surrounding neighborhood. The project's residents would have easy access to the existing light rail station, transit center, and would be located in close proximity to CSUS.

Project Location

The proposed project is located at 3075 Redding Avenue on 13.5 acres in the 65th Street Station Area of the City of Sacramento, (APN #015-0101-021) .The project site is south of U.S. 50, east of Redding Avenue, north of San Joaquin Street, and west of the Union Pacific Railroad (see Figure 1, Regional Project Location).

Existing Conditions and Surrounding Land Uses

The project site is currently undeveloped grassland. The project site has historically been used as a driving range that closed in January, 2004. Other smaller portions of the site were previously associated with the building materials business to north, and the small vacant parcels at the northeast corner of the site. The former driving range contains ancillary structures, along with a cement-lined pond near the center of the driving range, and a detention pond is located on the eastern edge of the project site.

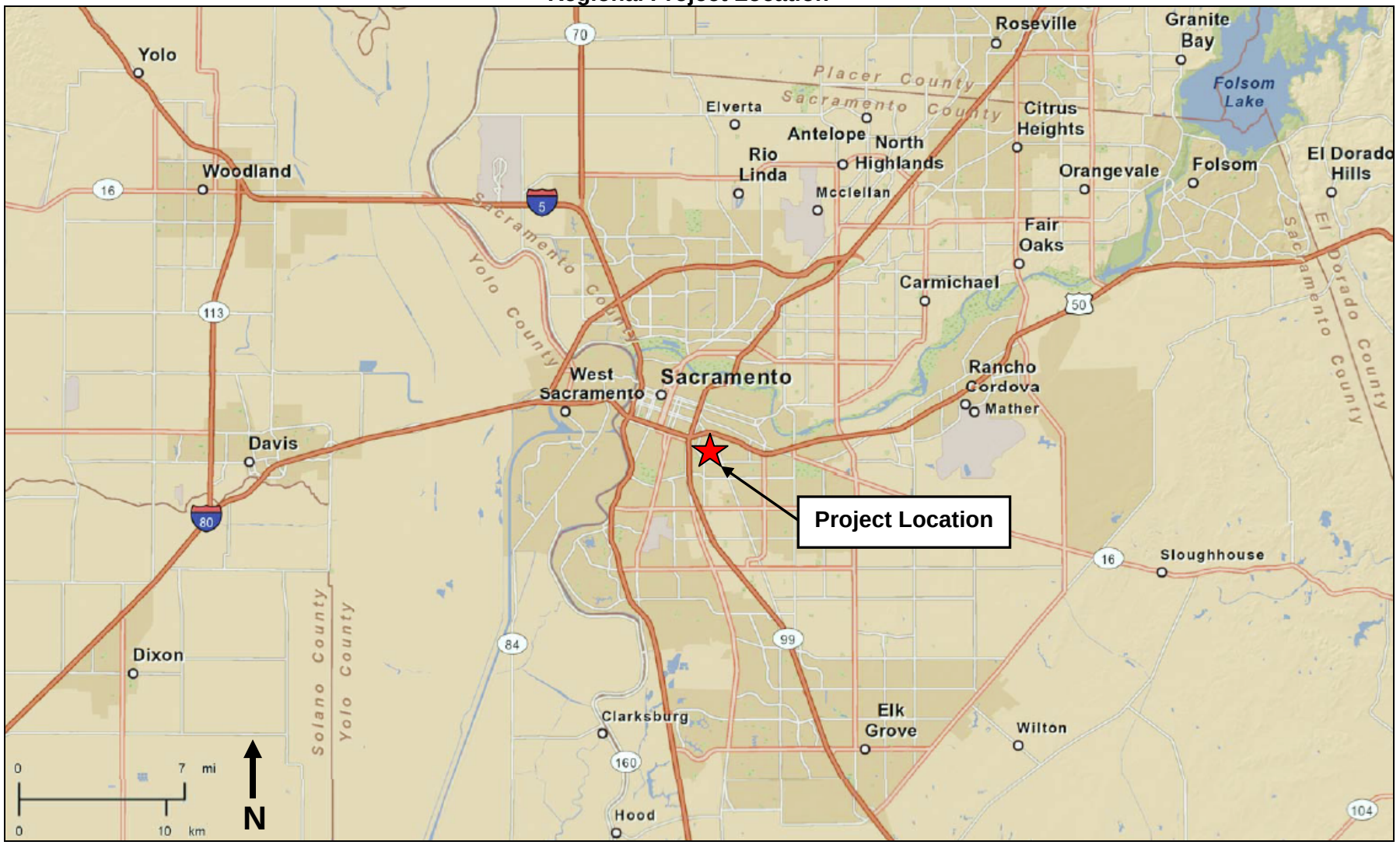
The project site is designated Urban Neighborhood Low Density in the General Plan; the site is zoned as Multi-Family (R-2B) Zone, and Residential Mixed Use, Transit Overlay (RMX-TO) Zone. Surrounding land uses include a building materials business and lumber yard to the north; a school district corporation yard, 911 dispatch center, and Little League Park along San Joaquin Street to the south; student housing to the west; and single-family housing to the southwest. The UPRR is located to the east of the project site (See Figure 2, Project Vicinity Map).

Vegetation on the project site consists of grassland, a variety of plant species, and scattered trees. Because the site was previously used as a golf driving range, the site surface also includes a combination of turf that was irrigated, mowed and maintained as part of the driving range operation, and two detention ponds. One detention pond is located in the center of the project site, while the other is on the eastern border near the UPRR tracks. Several ornamental trees and willow trees are planted along the eastern edge of the site adjacent to the detention pond, and a row of gum trees is located in the southern boundary of the project site.

Proposed Entitlements

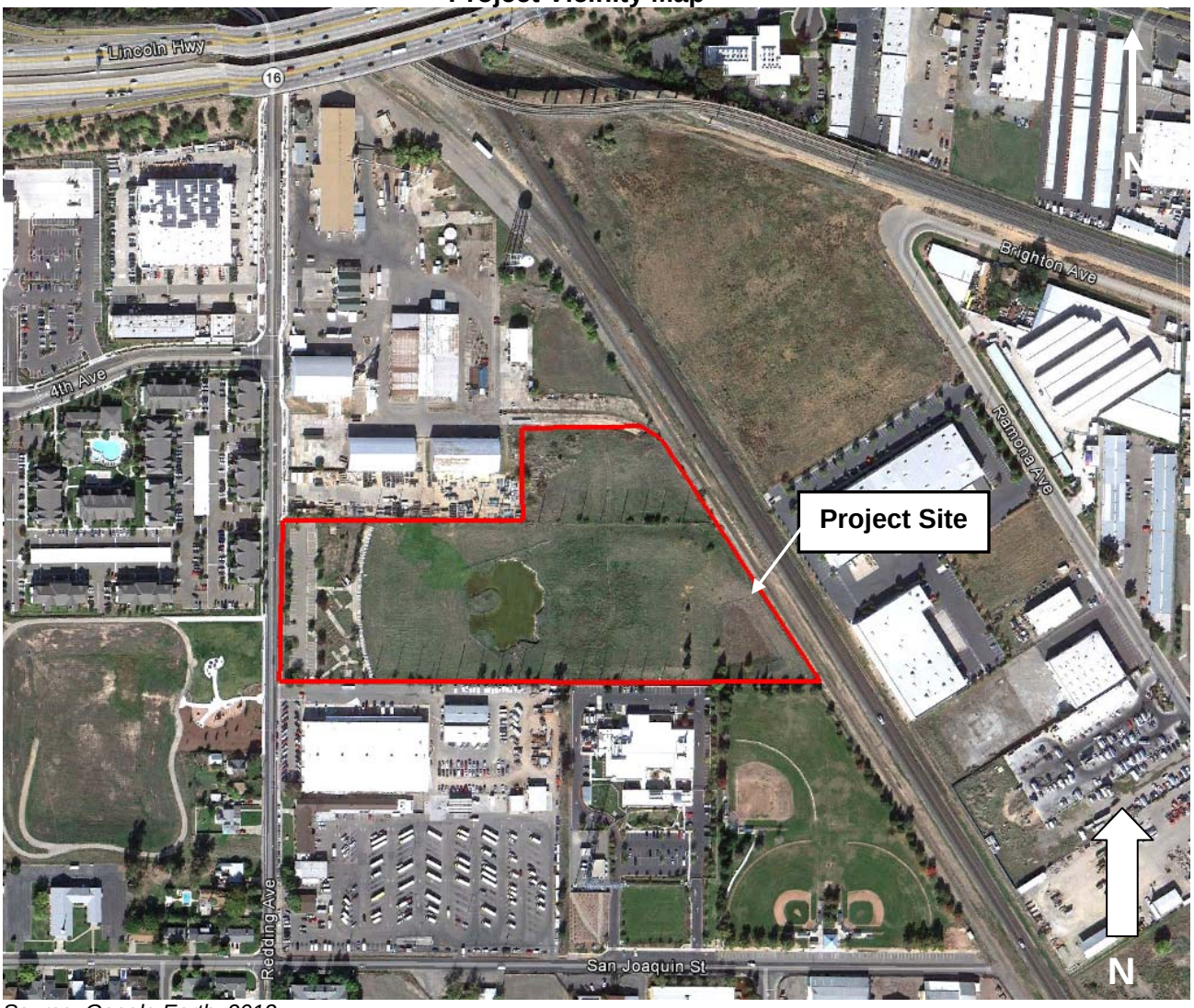
- Plan Review by City of Sacramento

Figure 1
Regional Project Location



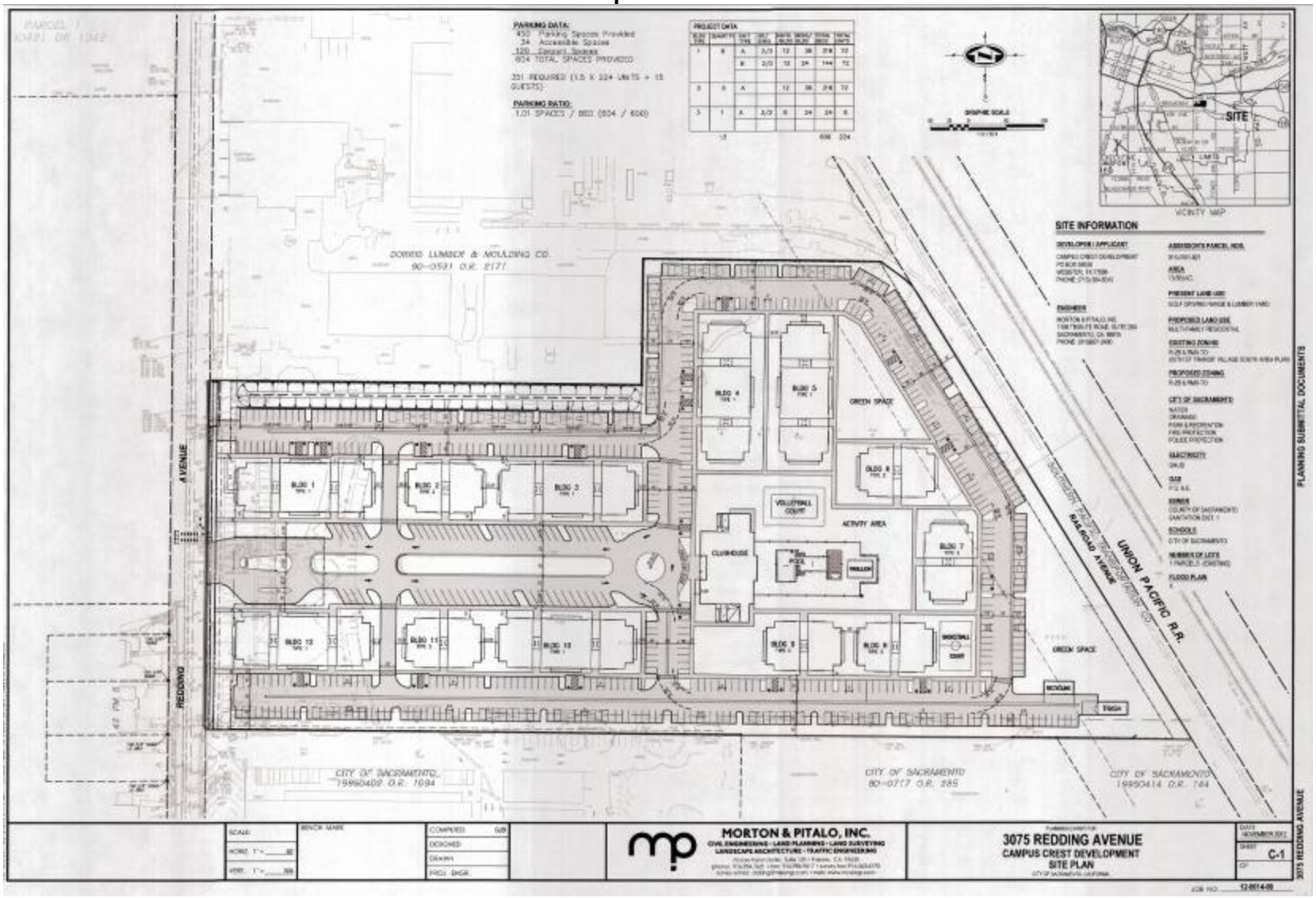
Source: ESRI Business Analyst, 2012.

Figure 2
Project Vicinity Map



Source: Google Earth, 2013.

Figure 3
Conceptual Site Plan



SECTION III – ENVIRONMENTAL CHECKLIST AND DISCUSSION

LAND USE, POPULATION AND HOUSING, AGRICULTURAL AND FORESTRY RESOURCES, AND ENERGY

Introduction

The California Environmental Quality Act (CEQA) requires the Lead Agency to examine the effects of a project on the physical conditions that exist within the area that would be affected by the project. CEQA also requires a discussion of any inconsistency between the proposed project and applicable General Plans and regional plans.

An inconsistency between the proposed project and an adopted plan for land use development in a community would not constitute a physical change in the environment. When a project diverges from an adopted plan, however, it may affect planning in the community regarding infrastructure and services, and the new demands generated by the project may result in later physical changes in response to the project.

In the same manner, the fact that a project brings new people or demand for housing to a community does not, by itself, change the physical conditions. An increase in population may, however, generate changes in retail demand or demand for governmental services, and the demand for housing may generate new activity in residential development. Physical environmental impacts that could result from implementing the proposed project are discussed in the appropriate technical sections.

This section of the initial study identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the proposed project.

Discussion

Land Use

The proposed project consists of constructing a 224-unit student housing complex. The project site is zoned Multi-family Residential (R-2B) and Residential Mixed-Use, Transit Overlay (RMX-TO). The project is consistent with the City of Sacramento 2030 General Plan, South 65th Street Area Plan EIR, and 65th Street Station Area Plan and EIR. The project would not modify the existing land use designation of the site and does not involve any amendments to the existing land use or zoning designations. After construction, the proposed project site would primarily operate as student housing for California State University Sacramento (CSUS) students, and other local students. The project site is an infill development location, and is within an existing built out urban area; therefore, the project would not physically divide an established community. The proposed project site is not currently included in any habitat conservation plan or natural community conservation plan; however, it should be noted that the Sacramento County's South Sacramento Habitat Conservation Plan is currently being developed.

The proposed project would provide 600 beds among 12 buildings, and 224 residential units. 604 total parking spaces would be provided as part of the project, constituting a ratio of 1.01 parking spaces per bed. According to the *Parking Study for Campus Crest Student Housing*

Development in Sacramento, CA conducted by Fehr and Peers, it is recommended that a parking supply of 513 spaces be provided by the proposed project. Therefore, the 604 parking spaces for the project far exceed the parking demand and the City's minimum requirement of 0.5 spaces per dwelling unit for multi-family buildings in an "Urban" Parking District. Although the project consists of a surplus of required parking spaces, the 604 dedicated parking spaces comply with Chapter 17.64 (Parking Regulations) of the City of Sacramento Zoning Code.

Population and Housing

The proposed project is located within a developed area of the eastern portion of Sacramento approximately one mile south of CSUS. Surrounding land uses include light industrial, residential, park, and commercial uses. The proposed project consists of developing a 224-unit student housing complex. The new residential complex would be considered a growth-inducing development, and would add to the population in the project area. However, the project is consistent with the type and intensity of use contemplated in the City's General Plan, and was analyzed in the associated EIRs. The project site is currently a closed golf driving range. Implementation of the proposed project would not displace substantial numbers of existing housing units or people. Construction or replacement of housing elsewhere would not be required for the project.

Agricultural Resources

The proposed project site is located within an urbanized area, which includes surrounding residential development. Agricultural activities do not currently occur within the vicinity of the project. In addition, the area does not include land that is designated as Prime Farmland, nor is the land under a Williamson Act contract. The proposed project would have no impact on agricultural resources.

Energy

Structures built as part of the project would be subject to Titles 20 and 24 of the California Code of Regulations, which serve to reduce demand for electrical energy by implementing energy-efficient standards for residential and nonresidential buildings. The 2030 General Plan includes policies (see Policies 6.1.10 through 6.1.13) to encourage the spread of energy-efficient technology by offering rebates and other incentives to commercial and residential developers, and recruiting businesses that research and promote energy conservation and efficiency.

Policies 6.1.6 through 6.1.8 focus on promoting the use of renewable resources, which would reduce the cumulative impacts associated with use of nonrenewable energy sources. In addition, Policies 6.1.5 and 6.1.12 call for the City to work closely with utility providers and industries to promote new energy conservation technologies.

The Master EIR evaluated the potential impacts on energy and concluded that the effects would be less than significant (see Impacts 6.11-9 and 6.11-10). The proposed project would not result in any impacts not identified and evaluated in the Master EIR.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
1. AIR QUALITY *Would the proposal:* A) Conflict with or obstruct implementation of the applicable air quality plan?			X
B) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X
C) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			X
D) Exposure sensitive receptors to substantial pollutant concentrations?			X
E) Create objectionable odors affecting a substantial number of people?			X
F) Interfere with or impede the City's efforts to reduce greenhouse gas emissions?			X

Environmental and Regulatory Setting

The project is within the Sacramento Valley Air Basin (SVAB) and is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). According to SMAQMD, Sacramento County is a federal severe nonattainment area and State nonattainment area for ozone, a State nonattainment area and federal moderate nonattainment area for PM_{10}, and a State and federal nonattainment area for $PM_{2.5}$. Table 1, below, demonstrates the SMAQMD thresholds of significance for air pollutant and precursor concentrations in pounds per day (lbs/day).

Table 1
SMAQMD Thresholds of Significance (lbs/day)

	ROG	NO_X	PM_{10}	$PM_{2.5}$
Construction				
SMAQMD Significance Threshold	--	85.00	--	--
Operation				
SMAQMD Significance Threshold	65.00	65.00	--	--

As shown in the table, SMAQMD does not have a mass emissions threshold for fugitive dust, but utilizes the concentration-based thresholds of significance consistent with the California Ambient Air Quality Standards (CAAQS). The SMAQMD's Guide to Air Quality Assessment in

Sacramento County offers screening criteria for construction PM emissions. According to the screening criteria, PM_{10} emissions concentration generated by construction activity would not have the potential to exceed or contribute to the SMAQMD's concentration-based threshold of significance for PM_{10} if the project meets the following conditions:

- Would implement all Basic Construction Emission Control Practices (BCECP); and
- Would not disturb more than 15 acres per day (or 25% of the total project area per day).

Because $PM_{2.5}$ is a subset of PM_{10}, the SMAQMD assumes that construction projects that would not generate concentrations of PM_{10} that exceed the concentration-based threshold of significance would also be considered less than significant for $PM_{2.5}$ impacts.

Practices in the BCECP include, but are not limited to, the following:

- Compliance with Rule 403;
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to five minutes (required by the California Code of Regulations, Title 13, Sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site; and
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before operated.

In addition, SMAQMD rules and regulations are applicable and are required for all projects. A complete list of current rules is available at www.airquality.org. Specific rules that relate to construction activities of the proposed project may include, but are not limited to, the following:

- Rule 201: General Permit Requirements – any project including use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation; and
- Rule 403: Fugitive Dust - includes the following: watering all exposed surfaces two times a day; covering or maintaining freeboard space on haul trucks transporting loose material; removing visible mud or dirt on public roads at least once a day; prohibiting use of dry power sweeping; limiting vehicle speeds on unpaved roads to 15 miles per hour; all paving should be completed as soon as possible; and all building pads should be laid as soon as possible after grading unless seeding or soil binders are used. (Note: compliance with this rule is also a BCECP).

Furthermore, the City adopted the City of Sacramento Climate Action Plan (CAP) on February 14, 2012 to comply with State Assembly Bill (AB) 32. AB 32 requires statewide GHG emissions be reduced to 1990 levels by the year 2020. The CAP identifies how the City and the broader community could reduce Sacramento's GHG emissions and includes reduction targets, strategies, and specific actions.

Standards of Significance

The SMAQMD has established the following thresholds of significance for air pollutant emissions:

- An increase of nitrogen oxides (NOx) above 85 lbs/day for short-term effects (construction) would result in a significant impact. An increase of either ozone precursor, nitrogen oxides

(NOx) or reactive organic gases (ROG), above 65 lbs/day for long-term effects (operation) would result in a significant impact. The threshold of significance for PM_{10} is a concentration based threshold equivalent to the CAAQS. For PM_{10}, a project would have a significant impact if it would emit pollutants at a level equal to or greater than five percent of the CAAQS (50 micrograms/cubic meter for 24 hours) if there were an existing or projected violation.

- The pollutant of concern for sensitive receptors is carbon monoxide (CO). Motor vehicle emissions are the dominant source of CO in Sacramento County (SMAQMD, 2009). For purposes of environmental analysis, sensitive receptor locations generally include parks, sidewalks, transit stops, hospitals, rest homes, schools, playgrounds and residences. Commercial buildings are generally not considered sensitive receptors. Carbon monoxide concentrations are considered significant if they exceed the 1-hour state ambient air quality standard of 20.0 parts per million (ppm) or the 8-hour state ambient standard of 9.0 ppm (State ambient air quality standards are more stringent than their federal counterparts).
- TAC exposures create a risk of 10 in 1 million for stationary sources or substantially increase the risk of exposure to TACs from mobile sources.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

The Master EIR addressed the potential effects of the 2030 General Plan on ambient air quality and the potential for exposure of people, especially sensitive receptors such as children or the elderly, to unhealthful pollutant concentrations (See Master EIR, Chapter 6.1).

Policies in the 2030 General Plan in Environmental Resources were identified as mitigating potential effects of development that could occur under the 2030 General Plan. For example, Policy ER 6.1.1 calls for the City to work with the California Air Resources Board (CARB) and the SMAQMD to meet state and federal air quality standards; Policy ER 6.1.12 requires the City to review proposed development projects to ensure that the projects incorporate feasible measures that reduce construction and operational emissions; Policy ER 6.1.11 calls for coordination of City efforts with SMAQMD; and Policy ER 6.1.15 requires the City to give preference to contractors using reduced-emission equipment.

The Master EIR identified exposure to sources of TACs as a potential effect. Policies in the 2030 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.5, requiring consideration of current guidance provided by the Air Resources Board and SMAQMD; requiring development adjacent to stationary or mobile TAC sources to be designed with consideration of such exposure in design, landscaping and filters; as well as Policies ER 6.11.1 and ER 6.11.15, referred to above.

The Master EIR found that greenhouse gas (GHG) emissions that would be generated by development consistent with the 2030 General Plan would be a significant and unavoidable cumulative impact. The discussion of GHG emissions and climate change in the 2030 General Plan Master EIR are incorporated by reference in this Initial Study (CEQA Guidelines Section 15150).

The Master EIR identified numerous policies included in the 2030 General Plan that addressed GHG emissions and climate change (See Draft MEIR, Chapter 8, and pages 8-49 et seq). The Master EIR is available for review at the offices of Development Services Department, 300

Richards Boulevard, 3rd Floor, Sacramento, CA during normal business hours, and is also available online at http://www.cityofsacramento.org/dsd/planning/environmental-review/eirs/.

Policies identified in the 2030 General Plan include directives relating to sustainable development patterns and practices, and increasing the viability of pedestrian, bicycle and public transit modes. A complete list of policies addressing climate change is included in the Master EIR in Table 8-5, pages 8-50 et seq. The Final MEIR included additional discussion of GHG emissions and climate change in response to written comments (See changes to Chapter 8 at Final MEIR pages 2-19 et seq., as well as Letter 2 and response).

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Questions A through C

Regional Air Quality Plan

The proposed project site is under the jurisdiction of the SMAQMD, which, along with other local air districts in the SVAB, is required to comply with and implement the State Implementation Plan (SIP) to demonstrate when and how the region can attain the federal ozone standards. Accordingly, the SMAQMD, along with the other air districts in the region, prepared the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* in December 2008. The SMAQMD adopted the Plan on January 22, 2009. The California Air Resources Board (CARB) determined that the Plan meets Clean Air Act requirements and approved the Plan on March 26, 2009 as a revision to the SIP.

A project would be considered to conflict with, or obstruct implementation of, the regional air quality plans if it would be inconsistent with the emissions inventories contained in the regional air quality plans and/or result in emissions that exceed the SMAQMD established thresholds of significance. Emission inventories are developed based on projected increases in population growth and vehicle miles traveled (VMT) within the region. The proposed project consists of the development of a 224-unit student housing complex, and is consistent with anticipated land use for the project site in the 2030 General Plan. In addition, the proposed project would not exceed construction or operational emissions thresholds (as presented below). Therefore, the project would not conflict with the regional air quality plan, as the proposed project is consistent with the land use analyzed for regional emissions inventories.

Construction and Operational Air Quality Emissions

Construction

Implementation of the proposed project would contribute to increases of various air pollutants during construction activities, including criteria pollutants such as carbon monoxide (CO), ozone precursors such as nitrous oxides (NO_X) and reactive organic gases (ROG), PM_{10}, and $PM_{2.5}$. Typical emission sources during construction include such sources as equipment exhaust, wind erosion, earthmoving activities, and vehicle exhaust.

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of vehicle re-entrained fugitive dust (which includes PM_{10}), a potential concern because the proposed project is in a non-attainment area for ozone and PM_{10}. Depending on the weather, soil conditions and amount of construction activity taking place at any one time, fugitive dust emissions could significantly affect existing land uses near the project site. However, increases in emissions of fugitive dust from the project's construction activities would not be expected to exceed the SMAQMD's threshold of significance for PM_{10}, as the project disturbance area is 13.58 acres (under the 15-acre SMAQMD condition), and the project would implement Basic Construction Emission Control Practices (BCECPs). Furthermore, the use of construction equipment and employee commute vehicles would be temporary and limited to the time required for constructing the project. To determine the potential impacts from a project's NO_x construction-related emissions, SMAQMD provides a NO_x construction screening level table for environmental analysis.

The construction-related NO_x emissions screening criteria are based on air quality modeling completed by SMAQMD. SMAQMD utilized the CARB-approved Urban Land Use Emissions Model (URBEMIS) to establish screening thresholds for projects whose construction emissions would not be expected to exceed the District's threshold of significance for NO_x. NO_x construction screening levels were developed using average default construction parameter inputs. Construction-related NO_x emissions expected to be under the established SMAQMD thresholds of significance (See Table 1) are dependent on the land use and size of the proposed project.

SMAQMD's NO_X construction screening threshold for residential mid-rise apartments is 1,895 units. The proposed 224-unit student housing complex is well below SMAQMD's aforementioned NO_X construction screening threshold. Because the proposed project is below the SMAQMD's screening threshold for NO_X emissions, the project's construction activities would not be expected to exceed SMAQMD's threshold of significance (85 pounds/day) for NO_X emissions. According to the CEQA Guide for Air Quality Assessment, construction of projects below the NO_X screening threshold would be considered to have an insignificant impact on air quality, including ROG, PM_{10}, and $PM_{2.5}$. In addition, the proposed project would implement SMAQMD's Basic Construction Emission Control Practices to further reduce air pollutant emissions during construction. Such practices include watering all surfaces two times daily, limiting vehicle speeds on unpaved roads to 15 miles per hour (mph), minimizing idling time of vehicles, and properly maintaining all construction equipment in proper condition to ensure fuel efficiency, among others. As a result, emissions associated with construction would not create a substantial permanent increase in the emissions of criteria pollutants that would violate any air quality standard.

Operation

Once construction has been completed, air pollutant emissions would be expected to be generated from vehicular trips, landscape maintenance equipment (lawnmowers, blowers, etc.), air conditioning units, and water heaters, among others. The SMAQMD

contains operational-related criteria air pollutant emission screening thresholds for residential development projects. As with the NO_x construction-related emission screening criteria, the operational-related criteria air pollutant emissions screening criteria is based on URBEMIS air quality modeling completed by SMAQMD. Operational screening levels were created using default land use trip generation rates. Projects that do not exceed the operational-related air quality screening emissions threshold would not be expected to have a substantial impact on air quality. The proposed project consists of the development of a 224-unit student housing complex. The operational air quality emission screening threshold for mid-rise apartments is 545 dwelling units. Therefore, the proposed project is below the SMAQMD mid-rise apartment operational air quality emission screening threshold, and would be expected to have an insignificant impact on air quality, including ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions during operation.

Cumulative

After construction is completed, the project site would generate minimal operational air pollutant emissions, and would be consistent with the potential land uses of the site per the 2030 General Plan. Because construction is temporary and the proposed project is below the SMAQMD screening threshold for construction emissions, such emissions would not cumulatively contribute to regional air quality. The proposed project would also implement Basic Construction Emission Control Practices as required by SMAQMD to reduce ozone, PM_{10}, and $PM_{2.5}$ emissions during construction. In addition, the proposed project would not result in any significant long-term operational emissions per the SMAQMD's operational screening threshold; thus, the project would not represent a significant cumulatively considerable contribution to regional air quality.

Furthermore, according to CEQA Section 15064(h)(3), the lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project would comply with the requirements in a previously approved plan or mitigation program such as an air quality attainment plan. As discussed above, implementation of the proposed project would be consistent with the emissions inventories contained in the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*. The proposed project is also consistent with the CSS Rehabilitation and Improvement Plan and associated EIR. Therefore, because the proposed project, as discussed above, would not conflict with or obstruct implementation of the SIP or the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*, is consistent with the CSS Rehabilitation and Improvement Plan and associated EIR, and would not result in any long-term emissions, the proposed project would result in a less than cumulatively considerable contribution to regional air quality.

Conclusion

The proposed project would not result in significant operational emissions or generation of long-term emissions that would be cumulatively considerable, per the SMAQMD operational screening threshold. Construction of the proposed project would not generate emissions of NO_x that exceed the SMAQMD screening threshold for construction emissions, or disturb more than 15 acres of land; thus, impacts would be considered less than significant for $PM_{2.5}$ and PM_{10} impacts as well. Compliance with all SMAQMD rules and regulations would further reduce PM emissions, including implementation of Basic Construction Emission Control Practices. Therefore, the project would not result in a cumulatively considerable net increase of any criteria air pollutant, during construction or operation, and would not violate an air quality standard or

contribute to an existing air quality violation. Consequently, a ***less-than-significant*** impact would occur.

Question D

Sensitive receptors are typically defined as facilities where sensitive receptor population groups (children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Land uses associated with sensitive receptor groups, include: residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The proposed project is located on an undeveloped lot and adjacent to a bus yard, lumber yard, UPRR tracks, and residential developments. The project site is approximately 0.25 miles northwest of Hiram Johnson High School, the nearest school to the project site.

During construction, various diesel-powered vehicles and equipment would be in use on the site. The CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[a] High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic were identified as having the highest associated risk. The proposed project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. Relatively very few vehicle trips associated with the proposed residential development would be expected to be composed of diesel-fueled vehicles. In addition, emissions of TACs resulting from construction-related equipment and vehicles are minimal and temporary, affecting a given receptor for a period of days or weeks. However, the project site is located near U.S. 50 (north of the project site) and the UPRR tracks are adjacent to the east. The UPRR tracks are located approximately less than 100 feet east of the project site. The CARB does not provide a recommendation for siting new sensitive land uses near railroad tracks, as the tracks are not considered a significant source of TAC emissions due to the low number of trains; however, rail yards are considered a significant source of TACs by the CARB due to the substantial amount of trains and idling. The CARB recommends a setback of 1,000 feet from a major rail yard, as well as other limitations and mitigation approaches for sensitive land uses within one mile. However, a rail yard is not located within 1,000 feet or one mile of the project site; the UPRR tracks located just east of the project site are utilized solely for passing trains that do not idle at that location.

In order to evaluate the risks associated with exposure of on-site sensitive receptors to TACs from nearby U.S. 50 traffic, the CARB, per their Air Quality and Land Use Handbook, recommends the evaluation of emissions when freeways are within 500 feet of sensitive receptors. Any project placing sensitive receptors within 500 feet of a major roadway or freeway may have the potential to expose residents to toxic air pollutants. The project is located more than 1,000 feet from the edge of the nearest travel lane on U.S. 50 and therefore would meet the CARB guidance distance of 500 feet for sensitive receptors. Consequently, the proposed project would not be expected to expose any sensitive receptors to a significant increase in individual cancer risk from TACs, and a detailed, site-specific health risk assessment is not warranted. As such, a ***less-than-significant*** impact would occur related to exposing sensitive receptors to substantial pollutant concentrations.

[a] California Air Resources Board, Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, October 2000.

Question E

Typical odor sources include industrial or intensive agricultural uses. Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction is temporary and diesel emissions would be minimal and regulated. The nearby lumber yard utilizes heavy diesel equipment that could generate diesel fumes and associated odors; however, operation of the equipment would occur throughout the entire lumber yard site, which would allow the fumes to disperse. In addition, operation of the heavy equipment on the lumber yard site would be regulated by permits to operate and applicable standards and regulations in order to ensure minimal emissions. Emissions of TACs from the nearby freeway could result in objectionable odor; however, as presented above, the buffer between the project site and the freeway would be sufficient to avoid high concentrations of TACs. As stated previously, the nearby UPRR tracks are not a significance source of TACs, and the rail yards, which are considered a significant source of TACs due to idling, are not located within the project vicinity. Accordingly, odors due to TACs from the rail yards would not affect any persons at the project site. Thus, odors related to TACs would not be expected to be considerable or affect a substantial number of people.

The residential land use of the proposed project use is not typically associated with the creation of objectionable odors. Decomposition of biological materials, such as food waste and other trash, could create objectionable odors if not properly contained and handled. The project site would provide adequate waste receptacles throughout the facility and would utilize outdoor trash dumpsters with plastic flip-top lids, which would be picked up weekly. For the aforementioned reasons, construction and operation of the proposed project would not create objectionable odors, nor would the project site be affected by any existing objectionable odors, and a ***less-than-significant*** impact related to objectionable odors would result.

Question F

Emissions of greenhouse gases (GHGs) contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Climate Solutions Act of 2006 (Stats. 2006, ch. 488) (Health &Saf. Code, § 38500 et seq.). AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020.The City has developed the City of Sacramento CAP, which was adopted February 14, 2012. The CAP identifies how the City and the broader community could reduce Sacramento's GHG emissions and includes reduction targets, strategies, and specific actions. In accordance with AB 32, the CAP sets a target of 15 percent GHG reduction below Business As Usual (BAU), or 2005, levels by the year 2020 in order to meet 1990 levels. On a per capita basis, GHG emissions must be reduced to 6.16 metric tons of CO_2 equivalent units of measure (i.e., $MTCO_2e$), the industry standard measurement units for GHG emissions, per person by 2020.The proposed project would be considered to interfere with or impede the City's efforts to reduce GHG emissions if the project were to be inconsistent with the reduction targets of the City's CAP.

Implementation of the proposed project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO_2 and other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O), from mobile sources and utility usage. The proposed project's short-term construction-related and long-term operational GHG emissions were estimated using the CalEEMod software. CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Project-specific data, where available, such as construction phases and scheduling, was input into the model. Emissions are expressed in annual $MTCO_2e$, based on the global warming potential of the individual pollutants. It should be noted that the proposed project includes off-site sewer infrastructure improvements, which have been modeled using the SMAQMD's Roadway Construction Emissions Model, converted into $MTCO_2e$units of measurement, and included in the project's construction-related GHG emissions estimate. See Appendix A for all modeling results.

Short-term Construction-Related GHG Emissions

Table 2 below presents the proposed project's short-term construction-related GHG emissions.

Table 2
Project Construction GHG Emissions

	Annual CO_2 emissions ($MTCO_2e$)
TOTAL Construction GHG Emissions	**1,048.69**

Source: CalEEMod and Roadway Construction Emissions Model, May 2013 (See Appendix A).

As presented in the table, short-term emissions of GHG associated with construction of the proposed project are estimated to be 1,016.76 $MTCO_2e$. Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a long period of time. However, the proposed project's construction GHG emissions have been amortized over the lifetime of the project and included in the annual operational GHG emissions for disclosure purposes. In accordance with the SMAQMD's Guide to Air Quality Assessment in Sacramento County, the lifetime of the proposed project is assumed to be 40 years. Amortizing the construction GHG emissions (a one-time release that would occur only during construction of the project) and including them in the annual operational emissions (which would occur every year over the lifetime of the entire project) would represent a worst-case scenario and provide a conservative analysis for the annual operational emissions.

Long-Term Operational GHG Emissions

The long-term operational GHG emissions estimate for the proposed project incorporates the project's potential area source and vehicle emissions, emissions associated with utility and water usage, and the generation of wastewater and solid waste. In addition, as stated above, the one-time release of construction GHG emissions has been included in the annual operational GHG emissions estimate in order to provide a worst-case scenario. Estimated GHG emissions associated with the proposed project at operational year 2020 are summarized in

Table 3. As shown in the table, the annual GHG emissions associated with the proposed project by year 2020, including construction GHG emissions, would be 2,516.81 $MTCO_2e$.

Table 3
Proposed Project (2020) Operational GHG Emissions

	CO_2 emissions ($MTCO_2e$)
Annual Operational GHG Emissions	2,490.59
Construction GHG Emissions[1]	26.22
ANNUAL GHG EMISSIONS	**2,516.81**

[1] See Table 2; Amortized over the estimated 40-year project lifetime.

Source: CalEEMod, May 2013 (See Appendix A).

The proposed project would be considered to interfere with or impede the City's efforts to reduce GHG emissions if the project were to be inconsistent with the reduction targets of the City's CAP. The City, per the CAP, requires a reduction of 15 percent from BAU or 2005 levels by 2020 in order to meet 1990 levels. On a per capita basis, GHG emissions must be reduced to 6.16 $MTCO_2e$ per person by 2020. Thus, the project's BAU levels for the year 2005 were evaluated in order to determine the net decrease in the proposed project's GHG emissions over time. The same land use, trip generation rates, and all other assumptions for the project were applied to the BAU modeling. As presented in Table 4 below, the BAU GHG emissions were estimated to be approximately 3,058.92 $MTCO_2e$.

Table 4
BAU (2005) Operational GHG Emissions

	CO_2 emissions ($MTCO_2e$)
Annual Operational GHG Emissions	**3,032.70**
Construction GHG Emissions[1]	26.22
ANNUAL GHG EMISSIONS	**3,058.92**

[1] See Table 2; Amortized over the estimated 40-year project lifetime.

Source: CalEEMod, May2013 (See Appendix A).

Consequently, the proposed project would result in approximately a 17.72 percent reduction in annual GHG emissions from BAU or 2005 level by 2020 ([3,058.92 $MTCO_2e$ – 2,516.81 $MTCO_2e$] / 3,058.92 $MTCO_2e$ x 100% = 17.72%), which exceeds the City CAP's target reduction of 15 percent. In addition, the proposed project would result in 4.21 $MTCO_2e$ per person per year in the year 2020 (2,516.81 $MTCO_2e$ / 598 people = 4.21 $MTCO_2e$ per person per year), which also exceeds the City CAP's per capita target of 6.16 $MTCO_2e$ per person per year by 2020. The reduction in GHG emissions over the years would be attributable to the advancement of vehicle and equipment efficiency as well as more stringent standards and regulations as time progresses, such as State regulation emission reductions (e.g., Pavley, Low Carbon Fuel Standard, and Renewable Portfolio Standard). It should be noted that although a reduction related to such attributes would occur for every development project, CalEEMod takes into consideration how much of each attribute is applied for each specific project based on the size of the project and associated land uses. Accordingly, some projects (e.g., large-scale projects, large commercial or distribution centers, etc.) may require additional reduction measures, such as project design features to reduce energy use, water use, or other sources of GHG, in order to further reduce operational GHG emissions to meet the City's GHG emission reduction target.

Conclusion

Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of the proposed project. Even under a worst-case scenario and conservative analysis, where construction GHG emissions are amortized over the lifetime of the project and incorporated into the estimated annual operational GHG emissions, the overall annual GHG emissions associated with the project would still be reduced by over 15 percent by the year 2020 and would exceed the City CAP's per capita target of 6.16 $MTCO_2e$ per person per year by 2020. It should be noted that the actual annual emissions over the lifetime of the project would be less than presented above, due to the one-time release of construction-related GHG emissions. Because the project would more than meet the reduction targets of the City's CAP, the proposed project would not be considered to interfere with or impede the City's efforts to reduce GHG emissions, and impacts related to GHG emissions and global climate change would be considered ***less than significant***.

Mitigation Measures

None required.

Findings

The project would have no additional project-specific environmental effects relating to Air Quality.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
2. BIOLOGICAL RESOURCES Would the proposal result in impacts to: A) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X	
B) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X
C) Have substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X

Environmental Setting

Vegetation

The proposed project site is currently undeveloped non-native annual grassland, and has historically been used as a golf driving range until January, 2004. Existing vegetation on the project site consists of turf that was irrigated, mowed, and maintained as part of the driving range operations. In the northeast corner of the site and around the detention basin near the eastern edge of the site, the vegetation consists of disturbed annual grasslands. Ornamental trees are located on the western edge of the project site where the clubhouse and parking lot used to be, and along the eastern edge adjacent to the detention pond. Several willow trees border the detention pond and a row of gum trees adjoin the project site to the south.

Wildlife

Due to the disturbed nature of the turf and grassland on the project site, the potential for a diversified amount of wildlife is anticipated to be low. However, the disturbed grasslands on the project site provides habitat for common wildlife species, such as the American Badger, Cooper's Hawk, Tricolored Blackbird, and Golden Eagle, amongst others. The scattered trees on the site provided nesting and foraging habitat for additional bird species and other raptors.

Jurisdictional Waters

The U.S. Army Corps of Engineers (USACE) has regulatory authority of "waters of the United States," which include wetlands, pursuant to Section 404 of the Clean Water Act (CWA). Waters

of the U.S. includes navigable waters, interstate waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

A Jurisdictional Delineation and Special Status Species Assessment report prepared for the proposed project by Gibson & Skordal, LLC in May 2012 (See Appendix B) includes an evaluation of potential waters of the U.S. on the project site that could be subject to USACE jurisdiction under Section 404 of the CWA. The report identifies two ponds on the project site, totaling 1.13 acres that have potential to be considered waters of the U.S. The pond located in the center of the project site is cement-lined and was used to capture sprinkler irrigation water, as part of the operation of the golf driving range. The water from the cement-lined pond is sporadically pumped into the second pond, located on the eastern edge of the site that functions as a detention basin. The report by Gibson & Skordal concludes that the ponds are hydrologically isolated, and thus, would not be regulated by the USACE.

Sensitive Biological Resources

Sensitive biological resources include those that are afforded special protection through the following: California Environmental Quality Act (CEQA), California Fish and Game Code, the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), or the CWA. Sensitive biological resources in the project area also include those afforded protection under the City of Sacramento General Plan.

Special-status species include plants and animals in the following categories:

- species listed or proposed for listing as threatened or endangered under ESA or CESA;
- species considered as candidates for listing as threatened or endangered under ESA or CESA;
- wildlife species identified by the California Department of Fish and Wildlife (CDFW) as California Species of Special Concern and by USFWS as Federal Species of Concern;
- animals fully protected in California under the California Fish and Game Code; and
- plants on California Native Plant Society (CNPS) List 1B (plants rare, threatened, or endangered in California and elsewhere) or List 2 (plants rare, threatened, or endangered in California but more common elsewhere).

Special-status Plants

Although a number of special-status plants have potential to occur in the project vicinity, most of the plants are associated with vernal pools and other seasonal wetlands. According to the report prepared by Gibson & Skordal, LLC, vernal pools and seasonal wetlands are not present on the project site. The special-status plants that are not associated with vernal pools or seasonal wetlands, Sanford's arrowhead and Wooly rose-mallow, typically are found in freshwater-saturated riverbanks, and near standing or slow-moving drainages, canals, ditches, or ponds. According to Gibson & Skordal, these species-supporting habitats do not exist on the project site.

Special-status Wildlife

A number of special-status wildlife species have the potential to occur on the project site, according to Gibson & Skordal. Amongst the potential wildlife species to occur on the site are: American badger, Cooper's hawk, tricolored blackbird, golden eagle, great egret, burrowing owl,

ferruginous hawk, Swainson's hawk, white-tailed kite, Merlin, purple martin, bank swallow, and yellow-headed blackbird. The project site, which is mostly made up of annual grassland, provides potential habitat for the above-mentioned special-status wildlife species. Further analysis on the potential of special-status wildlife species to occur on the project site is discussed below.

Standards of Significance

For purposes of this environmental document, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal;
- Affect other species or habitats of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands);
- Interfere with native resident or migratory wildlife species or with established migratory wildlife corridors, or impede the use of wildlife nursery sites; or
- Conflict with any local policies or ordinances protecting biological resources or with the provisions of any adopted or approved habitat conservation plan.

For the purposes of this document, "special-status" has been defined to include those species, which are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected, pursuant to California Fish and Game Code (Section 3511, 4700, or 5050);
- Designated as species of concern by U.S. Fish and Wildlife Service (USFWS), or as species of special concern to CDFW; or
- Plants or animals that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA).

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

Chapter 6.3 of the Master EIR evaluated the effects of the 2030 General Plan on biological resources within the General Plan policy area. The Master EIR identified potential impacts in terms of degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status birds, through the loss of both nesting and foraging habitat.

Policies in the 2030 General Plan were identified as mitigating the effects of development that could occur under the provisions of the 2030 General Plan. Policy 2.1.5 calls for the City to preserve the ecological integrity of creek corridors and other riparian resources; Policy ER 2.1.10 requires the City to consider the potential impact on sensitive plants for each project and to require pre-construction surveys when appropriate; and Policy 2.1.11 requires the City to

coordinate its actions with those of the California Department Fish and Game, U.S. Fish and Wildlife Service, and other agencies in the protection of resources.

The Master EIR concluded that the cumulative effects of development that could occur under the 2030 General Plan would be significant and unavoidable as they related to effects on special-status plant species (Impact 6.3-2), reduction of habitat for special-status invertebrates (Impact 6.3-3), loss of habitat for special-status birds (Impact 6.3-4), loss of habitat for special-status amphibians and reptiles (Impact 6.3-5), loss of habitat for special-status mammals (Impact 6.5-6), special-status fish (Impact 6.3-7) and, in general, loss of riparian habitat, wetlands and sensitive natural communities such as elderberry savannah (Impacts 6.3-8 through 10).

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Question A

Gibson and Skordal, LLC utilized the CDFW California Natural Diversity Database (CNDDB) to determine the special-status or sensitive plant and wildlife species to potentially occur in the project area. According to the Jurisdictional Delineation and Special Status Species Assessment prepared for the proposed project by Gibson and Skordal, the special-status or sensitive plant and wildlife species identified to potentially occur in the project area, as well as the likelihood for the species to occur on the project site based on the presence of suitable habitat, are presented in Table 5 below. The proposed project site does not contain suitable habitat for those species identified as not having the potential to occur on-site. For those species that are identified as having the potential to occur on the project site based on the presence of suitable habitat, further discussions are provided.

Table 5
Special-Status Species in Project Area

Species		Potential to Occur On-Site	Notes
Common Name	**Scientific Name**		
Plants			
Ahart's dwarf rush	*Juncus leiospermus var. ahartii*	NO	
Bearded popcorn-flower	*Plagiobothrys hystriculus*	NO	
Boggs Lake hedge-hyssop	*Atriplex depressa Gratiola heterosepala*	NO	
Dwarf downingia	*Downingia pusilla*	NO	
Legenere	*Legenere limosa*	NO	
Mason's lilaeopsis	*Lilaeopsis masonii*	NO	

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Table 5
Special-Status Species in Project Area

Species		Potential to Occur On-Site	Notes
Common Name	**Scientific Name**		
Northern California black walnut	*Juglans hindsii*	NO	
Peruvian dodder	*Cuscuta obtusiflora var. glandulosa*	NO	
Sacramento Orcutt grass	*Orcuttia viscida*	NO	
saline clover	*Trifolium hydrophilum*	NO	
Sanford's arrowhead	*Sagittaria sanfordii*	NO	
Slender Orcutt grass	*Orcuttia tenuis*	NO	
Stinkbells	*Fritillaria agrestis*	NO	
Suisun Marsh aster	*Symphyotrichum lentum*	NO	
Wooly rose-mallow	*Hibiscus lasiocarpus var. occidentalis*	NO	
Wildlife			
American badger	*Taxidea taxus*	NO	
Bank swallow	*Riparia riparia*	**YES**	This bird nests in colonies of two or three pairs to a few thousand in vertical cliffs and banks associated with riparian zones, lakes, and streams. The species is known to colonize human-made vertical banks or building structures. The nearest recorded nesting colonies are located approximately 2.5 miles to the northeast along the American River corridor. Foraging habitat does not exist for the species on the proposed project site.
Black-crowned night heron	*Nycticorax nycticorax*	NO	
Burrowing owl	*Athene cunicularia*	**YES**	Ground nesting raptor species that typically inhabit open grasslands and nest in abandoned ground squirrel burrows, cavities associated with raised mounds, levees, or soft berm features. The nearest occurrence is located approximately 0.3-mile north of the site. The project site provides potential nesting and foraging habitat for the species; therefore, the possibility exists for the burrowing owl to be present on the project site.
California linderiella	*Linderiella occidentalis*	NO	
Chinook salmon - Central Valley spring-run ESU	*Oncorhynchus tshawytscha*	NO	

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Table 5
Special-Status Species in Project Area

Species		Potential to Occur On-Site	Notes
Common Name	**Scientific Name**		
Chinook salmon - Sacramento River winter-run ESU	*Oncorhynchus tshawytscha*	NO	
Cooper's hawk	*Accipiter cooperi*	**YES**	This species prefers tree nesting in wooded areas typically 10 to 60 feet above ground level. The project site provides low quality nesting and foraging habitat, and would not be expected to occur on the site.
Double-crested cormorant	*Phalacrocorax auritus*	NO	
Ferruginous hawk	*Buteo regalis*	**YES**	A solitary tree nester that forages in grasslands or other open areas for small mammals, birds, reptiles, and large insects. This large and powerful buteo often winters in California and may nest in riparian corridors. Nesting and foraging habitat is not present on the project site for this species.
Giant garter snake	*Thamnophis gigas*	NO	
Golden eagle	*Aquila chrysaetos*	**YES**	Very large solitary tree nesting raptor which feeds on mammals, carrion, and reptiles. Though its natural densities are generally believed to be low, it once was relatively common to the open areas of California. Today, the golden eagle is rarely observed in the Great Central Valley. The project site provides low quality foraging habitat for the species, and is not expected to occur on the site.
Great blue heron	*Ardea herodias*	**YES**	This wading bird forages in wetlands and shallow open waters for fish, aquatic invertebrates, small mammals, and amphibians. It usually nests in rookeries that are situated in wetlands or near open waters. Foraging habitat for the species is unlikely to occur on the project site.
Great egret	*Ardea alba*	**YES**	This bird usually forages alone in shallow open water and wetlands for fish, amphibians, and aquatic invertebrates. The species has recovered from historic persecution by plume hunters, but destruction of wetlands, especially in the West where colonies are few and widely scattered, poses a current threat. Great egrets prefer breeding habitat in or near open waters and wetlands. Low quality foraging habitat exists on the project site.
Hairy water flea	*Dumontia oregonensis*	NO	
Hoary bat	*Lasiurus cinereus*	NO	

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Table 5
Special-Status Species in Project Area

Species		Potential to Occur On-Site	Notes
Common Name	**Scientific Name**		
Merlin	*Falco columbarius*	**YES**	Never been observed nesting in California. Though it is a transient throughout most of the State, wintering populations are known to occur in the Central Valley and along the coast. The project site provides low quality foraging habitat for the species.
Midvalley fairy shrimp	*Branchinecta mesovallensis*	NO	
No common name	*Andrena subapasta*	NO	
Purple martin	*Progne subis*	**YES**	This bird winters in South American and migrates to Mexico, the U.S., and southern Canada to breed. It is a colonial nester and utilizes natural cavities such as hollow trees, cliffs, and abandoned woodpecker dens, though it also takes advantage of created nesting sites such as bird houses or gourds. It feeds on winged insects which it catches on the fly, and it prefers open areas near lakes, ponds, marshes or other water features. Purple martins were observed nesting in the weep holes of the U.S. 50 overpass less than 0.2-mile to the north. Low quality foraging habitat is present within the project site.
Ricksecker's water scavenger beetle	*Hydrochara rickseckeri*	**YES**	This species favors shallow, weedy freshwater habitats such as vernal pools, lakes, ponds, and slow moving streams. It is capable of flight, but its dispersal tendencies are not well documented. The appropriate habitat for the species is not present within the project site.
Sacramento splittail	*Pogonichthys macrolepidotus*	NO	
Swainson's hawk	*Buteo swainsoni*	**YES**	A raptor species currently listed as threatened in California by the CDFW. Breeding pairs typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors, grassland, irrigated pasture, and cropland with a high density of rodents. The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter. Numerous occurrences of Swainson's hawk nesting sites are located within ten miles of the study area including one less than 1.5 miles to the northwest along the American River. Low quality nesting and foraging habitat is present on the project site.
Tricolored blackbird	*Agelaius tricolor*	**YES**	Colonial nesters that favor dense stands of cattails and/or bulrush, but they also commonly utilize blackberry thickets associated with drainages, ditches, and canals. The closest

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Table 5
Special-Status Species in Project Area

Species		Potential to Occur On-Site	Notes
Common Name	**Scientific Name**		
			recorded nesting colony is approximately five miles to the southeast. Low quality nesting and foraging habitat is present on the project site.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	NO	
Vernal pool fairy shrimp	*Branchinecta lynchi*	NO	
Vernal pool tadpole shrimp	*Lepidurus packardi*	NO	
Western pond turtle	*Emys marmorata*	NO	
Western spadefoot toad	*Spea hammondii*	**YES**	A nocturnally active animal. Prefers to forage in grassland, scrub, and chaparral for a variety of invertebrates such as insects and worms. Breeds from January to May in vernal pools, pools in ephemeral stream courses, and other fish-free water features. The project site provides marginal habitat for this species.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	NO	
White-tailed kite	*Elanus leucurus*	**YES**	Non-migrating bird typically attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. The white-tailed kite builds a platform-like nest of sticks in trees or shrubs and lays three to five eggs, but may brood a second clutch if prey is abundant. Low quality foraging and nesting habitats are present within the project site.
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	**YES**	Nests in the deeper portions of tule, bulrush, or cattail marshes than other blackbirds and typically breeds in California from April to June. Though some populations are known to over-winter in California, many migrate to Mexico and Costa Rica. Feed on seeds and insects, and flocks are often observed in open areas such as grasslands and agricultural fields during migration. The only recorded occurrence within the CNDDB search is located near Freeport approximately eight miles to the southeast. The project site provides low quality foraging habitat for the species.

Source: Gibson & Skordal, LLC, Jurisdictional Delineation & Special Status Species Assessment, May 2012 (See Appendix B)

As shown in Table 5 above, the project site does not provide suitable habitat for many of the special-status species and provides low quality foraging or nesting habitat for those species that do have the potential to occur on-site. In addition, the project site is surrounded by development

to the north, south and west, and the UPRR tracks are located to the east, causing a lack of habitat connectivity, which decreases the feasibility of the project site as habitat for special-status species. However, because special-status species could be present at the site prior to the initiation of construction of the proposed project, the possibility exists for the western spadefoot toad, burrowing owls, special-status raptors, and other special-status bird species to be nesting on the project site; therefore, a ***potentially significant*** impact could result. Implementation of Mitigation Measures 3-1 through 3-3 would reduce this impact to a *less-than-significant* level.

Questions B and C

Existing water bodies or features, such as rivers, creeks, or natural ditches do not exist on the project site or in the immediate vicinity. However, there is an existing driving range pond, and detention basin located on the project site. The two potential waters are hydrologically isolated, and are not connected to any other waters of the U.S., according to the Jurisdictional Delineation conducted by Gibson and Skordal for the project site. Therefore, it is expected that the two water features would not be regulated by the United States Army Corps of Engineers (USACE), and would not require Section 404 permitting. In addition, the two water features on the project site have not been identified as sensitive natural habitats, according to Gibson and Skordal. Therefore, the proposed project would not have a substantially adverse effect on any sensitive natural communities or protected wetlands, and would result in a ***less-than-significant*** impact.

Mitigation Measures

Implementation of Mitigation Measures 2-1 through 2-3 below would reduce the impact identified above related to the western spadefoot toad, the nesting of burrowing owls, special-status raptors, and other special-status bird species to a *less-than-significant* level.

2-1 *Prior to construction, the project contractor shall initiate preconstruction surveys of the project site to determine if burrowing owls are present during the non-nesting season prior to any breeding season construction. The results of the preconstruction surveys shall then be submitted to the City for review. If burrowing owls are not present, further mitigation is not required. If occupied burrows are found during the non-breeding season, the project contractor shall implement standard "passive relocation" measures to exclude burrowing owls from burrows that need to be disturbed, consistent with CDFW guidelines. If breeding owls are found on-site during the nesting season, the project contractor shall establish a no-disturbance buffer around nesting burrows until the nesting is completed. The buffer distance and verification of completion of nesting will be determined by a qualified biologist with experience working with burrowing owls and construction activities. If it is not feasible to avoid removal of nesting burrows, the project contractor shall consult with the CDFW to determine if any options for active nest relocation are feasible.*

2-2 *One of the following mitigation options shall be implemented by the project contractor to avoid disturbing or removing any active nest tree at the time of project implementation:*

- *If project construction plans require removal of a tree that represents potential nesting habitat for migratory birds or other raptors including*

Swainson's hawk, the project contractor shall remove such trees during the non-nesting season, prior to initiation of major construction.

Or

- *If suitable migratory bird or raptor nest trees are on-site and construction is planned during the nesting season for the species, preconstruction surveys shall be conducted to determine if migratory birds or other raptors including Swainson's hawk are using suitable nest trees. The results of the preconstruction surveys shall then be submitted to the City for review. If active nests are present on the property, construction shall be avoided within a buffer area designated to protect the nesting pair. The size of the buffer will be determined by a qualified biologist with experience in nest protection and will be based on the location of the nest, the background level of disturbance in the nest area, and observed reactions of the nesting species to human activity.*

2-3 *Prior to construction, the project contractor shall initiate preconstruction surveys of the project site to determine if western spadefoot toads are present. The results of the preconstruction surveys shall then be submitted to the City for review. If western spadefoot toads are not present, further mitigation is not required. If western spadefoot toads are found during preconstruction surveys, the project contractor shall implement standard "passive relocation" measures consistent with CDFW guidelines.*

Findings

All project-specific environmental effects relating to Biological Resources would be mitigated to a less-than-significant level.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
3. CULTURAL RESOURCES *Would the proposal:* A) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?			X
B) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X	
C) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X	
D) Disturb any human remains, including those interred outside of formal cemeteries?		X	

Environmental Setting

The South 65th Street Area Plan EIR, which encompasses the proposed project site, contains a cultural resources evaluation including background research, a review of historical aerial photographs, records search, field reconnaissance, and review of tax assessor information. The proposed project site was part of the area examined and surveyed in the analysis. According to the South 65th Street Area Plan EIR, archaeological resource sites or human remains are not located on or associated with the project site. However, historical resources are located in the project vicinity that have the potential to be listed in the California Register of Historical Resources (CRHR). Visual examinations and surveys were conducted in the cultural resource analysis for the South 65th Street Area Plan EIR to determine potential historical resources within the project area. An industrial building constructed in 1969 was identified on APN 015-0101-016, and a commercial building constructed during the 1970s was identified on APN 015-0101-019. However, the two buildings are not located on the project site and would not be affected by the proposed project.

Standards of Significance

For purposes of this Initial Study, cultural resource impacts may be considered significant if the proposed project would result in one or more of the following:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

The Master EIR evaluated the potential effects of development under the 2030 General Plan on prehistoric and historic resources (See Chapter 6.4). The Master EIR identified significant and unavoidable effects on historic resources and archaeological resources.

General Plan policies identified as reducing such effects call for identification of resources on project sites (Policy HCR 2.1.1), implementation of applicable laws and regulations (Policy HCR 2.1.2), early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10 and encouragement of adaptive reuse of historic resources (Policy HCR 2.1.13). Demolition of historic resources is deemed a last resort (Policy HCR 1.1.14).

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Question A

According to the South 65th Street Area Plan EIR, historical resources are not located within the project site, or the immediate vicinity of the site. In addition, according to Figure 6.4-2 of the Master EIR, historic structures are not located on or near the project site. Therefore, historical resources as defined in Section 15064.5 of the State CEQA Guidelines would not be affected by implementation of the proposed project. Therefore, a ***less-than-significant*** impact would occur.

Question B through D

The South 65th Street Area Plan EIR revealed no evidence of archaeological resources or human remains in the study area, including within the proposed project site. However, the EIR determined that the lack of surface evidence of archaeological resources or human remains does not exclude the existence of materials. Therefore, the possibility exists that undiscovered archaeological resources or human remains could be affected by the proposed project. The South 65th Street Area Plan EIR recommends mitigation to avoid impacts to undiscovered archaeological resources or human remains present in the study area, including the project site. Because the project site could contain unlisted or unknown archaeological resources, a ***potentially significant*** impact would occur.

Mitigation Measures

Consistent with the South 65th Street Area Plan EIR, implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

3-1 *Construction personnel shall be alerted to the possibility of buried archaeological resources in the project area prior to construction activities, and shall be educated as to identification of archaeological artifacts.*

3-2 *If archaeological artifacts or unusual amounts of stone, bone, or shell are uncovered during construction activities, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended. At that time, the property owner shall retain a qualified professional archaeologist. The archaeologist shall conduct a field investigation of the specific site and recommend mitigation deemed necessary for the protection or recovery of any archaeological resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. The mitigation shall be implemented by the property owner to the satisfaction of the City of Sacramento Planning Department prior to resumption of construction activity.*

3-3 *In accordance with Section 7050.5 of the Health and Safety Code and Sections 5097.94 and 5097.98 of the Public Resources Code, if human remains are uncovered during project construction activities, work within 50 feet of the remains shall be suspended immediately, and the City of Sacramento Planning Department and the County Coroner shall be immediately notified. If the remains are determined by the Coroner to be Native American in origin, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The property owner shall also retain a professional archaeological consultant with Native American burial experience. The archaeologist shall conduct a field investigation of the specific site and consult with the Most Likely Descendant identified by the NAHC. As necessary, the archaeological consultant may provide professional assistance to the Most Likely Descendant including the excavation and removal of the human remains. The property owner shall implement any mitigation before the resumption of activities at the site where the remains were discovered.*

Findings

All project-specific environmental effects relating to Cultural Resources would be mitigated to a less-than-significant level.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
4.GEOLOGY AND SOILS Would the project: A) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i.) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii.) Strong seismic ground shaking? iii.) Seismic-related ground failure, including liquefaction? iv.) Landslides?			X
B) Result in substantial soil erosion or the loss of topsoil?			X
C) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X	
D) 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?			X
E) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X

Environmental Setting

The Campus Crest project site is located within the Sacramento Valley, and lies centrally in the Great Valley geomorphic province of California. The Sacramento Valley forms the northern third of the Great Valley, which fills a northwest-trending structural depression bounded on the west by the Great Valley Fault Zone and the northern Coast Range, and to the east by the northern Sierra Nevada and the Foothills Fault Zone. Most of the surface of the Great Valley is covered with Holocene and Pleistocene-age alluvium, primarily composed of sediments from the Sierra Nevada and the Coast Ranges, which were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits. Older Tertiary Cenozoic deposits underlie the Quaternary alluvium.

The project site is underlain by sediments of the Riverbank Formation, which forms dissected alluvial fans containing material derived from the western slope of the Sierra Nevada. Erosional forces carried the sediments downstream, where they were eventually deposited to form high alluvial fans and terraces of the Sacramento and American Rivers.

The Sacramento 2030 General Plan Master EIR identifies all of the City of Sacramento as being subject to potential damage from earthquake groundshaking at a maximum intensity of VIII on the Modified Mercalli scale (SGP MEIR, Table 6.5-6). The closest potentially active faults to the project area include the Foothills Fault System, located approximately 23 miles from Sacramento; the Great Valley fault, located 26 miles from Sacramento; Concord-Green Valley Fault, located approximately 38 miles from Sacramento; and the Hunting Creek-Berryessa Fault, located 38 miles from Sacramento. The Foothills Fault System is considered capable of generating an earthquake with a Richter-Scale magnitude of 6.5; the Great Valley Fault is capable of generating an earthquake with a magnitude of 6.8; the Concord-Green Valley fault is capable of generating an earthquake with a magnitude 6.9; and the Hunting Creek-Berryessa Fault could generate a 6.9 magnitude earthquake. A major earthquake on any of these faults could cause strong groundshaking in the project area.

Topography

Topography of the site is generally flat. Due to the relatively flat topography of the area, the potential for slope instability within the City of Sacramento and at the project site is minor.

Regional Geology

The City of Sacramento is located in the Great Valley of California. The Great Valley is a flat alluvial plain approximately 50 miles wide and 400 miles long in the central portion of California. The northern portion of the Great Valley is the Sacramento Valley drained by the Sacramento River, and its southern part is the San Joaquin Valley drained by the San Joaquin River. The valley is surrounded by the Sierra Nevada to the east, the Tehachapi Mountains to the south, Coastal Range to the west, and Cascade Range to the north.

Project Area Geology

According to the U.S. Department of Agriculture (USDA)'s Natural Resources Conservation Service (NRCS) Web Soil Survey for the proposed project, the entire project site is made up of San Joaquin-Urban land complex soil series, 0 to 2 percent slopes. San Joaquin-Urban land complex characteristics include being moderately well drained, more than 80 inches to water table, zero frequency of flooding or ponding, and low water capacity. Silt loam occurs from zero to 23 inches, clay from 23 to 28 inches, indurated from 28 to 54 inches, and stratified sandy loam to loam from 54 to 60 inches.

Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if it allows a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

Chapter 6.5 of the Master EIR evaluated the potential effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, existing mineral resources and paleontological resources in the General Plan policy area. Implementation of identified policies in the 2030 General Plan reduced all effects to a less-than-significant level. Policies EC 1.1.1 through 1.1.3 require regular review of the City's seismic and geologic safety standards,

geotechnical investigations for project sites and retrofit of critical facilities such as hospitals and schools.

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Question A

The City of Sacramento's topography is relatively flat, the City is not located within an Alquist-Priolo Earthquake Fault Zone, and the City is not located in the immediate vicinity of an active fault. However, the 2030 General Plan indicates that groundshaking would occur periodically in Sacramento as a result of distant earthquakes. The 2030 General Plan further states that the earthquake resistance of any building is dependent on an interaction of seismic frequency, intensity, and duration with the structure's height, condition, and construction materials. Although the project site is not located near any active or potentially active faults, strong groundshaking could occur at the project site during a major earthquake on any of the major regional faults.

According to the California Geological Survey and the USGS, active faults are not mapped across the project site, nor is the project site located within an Alquist-Priolo Earthquake Special Study Zone. In addition, the nearest fault to the proposed project site, the Dunnigan Hills Fault, is located approximately 30 miles to the northwest. The intensity of ground shaking caused by an earthquake at the Dunnigan Hills Fault is not expected to cause substantial damage to the project site, according to the *Probabilistic Seismic Hazard Assessment for the State of California*. It should be noted that the project would be constructed in compliance with Title 24 of the Uniform Building Code (UBC) to avoid substantial impacts to the structures and residents of the proposed site from an earthquake.

The project site is located on a fairly flat plain of the Sacramento Valley. According to the geotechnical reports prepared by Wallace Kuhl & Associates, the project site is underlain by interbedded clayey silts and sands within the upper 2 to 13 feet, below which are slightly cemented silty sands, followed by interbedded fine sandy clays and silty fine sands at depth. The Sacramento area has historically not been subject to landslides or mudflows, and therefore, landslides would not be expected to occur on the project site. In addition, the geotechnical report revealed that that the project site has a relatively low groundwater table and moderately stable soils. Due to the long distance of potential seismic sources from the project site, low liquefaction potential is anticipated.

Because the project site is not located on or near a known active fault, and the project would comply with UBC requirements and the General Plan and Master EIR, the proposed project would not expose people or structures to the risk of loss, injury, or death. In addition, due to site conditions and the project location, the project site is not expected to experience landsliding or liquefaction. Therefore, a ***less-than-significant*** impact would occur.

Questions B and D

The project site has historically been used as a golf driving range. As a result, the project site consists primarily of disturbed soils, paved parking areas, and vacant land. The soils on the

project site are known to have little or no erosion hazard or expansive properties (Natural Resource Conservation Service, 2012), and the flat topography of the site and coarse soil size would decrease the potential for wind erosion. Construction activities would involve excavating, moving, filling, temporary stockpiling of soil, and grading, which would remove any vegetative cover and expose site soils to erosion from wind and surface water runoff. The City of Sacramento has adopted standard measures to control erosion and sediment during construction. All projects in the City of Sacramento are required to comply with the City's Standard Construction Specifications for Erosion and Sediment Control. The proposed project would comply with the City's standards set forth in the "Administrative and Technical Procedures Manual for Grading and Erosion and Sediment Control." The City's grading ordinance (Chapter 15.88 of Sacramento City Code) specifies construction standards to minimize erosion and runoff, with which the project would comply. Therefore, impacts associated with erosion, loss of topsoil, and expansive soil would be considered ***less than significant***.

Question C

According to the data from the geotechnical report prepared by Wallace Kuhl and Associates, the upper 6 to 12 inches of native soils at the project site are variable and loose, and are unstable for support of the proposed structures. In addition, existing fill soils are unsuitable for structural support and would need to be removed and recompacted. Therefore, the potential for lateral spreading, subsidence, or collapse exists, and would result in a ***potentially significant*** impact. Implementation of Mitigation Measure 4-1 would reduce the above-mentioned impacts to a *less-than-significant* level. As noted in response to Question A, the project site presents low liquefaction potential.

Question E

The proposed project does not include the implementation or use of septic tanks or alternative wastewater disposal systems. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measures

4-1 *Prior to the issuance of grading permit, the applicant shall submit a geotechnical design-level geotechnical analysis of the project site, which shall include requirements for site preparation, appropriate sources and types of fill, the potential need for soil amendments, foundation design, and site drainage to reduce the risk of damage from unstable soils, for the review and approval of the City Engineer. In addition, a qualified geotechnical engineer shall monitor the site during site preparation and grading operations to observe and test fill to verify compliance with these and other measures.*

Findings

All project-specific environmental impacts related to Geology and Soils would be mitigated to a less-than-significant level.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
5. HAZARDS Would the project: A) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X	
B) 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?		X	
C) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X
D) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X
E) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X
F) For a project within the vicinity of private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X
G) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X
H) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X

Environmental and Regulatory Setting

The project site was examined for hazards and hazardous materials in the South 65th Street Area Plan EIR. The hazards and hazardous materials assessment in the EIR involved the review of various databases available from federal, state, and local regulatory agencies regarding hazardous substance use, storage, or disposal in the plan area, and up to one mile from the plan area; review of aerial photographs, Sanborn Fire Insurance Maps, historical

topographic maps, building department records, previous assessments, and other sources to determine the history of land uses at the site; site reconnaissance; and telephone and in-person interviews. Field reconnaissance surveys were also performed in the plan area, including the proposed project site.

The existing UPRR track land bordering the project site to the east were identified as having potential for lead to be present in the soil. A total of 18 computer database searches were conducted for potential or known existing hazardous waste sites within the South 65th Street Area Plan EIR study area, and listed sites were not identified as occurring at the proposed project site.

The project site has historically been used as a golf driving range and is currently undeveloped annual grassland adjacent to the UPRR track. Existing development surrounds the project site, including residential, public, light industrial, and recreational uses. U.S. 50 is located approximately 0.25-mile from the project site, and CSUS is approximately one mile from the site.

Federal regulations and regulations adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) apply to the identification and treatment of hazardous materials during demolition and construction activities. Failure to comply with these regulations respecting asbestos may result in a Notice of Violation being issued by the SMAQMD and civil penalties under state and/or federal law, in addition to possible action by U.S. EPA under federal law. Federal law covers a number of different activities involving asbestos, including demolition and renovation of structures (40 CFR § 61.145). Demolition would not be required for implementation of the proposed project.

Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if the proposed project would:

- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

The Master EIR evaluated effects of development on hazardous materials, emergency response and aircraft crash hazards. See Chapter 6.6. Implementation of the General Plan may result in the exposure of people to hazards and hazardous materials during construction activities, and exposure of people to hazards and hazardous materials during the life of the General Plan. Impacts identified related to construction activities and operations were found to be less than significant. Policies included in the 2030 General Plan, including PHS 3.1.1 (investigation of sites for contamination) and PHS 3.1.2 (preparation of hazardous materials actions plans when appropriate) were effective in reducing the identified impacts.

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Questions A and B

No existing structures exist on the project site and, therefore, the project would not expose people to asbestos-containing-materials through building demolition. The proposed project consists of the construction of a student housing complex. Construction and maintenance of the project site would use fuels, oils, lubricants, paint and paint thinners, glues, cleaners and other hazardous materials. However, compliance with City code and State regulations for the handling of hazardous materials would be required by the project applicant. It should be noted that the UPRR tracks immediately east of the project site could contain soil contaminated by aerially-deposited lead from fuel-powered trains.

The proposed project does not include construction in the UPRR right-of-way. However, it is possible that excavation work for the proposed project could occur in areas along the east side of the site where soils would be contaminated with lead. Construction workers could be exposed to hazardous materials in the potentially contaminated soil along the UPRR tracks. Therefore, a ***potentially significant*** impact would occur related to creating a significant hazard from the handling, release and/or disposal of hazardous materials. Implementation of Mitigation Measure 5-1 would reduce the impact to a *less-than-significant* level.

Questions C through F

The nearest school is located approximately 0.3 mile southwest of the project site. Construction and maintenance of the proposed project would not emit hazardous emissions within 0.25 mile of an existing or proposed school. Therefore, impacts to schools from hazardous materials would not be expected. In addition, the project site is not included on a list of hazardous materials sites, pursuant to Government Code 65962.5. Lastly, the project site is not located within an airport land use plan, in the vicinity of a private airstrip, or within two miles of a public airport. Therefore, a ***less-than-significant*** impact would occur.

Questions G and H

The proposed project consists of constructing a 224-unit market rate student housing development. While some additional traffic would be generated on area streets due to project construction and operation, increased traffic would not be substantial and would not increase congestion such that movement through emergency or evacuation routes would be impeded. The project would not impede or conflict with the objectives or policies of the identified emergency response plans and evacuation plans.

Finally, the project area is located in an urban, built-up environment. The site is not adjacent to or in close proximity to wildland areas, so there would be no risk of wildland fire.

Because the proposed project would not interfere with the implementation of an emergency response plan, and there is no risk of wildland fires in the project area, a ***less-than-significant*** impact would occur.

Mitigation Measures

5-1 *Prior to construction activities, the project applicant shall contract with a qualified firm to collect soil and vapor samples from the proposed development site and analyze the samples for suspected chemical constituents. The results of the soil and vapor analysis shall then be submitted to the City for review. If no contaminants or associated vapors are identified in the samples, construction activities may proceed. If contaminants are identified in the samples, the applicant shall coordinate with the Sacramento County Hazardous Materials Division for direction on appropriate remediation measures and procedures before construction activities begin.*

Findings

All project-specific environmental effects relating to Hazards would be reduced to a less-than-significant level with mitigation.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
6. HYDROLOGY AND WATER QUALITY Would the project: A) Violate any water quality standards or waste or discharge requirements?			X
B) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to level which would not support existing land uses or planned uses for which permits have been granted)?			X
C) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X
D) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X
E) Otherwise substantially degrade water quality?			X
F) 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?			X
G) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X
H) 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?			X

Environmental Setting

Major storm events can produce high flows throughout the Sacramento and American River systems. Flood control facilities along these rivers consist of a comprehensive system of dams, levees, overflow weirs, drainage pumping plants, and flood control bypass channels. The flood control network seeks to control water flows by regulating the amount of water passing through a particular reach of the river. Urban runoff flows from the project site would be directed into this system by the City via two systems: (1) conveyance to the Sacramento River and American River through sumps, pipelines, and treatment facilities; or (2) conveyance by the City's Combined Sewer System (CSS) or Separated Sewer Service System (SSS), along with sewage to the Sacramento Regional Wastewater Treatment Plant (SRWTP) located near Elk Grove.

The proposed project site is located within the Sacramento Drainage Basin 31 watershed area. The Basin 31 service area is approximately 940 acres bounded generally by 60th Street on the west, 21st Avenue on the south, and the UPRR tracks on the north/northeast. The City of Sacramento completed the Sump 31 Drainage Improvement Project in 2005 to upgrade the existing storm drain system and remedy localized flooding within certain areas in the watershed area. The Sump 31 project included construction of a seven acre detention basin at the 65th Street and Broadway (Basin 31 Detention Pond) and the installation of a 66-inch pipe as part of the detention pond improvements. The Sump 31 improvements were sized to accommodate runoff from the proposed project site and buildout of the General Plan. Approximately 83 percent of the Plan Area would be comprised of impervious surfaces at full buildout.

The National Pollutant Discharge Elimination System (NPDES) Permit regulates waste discharge requirements from the SSS (NPDES No. CA082597), as well as discharge requirements from the CSS (NPDES No. CA0079111), In 1997, the CSS Rehabilitation and Improvement Plan and associated EIR were approved. The purpose of the plan was to ensure that the necessary improvements to the CSS would be constructed, and the CSS would be rehabilitated to the level necessary to adequately accommodate 10-year stormwater flows in the area.

The proposed project site consists of a closed golf driving range. Currently, on-site drainage is accommodated by an existing detention pond in the center of the site, and a retention pond in the southeast corner. The two ponds serve approximately 90 percent of the property's stormwater runoff generated from the site, while the remaining 10 percent of runoff drains to existing vegetation. Existing storm drains are located in the western portion of the project site near the golf driving range parking lot. The current configuration of the project site produces virtually no significant outflows.

Standards of Significance

For purposes of this Initial Study, hydrology and water quality impacts may be considered significant if the proposed project would result in one or more of the following:

- If the proposed project would substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increased sediments and other contaminants generated by construction and/or operational activities; or
- If the proposed project substantially increases exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

Chapter 6.7 of the Master EIR evaluates the potential effects of the 2030 General Plan as they relate to surface water, groundwater, flooding, stormwater and water quality. Potential effects include water quality degradation due to construction activities (Impacts 6.7-1, 6.7-2), and exposure of people to flood risks (Impacts 6.7-3, 6.7-4). Policies included in the 2030 General Plan, including a directive for regional cooperation (Policies ER 1.1.2, EC 2.1.1, EC 2.1.1), comprehensive flood management (Policy EC 2.1.14), and construction of adequate drainage facilities with new development (Policy U 4.1.1) were identified that reduced all impacts to a less-than-significant level.

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Questions A and E

The proposed project consists of constructing a 224-unit student housing complex. A base Storm Water Pollution Prevention Plan (SWPPP) and Construction site Monitoring Program (CSMP) in accordance with 2009 Construction General Permit requirements would be prepared as part of the proposed project. The SWPPP would include Best Management Practices (BMPs) in order to prevent, or reduce to the greatest to the greatest feasible extent, adverse impacts to water quality from erosion and sedimentation. A monitoring and reporting framework, and an Erosion and Sediment Control Plan would also be included during construction of the project to ensure appropriate BMPs are followed. The BMPs would ensure proper compliance with the Construction General Permit requirements during construction of the proposed project, and implement a post-construction water quality feature that would provide appropriate treatment measures during operation of the proposed project based on the City of Sacramento Stormwater Quality Standards. In addition, it should be noted that the natural/vegetative channel located in the north/northwest corner of the site would be used for treatment of stormwater runoff from the project site.

Due to the availability of Basin 31 across the street from the project site (west side of Redding Avenue), no on-site detention would be required for the proposed project. In addition, the proposed project would implement BMPs as part of the SWPPP and for operational purposes, and an Erosion and Sediment Control Plan to ensure proper compliance with water quality standards and the Construction General Permit requirements. As such, the proposed project would have a ***less-than-significant*** impact related to violating any water quality standards, waste or discharge requirements, or degrading water quality.

Question B

The proposed project consists of constructing a 224-unit student housing complex. The project is consistent with the land use designations in the City of Sacramento 2030 General Plan. According to the Sacramento Urban Water Management Plan (UWMP), the City receives its water from two surface water sources – the Sacramento and American Rivers – and groundwater from the North American and South American subbasins of the Sacramento Valley Groundwater Basin. As stated previously, the proposed project site is included in the South 65th Street Area Plan EIR, and is anticipated for residential development. The South 65th Street Area Plan EIR examined potential impacts to groundwater supplies. According to the EIR, at full buildout, the City would have adequate water supply to serve the area, which includes the proposed project site. Therefore, the water demand from the proposed project would not create a deficit in groundwater levels. In addition, the City of Sacramento Department of Utilities would review the proposed project to ensure that adequate water supply would be available to serve the project, and would not create a deficit in groundwater levels. Therefore, a ***less-than-significant*** impact would occur in relation to depleting groundwater supplies.

Questions C and D

The proposed project includes the development of a 224-unit student housing complex. The project site is currently a closed golf driving range, and is composed of grassland and two ponds used for detention and retention purposes. The conversion from grassland to mostly impervious surfaces on the project site would increase the amount of surface runoff from the site. However, the proposed project would include an underground drainage system that would include pipe sizes able to handle a 10-year storm event without surcharge, a vegetative swale in the north/northwest corner of the site to capture and filter stormwater runoff prior to entry into the City's stormwater drainage system, and access to Basin 31 to help detain excess flows during high storm events. Basin 31 has ample capacity to accommodate runoff from the proposed project. In addition, the proposed project would include a drainage plan that would be subject to the review of the Sacramento Department of Utilities Department prior to implementation. The proposed project is not located within any river banks or watercourses. Therefore, a ***less-than-significant*** impact would occur related to altering existing drainage patterns, alteration of a stream or river, substantially increasing the amount of surface runoff, or exceeding the capacity of existing or planned stormwater drainage systems.

Questions F through H

The proposed project consists of constructing a 224-unit student housing development. The proposed project site is located within Flood Zone X of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM). The project area designation under Flood Zone X is determined to be outside the area having a 0.2% chance of a flood. Based on this designation, the project site is not subject to flooding from the 100 or 500-year storm events. Because the proposed project site is located outside the FEMA 100-year floodplain, the project would not place housing within a 100-year flood hazard, expose people to significant risk, or impede flood flows, a ***less-than-significant*** impact would occur.

Mitigation Measures

None required.

Findings

The project would have no additional project-specific environmental effects relating to Hydrology and Water Quality.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
7. LIGHT AND GLARE Would the proposal: A) Create a new source of substantial light or glare which would cause a public hazard or annoyance?		X	
B) Create a new source of light that would be cast onto oncoming traffic or residential uses?		X	

Environmental Setting

The project site has historically been used as a golf driving range until 2004. Since the closing of the driving range in 2004, the site has been vacant and undeveloped. The former driving range includes disturbed grassland, a cement-lined pond in the center of the site, a ball screen, and stadium-style overhead lights. A row of single-family residences is located along the west side of Redding Avenue just southwest of the project site. Heavy industrial warehouses and facilities are commonly visible from the streets in the project area. Other views on nearby streets include those of single-family and multi-family residences, and the Sacramento City Unified School District (SCUSD) Central Services Warehouse can be seen to the south of the project site. Mature ornamental trees are visible along portions of streets where residential development is present.

Standards of Significance

For purposes of this Initial Study, aesthetics impacts may be considered significant if the proposed project would result in one or more of the following:

Glare. Glare is considered to be significant if it would be cast in such a way as to cause public hazard or annoyance for a sustained period of time.

Light. Light is considered significant if it would be cast onto oncoming traffic or residential uses.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

The Master EIR described the existing visual conditions in the General Plan policy area and the potential changes to those conditions that could result from development consistent with the 2030 General Plan (See the Master EIR, Chapter 6.13, Urban Design and Visual Resources).

The Master EIR identified potential impacts for glare (Impact 6.13-1). Mitigation Measure 6.13-1 was set forth in order to reduce the effects of new development under the 2030 General Plan to a less-than-significant level.

Light cast onto oncoming traffic or residential uses was identified as a potential impact (Impact 6.13-2). The Master EIR identified Policy LU 6.1.14 (Compatibility with Adjoining Uses) and its

requirement that lighting must be shielded and directed downward as reducing the potential effect to a less-than-significant level.

Mitigation Measures from 2030 General Plan Master EIR that Apply to Project

6.13-1 City shall amend the Zoning Code to prohibit new development from:
(1) using reflective glass that exceeds 50 percent of any building surface and on the ground three floors;
(2) using mirrored glass;
(3) using black glass that exceeds 25 percent of any surface of a building; and
(4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building.

Answers to Checklist Questions

Questions A and B

The project site is currently a vacant undeveloped lot, and was previously used as a golf driving range. The existing stadium-style lights would be removed as part of the project. All outdoor lighting would be dark sky compliant, which is designed to reduce nocturnal glow and glare from urban areas by casting light downward only. All wall packs would be full cutoff and would project downward only. All outdoor lighting would be light-emitting diode (LED) lights, which are more efficient and longer lasting than traditional lighting. In addition, the project is required to comply with Mitigation Measure 6.13-1 of the General Plan Master EIR, which is intended to reduce potential glare impacts from new development. However, failure to comply with Mitigation Measure 6.13-1 of the General Plan Master EIR could result in substantial light and glare to surrounding residential uses and traffic along Redding Avenue from the project. As a result, a ***potentially significant*** impact would occur in relation to creating a new source of substantial glare in the project area. Implementation of Mitigation Measure 7-1 would reduce the above impact to a *less-than-significant* level.

Mitigation Measures

7-1 Prior to issuance of building permits, the Building Department shall review the plans to ensure the plans show that the proposed project does not include the following:

- *Use reflective glass that exceeds 50 percent of any building surface and on the ground three floors;*
- *Use mirrored glass;*
- *Use black glass that exceeds 25 percent of any surface of a building; and*
- *Use metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building.*

Findings

All project-specific environmental effects relating to light and glare would be mitigated to a less-than-significant level.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
8. NOISE Would the project result in: A) Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?		X	
B) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X
C) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X	
D) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X	
E) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X
F) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			X

Environmental Setting

The following discussions present basic information related to noise and vibration, as well as the existing noise environment at the proposed project site.

Noise

Noise is described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz). Discussing sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel (dB) scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference, defined as 0 dB. Other sound pressures are compared to the reference pressure and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. There is a strong correlation between the way humans perceive sound and A-weighted sound levels. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment for

community exposures. All sound levels expressed as dB in this section are A-weighted sound levels, unless noted otherwise.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors, day-night average level (L_{dn}) and the community noise equivalent level (CNEL), and shows very good correlation with community response to noise for the average person. The median noise level descriptor, denoted L_{50}, represents the noise level which is exceeded 50 percent of the hour. In other words, half of the hour ambient conditions are higher than the L_{50} and the other half are lower than the L_{50}.

The L_{dn} is based upon the average noise level over a 24-hour day, with a +10 dB weighting applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, L_{dn} tends to disguise short-term variations in the noise environment. Where short-term noise sources are an issue, noise impacts may be assessed in terms of maximum noise levels, hourly averages, or other statistical descriptors.

Another common descriptor is the CNEL. The CNEL is similar to the L_{dn}, except CNEL has an additional weighting factor. Both average noise energy over a 24-hour period. The CNEL applies a +5 dB weighting to events that occur between 7:00 p.m. and 10:00 p.m., in addition to the +10 dB weighting between 10:00 p.m. and 7:00 a.m. associated with L_{dn}. Typically, the CNEL and L_{dn} result in similar results for the same noise events, with the CNEL sometimes resulting in reporting a 1 dB increase compared to the L_{dn} to account for noise events between 7 and 10 p.m. that have the additional weighting factor.

Vibration

Vibration is like noise in that vibration involves a source, a transmission path, and a receiver. While vibration is related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating. Vibration can be measured in terms of acceleration, velocity, or displacement. Vibration magnitude is measured in vibration decibels (VdB) relative to a reference level of 1 micro-inch per second peak particle velocity (PPV), the human threshold of perception. The background vibration level in residential areas is usually 50 VdB or lower. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible. The range of environmental interest is typically from 50 VdB to 90 VdB (or 0.12 inch per second PPV), the latter being the general threshold where structural damage can begin to occur in fragile buildings.

Proposed Project

The proposed project is located at 3075 Redding Avenue on 13.5 acres in the 65th Street Station Area of the City of Sacramento, California. The project site is south of U.S. 50, east of Redding Avenue, north of San Joaquin Street, and west of UPRR. Existing land uses surrounding the project site include a lumber yard to the north, single-family residential units to the west, the Sacramento City Unified School District (SCUSD) warehouse to the south, and the UPRR tracks to the east. The proposed project includes the construction of a 224-unit student housing complex.

Standards of Significance

Thresholds of significance are those established by the Title 24 standards and by the 2030 General Plan Noise Policies and the City Noise Ordinance. Noise and vibration impacts resulting from the implementation of the proposed project would be considered significant if they cause any of the following results:

- Exterior noise levels at the proposed project exceeding the upper value of the normally acceptable category for various land uses caused by noise level increases due to the project (2030 General Plan, Table EC-1, 2009);
- Residential interior noise levels of L_{dn} 45 dB or greater caused by noise level increases due to the project;
- Construction noise levels not in compliance with the City of Sacramento Noise Ordinance;
- Occupied existing and project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 inches per second (in/sec) due to project construction;
- Project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 in/sec due to highway traffic and rail operations; and
- Historic buildings and archaeological sites are exposed to vibration peak particle velocities greater than 0.25 in/sec due to project construction, highway traffic, and rail operations.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

Noise and vibration associated with development that could occur pursuant to the 2030 General Plan could increase on a cumulative basis. The Master EIR concluded that residential development that could occur could be exposed to significant noise levels that exceed the City's applicable thresholds, and that such effects were significant and unavoidable.

The General Plan goals and policies that serve to reduce the effects from increased noise due to new development are set forth in the Master EIR on pages 6.8-24 to 26. These establish noise standards for interior and exterior for various land uses. Specifically for transportation projects, General Plan policy EC 3.1.2 - Exterior Incremental Noise Standards requires mitigation for all development that increases existing noise levels by more than the allowable increment as shown in Table EC 2 of the Master EIR, to the extent feasible. Policy EC 3.1.12 applies specifically to residential streets in that the City shall discourage widening streets or converting streets to one-way in residential areas where the resulting increased traffic volumes would raise ambient noise levels.

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Questions A, C, and D

Temporary Construction Noise

Construction activities at the project site would include site grading, clearing and excavation work associated with site preparation. The on-site equipment required for construction activities are expected to include excavators, graders, haul trucks, and a crane, amongst other construction equipment. According to the United States Environmental Protection Agency (U.S. EPA), the noise levels of primary concern are often associated with the site preparation phase because of the on-site equipment used for clearing, grading, and excavation. Typical equipment noise levels can range from 79 to 91 dBA at 50 feet, as shown in Table 6. Sensitive receptors surrounding the project site could be exposed to increased levels of noise during project construction. The sensitive receptors within the project vicinity include five existing single-family homes on the west side of Redding Avenue, a church on San Joaquin Street, and one duplex on San Joaquin Street.

The City's Noise Ordinance exempts construction operations that occur between 7:00 a.m. and 6:00 p.m., Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sundays, from the applicable noise standards. However, if construction operations were to occur during the noise-sensitive hours of 6:00 p.m. to 7:00 a.m., Monday through Saturday, or from 6:00 p.m. to 9:00 a.m. on Sunday, the applicable noise standards could potentially be exceeded at the aforementioned sensitive receptors surrounding the project site. However, because the City has determined that all construction within the City limits must comply with the City's Noise Ordinance, nighttime construction activities would not occur and construction noise associated with use of on-site equipment during the project construction phases would be insignificant.

Table 6
Typical Equipment Noise Levels

Type of Equipment	Noise Level in dBA at 50 feet	
	Without Feasible Noise control	With Feasible Noise Control[1]
Dozer or Tractor	80	75
Excavator	88	80
Compactor	82	75
Front-end Loader	79	75
Backhoe	85	75
Grader	85	75
Crane	83	75
Generator	78	75
Truck	91	75

[1] Feasible noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds in accordance with manufacturer' specifications.

Source: U.S. Environmental Protection Agency 1971, Federal Transit Administration 1995

Long-term Operational Noise

On-site Stationary and Area-Source Noise

Typical operational noise sources from student housing developments include mechanical building equipment (heating and ventilation equipment, air conditioning systems, boilers), landscape maintenance equipment, parking lot activity, and outdoor recreation.

Mechanical building equipment

Mechanical building equipment associated with operation of the proposed project could generate noise levels above the 60 dBA threshold established in the City's Noise Ordinance. However, mechanical building equipment is often shielded from direct public exposure and usually placed on rooftops, within equipment rooms, or within exterior enclosures. If proper shielding of mechanical building equipment is not used on the project site, their operation could result in noise levels of 60 dBA or 55 dBA. As a result, the aforementioned sensitive receptors surrounding the project site could be subject to noise levels exceeding the 60 dBA threshold in the City's Noise Ordinance. Therefore, a ***potentially significant*** impact would occur. Implementation of Mitigation Measure 8-1 would reduce the above impact to a *less-than-significant* level.

Landscape Equipment

Landscape equipment such as leaf blowers, lawn mowers, edgers, and trimmers associated with the maintenance of the proposed project site could also contribute to long-term increases in ambient noise levels at nearby receptors. Noise levels ranging from approximately 80 to 90 dBA could result at a distance of three feet. Accordingly, anticipated noise levels would be 55 dBA at 170 feet, and 50 dBA at distances of 300 feet. Such noise levels produced from landscaping equipment could occur during sensitive evening hours and exceed the nighttime noise standards (55dBA Leq during any 30-minuted period) at the nearby sensitive receptors. Although landscaping maintenance activities would be intermittent and temporary, nighttime landscaping activity could exceed the City's Noise Ordinance nighttime standard (50dBA Leq during any 30-minute period) at nearby residential dwellings; annoyance and/or sleep disruption to occupants of nearby residential dwellings could also result. Therefore, a ***potentially significant*** impact would result. Implementation of Mitigation Measure 8-1 would reduce the above impact to a *less-than-significant* level.

Parking Lots

The proposed project would include parking for approximately 604 vehicle spaces evenly distributed among the 12 buildings. Noise levels attributable for parking lot operations were calculated for the Jefferson Lofts Project, which preceded the proposed project. The Jefferson Lofts IS/MND calculated parking noise levels based on 638 vehicle spaces evenly distributed amongst 16 apartment buildings. According to the Jefferson Lofts IS/MND, predicted peak hour average noise levels generated from the 638 vehicle parking lot would be approximately 51 dBA Leq during daytime hours, 49 dBA Leq during nighttime hours, and generate an Ldn/CNEL level of 56 dBA at 75 feet. The closest sensitive receptors to the proposed project site are single family residences located near the southwest corner of the project site, at an approximate distance of 75

feet. The predicted noise levels generated by the 638 vehicle parking lot for the Jefferson Lofts project would not exceed the criteria established by the City's Noise Ordinance (55/50 dBA Ldn during any 30-minute period during daytime/nighttime hours) or the Exterior Noise Standards in the General Plan (60 dBA Ldn for low density single family residential units, 65 dBA Ldn for multi-family residential units). Because the proposed project includes a 604 vehicle parking lot (34 less than the Jefferson Lofts Project), noise levels generated from the proposed project's parking lot would be expected to be less than those predicted for the Jefferson Lofts Project. Therefore, a ***less-than-significant*** impact would occur.

Recreational Areas

Recreational areas would include an outdoor pool, volleyball court, basketball court, activity area, and green space. The volleyball court, pool, and activity area would be located near the center of the project site, while the basketball court and green spaces would be located on the eastern edge of the project site near the UPRR tracks. According to the Jefferson Lofts IS/MND, noise levels typically associated with recreational activities and sporting events average approximately 60 to 75 dBA Leq at 50 feet. The noise levels associated with the recreational activities on the project site would reduce as the distance from the activities grow. In addition, the surrounding apartment buildings near the pool, volleyball court, and activity area would further lessen the noise levels generated from recreational activities. The noise levels generated by activities associated with the basketball court and two green space areas on the eastern edge of the project site would also attenuate, as the on-site apartment buildings to the west and UPRR tracks to the east would lessen noise levels. Furthermore, the recreational activities associated with the proposed project would occur at a distance of over 900 feet from the nearest sensitive receptors located to the southwest of the project site. Therefore, a ***less-than-significant*** impact would occur.

Off-site Traffic Noise

The proposed project would generate additional daily vehicle trips, resulting in increased traffic on local roadways. According to the South 65th Street Area Plan EIR, roadside noise levels resulting from project-related traffic are not expected to increase by more than 3 dBA Ldn, and the impact related to increases in traffic noise would be ***less than significant***.

Land Use Compatibility with On-site Noise Levels

Nearby noise sources that could impact the proposed project site include a lumber yard to the north, SCUSD warehouse and bus lot to the south, a baseball field to the southeast, vehicle traffic on U.S. 50, trains, and surface road vehicle traffic.

Lumber Yard

Noise sources at the lumber yard, which borders the north boundary of the proposed project site, area expected to include the use of forklifts for the loading and unloading of materials, as well as the use of power saws. The nearest sensitive receptors of the proposed project to the lumber yard are buildings 1-5 (See Figure 3, Conceptual Site Plan) on the northern boundary of the project site. Buildings 1-5 would be located approximately 75 feet from the lumber yard.

According to the Jefferson Lofts IS/MND, forklifts generate noise levels up to 78 dBA Leq at the operators position, and typically roam throughout the lumber yard site. Saws range from 72-82 dBA Leq at 50 feet. Lumber yard saws are typically centrally located in the lumber yard and operated inside a shelter or shed, which can be expected to provide at least 10 dBA of noise attenuation. Assuming three forklifts are being operated near the project's northern boundary and the sawing shed is not centrally located but also near the boundary, the combined noise level from these sources would be approximately 72 dBA at a distance of 75 feet and 67.6 dBA Leq at a distance of 125 feet (Jefferson Lofts IS/MND). The 72 dBA generated at 75 feet would exceed the City's 65 dBA exterior threshold for multi-family housing by 7 dBA, and would present a ***potentially significant*** impact. Implementation of Mitigation Measure 8-2 would reduce the above impact to a *less-than-significant* level. The pool, volleyball court, green spaces, and activity area would be located over 75 feet from the lumber yard, and would not be impacted by lumber yard noise levels.

School Bus Yard

The SCUSD warehouse and bus lot is located adjacent to the south side of the proposed project site. Buildings 9-12 would be the closest sensitive receptors to the SCUSD facility at a distance of approximately 75 feet, and the closest common outdoor activity area (activity area, pool), would be located approximately 150 feet from the school bus lot. Noise levels generated at the school bus lot are expected to be comparable to noise levels generated at the lumber yard. Interior noise levels in buildings 9-12 would be approximately 41 dBA Leq, which is below the City's criterion for interior noise. The exterior noise levels at buildings 9-12 would be approximately 72 dBA Leq and the exterior noise levels at the activity area and pool would be approximately 66 dBA Leq. The activity area and pool would experience noise protection due to shielding by buildings 8 and 9. However, noise levels would exceed the City's 65 dBA exterior threshold for multi-family housing and would present a ***potentially significant*** impact. Implementation of Mitigation Measure 8-2 would reduce the above impact to a *less-than-significant* level.

Baseball Field

A little league baseball field is located south of the project site. According to the Jefferson Lofts IS/MND, noise levels typically associated with recreational activities and sporting events, including noise from spectators and players, average approximately 60 to 75 dBA Leq at 50 feet. The baseball diamond is located more than 400 feet from the southern boundary of the project site. The higher noise levels of this range would attenuate to 55 dBA at this distance. Because this level is below the 60 dBA Ldn criterion for exterior noise levels established by the City, the impact would be considered ***less than significant***.

UPRR

The UPRR tracks located to the east of the proposed project site produce rail traffic noise of approximately 77 dBA CNEL/Ldn at a distance of 50 feet, according to the South 65th Street Plan EIR. The 60 dBA CNEL/Ldn noise contour from the UPRR rail traffic extends approximately 0.5 mile from the UPRR tracks, encompassing the entire project site. The closest sensitive receptors to the UPRR tracks are buildings 6 through 8, and would experience exterior sound levels of approximately 73 dBA CNEL/Ldn at a

distance of 150 feet. In addition, users of the green space areas and basketball court would experience similar dBA noise levels, as both areas are located on the easternmost boundary of the project site near the UPRR tracks. As such, the 65 dBA Ldn exterior criterion for multi-family residential units would be exceeded. Therefore, a ***potentially significant*** impact would occur. Implementation of Mitigation Measure 8-2 would reduce the impact to a *less-than-significant* level.

Mitigation is also required for the green space areas and basketball court on the eastern boundary of the project site. Implementation of Mitigation Measure 8-2 would reduce impacts to the aforementioned outdoor recreation activity areas to a *less-than-significant* level.

Vehicle Traffic

According to the South 65th Street Area Plan EIR, existing ambient traffic-related noise levels are already greater than the 60 dBA CNEL/Ldn exterior noise standard along many roadways in the EIR study area. Traffic noise affecting the project site could be generated from the 65th Street/U.S. 50 Eastbound Ramp and from Redding Avenue. The project site lies just outside of the 60 dBA CNEL/Ldn noise contour for the 65th Street. U.S. 50 Eastbound Ramp, which extends approximately 1,003 feet from the centerline.

Traffic noise from the segment of Redding Avenue that runs along the project's western boundary (south of the U.S. 50 underpass) would have a greater influence on ambient noise levels at the project site. Buildings 1 and 12 on the western boundary of the project site would be located approximately 50 feet from Redding Avenue. At buildout of the area, it is projected that buildings 1 and 12 would experience a traffic noise level of 69.8 dBA CNEL/Ldn. The sound level generated from Redding Avenue would lessen to below 60 dBA Ldn at the pool, activity area, and volleyball court, which would be located more than 350 feet from Redding Avenue. The clubhouse and other apartment buildings would shield the outdoor activity areas from some of the traffic noise as well. Because exterior traffic noise levels would approach 70 dBA Ldn at buildings 1 and 12, it is possible that interior noise levels would not meet the City's criterion of 45 dBA Ldn. As a result, a ***potentially significant*** impact would occur. However, implementation of Mitigation Measure 8-2 would reduce the impact to a *less-than-significant* level.

Question B

Temporary Construction Groundborne Vibration

Construction operations have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. The ground vibration levels associated with various types of construction equipment are summarized in Table 7. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels.

At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. For most structures, a peak particle velocity (ppv) threshold of 0.5 inch per second is sufficient to avoid structural damage, with the exception of fragile historic structures or ruins. At the request of the

U.S. EPA, the Committee of Hearing, Bio-Acousitcs, and Bio-Mechanics (CHABA) has developed guidelines for safe vibration limits for ruins and ancient and/or historic buildings. For fragile structures, the CHABA recommends a maximum limit of 0.25 inch per second ppv. For the protection of fragile, historic, and residential structures, the California Department of Transportation (Caltrans) recommends a more conservative threshold of 0.2 inch per second ppn.

Table 7
Representative Vibration Source Levels for Construction Equipment

Equipment		Peak Particle Velocity at 25 feet (in/sec)
Pile Driver (impact)	upper range	1.518
	typical	0.644
Pile Driver (sonic)	upper range	0.734
	typical	0.170
Large Bulldozer		0.089
Caisson Drilling		0.089
Loaded Trucks		0.076
Jackhammer		0.035
Small Bulldozer		0.003

Source: Federal Transit Administration

The proposed project would not involve the use of any equipment or processes that would result in potentially significant levels of ground vibration (i.e., pile drivers). Ground vibration generated by construction operations would be primarily associated with on-site trucks; as shown in Table 7, these would result in vibration levels of less than 0.08 inch per second ppv at 25 feet. The predicted vibration levels at the nearest structure would not be anticipated to exceed the most conservative threshold of 0.2 inch per second ppv. The temporary construction vibration associated with on-site equipment would not be anticipated to expose sensitive receptors to or generate excessive groundborne vibration or groundborne vibration levels. Therefore, a **less-than-significant** impact would occur.

Long-Term Exposure to Groundborne Vibration

The detailed analysis of groundborne vibration presented in the South 65th Street Area Plan EIR also serves as adequate project-level analysis for the proposed project. Within the project area, groundborne vibration levels are primarily associated with heavy-rail traffic along UPRR tracks, located to the east of the project site. To a lesser extent, light-rail transit located along the northern boundary, and vehicle traffic on area roadways, including U.S. 50, also contribute to groundborne vibration levels within the EIR study area. However, groundborne vibration levels associated with light-rail transit and roadway traffic rarely exceed criteria established for evaluation of building damage or human annoyance. Therefore, the EIR analysis focuses on risks of building damage and human annoyance associated with heavy-rail. Ground vibration spreads through the ground and diminishes in magnitude with increases in distance.

The EIR analysis concludes that the contours for risk of damage to typical buildings are limited to within the UPRR corridor and do not extend beyond the property line of parcels located within the South 65th Street Area Plan EIR study area. Consequently, the potential risk of structural damage from ground vibration to structures within the EIR study area, including the proposed project, would be ***less than significant***.

Questions E and F

The proposed project is located more than four miles from the western boundary of Mather Airport, more than three miles from the eastern boundary of the Sacramento Executive Airport, and more than six miles south of McClellan Air Force Base. The nearest private airports to the project site are Franklin Field, located approximately 10 miles south of the project site, and Sunset Skyranch Airport, located more than nine miles to the southeast. The proposed project would not result in the exposure of people residing or working in the project area to excessive noise levels because of airports. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measures

Implementation of the following mitigation measures would reduce the above identified impact related to generation of noise levels in excess of standards and a temporary increase in ambient noise levels to a *less-than-significant* level.

8-1 *Noise impacts due to operational activities would be reduced by implementing the following mitigation measure from the South 65th Street Area Plan EIR:*

- *All mechanical building equipment systems shall be shielded from direct public exposure and completely enclosed.*
- *Landscape maintenance activities shall be limited to the less noise-sensitive daytime hours of 7:00 a.m.-8:00 p.m.*

8-2 *The project applicant shall coordinate with the project architects and other contractors to ensure compliance with the 45 dBA Ldn interior noise level standard for all residential units, and 65 dBA exterior noise level standard for all residential units and recreational areas. Compliance shall be achieved by implementing several specific building and site design elements, including the following:*

- *Air conditioning or mechanical ventilation systems are installed so that windows and doors may remain closed.*
- *Windows and sliding glass doors are mounted in low air infiltration rate frames (0.5 cubic feet per minute or less, per American National Standards Institute specifications).*
- *Exterior doors are solid core with perimeter weather-stripping and threshold seals.*
- *Exterior walls consist of stucco or brick veneer.*
- *Glass in both windows and doors shall not exceed 20 percent of the floor area in a room.*
- *Windows shall have a Sound Classification (STC) rating of at least 35.*
- *Roof or attic vents facing the noise source of concern should be boxed.*
- *Sound buffers or walls to attenuate levels generated from the UPRR tracks, lumber yard, and school bus yard.*

If the above recommendations cannot be implemented into the construction of the buildings and outdoor areas, a more detailed analysis of interior and exterior noise levels shall be conducted when floor plans and construction details are available.

Findings

All project-specific environmental effects of the project relating to Noise would be mitigated to a less-than-significant level.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
9. PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: A) Fire protection?			X
B) Police protection?			X
C) Schools?			X
D) Parks?			X
E) Other public facilities?			X

Environmental Setting

The City of Sacramento provides fire, police, and parks and recreation services in the vicinity of the proposed project site.

The Sacramento Fire Department (SFD) provides fire protection services to the entire City and some small areas just outside the City boundaries within the County limits. SFD provides fire protection and emergency medical services to the project area. First-response service is provided by Station 10, located at 5642 66th Street, approximately 1.5 miles south of the project site. Service is also provided by Station 6, located at 3301 Martin Luther King Boulevard approximately two miles west of the project site; Station 8, located at 5990 H Street approximately 1.4 miles north of the site; and Station 60, located at 3301 Julliard Drive approximately 1.8 miles east of the project site.

The Sacramento City Police Department (SPD) provides police protection services to the project area. The project area is serviced by Central Command which is located at the Richards Police Facility, 300 Richards Boulevard which is 7.7 miles away from the project site. In addition to the SPD, the Sacramento County Sheriff's Department, California Highway Patrol (CHP), University of California, Davis (UC Davis) Medical Center Police Department, and the Regional Transit Police Department aid the SPD to provide protection for the City.

The project site is within the Sacramento City Unified School District. Sacramento City Unified School District is the 11th largest school district in California and serves 47,900 students on 81 campuses. The nearest school is Hiram Johnson High School, which is located approximately .32 miles southwest of the project site.

The City of Sacramento Department of Parks and Recreation oversees more than 2,400 acres of parkland, and manages more than 212 parks within the City. The project site is located adjacently north of Tahoe Tallac Park, east of Mae Fong Park (across Redding Avenue), approximately 0.68 miles east of Tahoe Park, 0.88 miles west of Granite Regional Park, and 1.31 miles north of Earl Warren Park.

Standards of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, school facilities, roadway maintenance, or other governmental services beyond what was anticipated in the 2030 General Plan.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

The Master EIR evaluated the potential effects of the 2030 General Plan on various public services. These include parks (Chapter 6.9) and police, fire protection, schools, libraries and emergency services (Chapter 6.10).

The General Plan provides that adequate staffing levels for police and fire are important for the long-term health, safety and well-being of the community (Goal PHS 1.1, PHS 2.1). The Master EIR concluded that effects would be less than significant.

General Plan policies that call for the City to consider impacts of new development on schools (see, for example, Policy ERC 1.1.2 setting forth locational criteria and Policy ERC 1.1.5 that encourages joint-use development of facilities) reduced impacts on schools to a less-than-significant level. Impacts on library facilities were also considered less than significant (Impact 6.10-8).

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Question A

The proposed project would include the development of a 224-unit student housing complex, including 600 beds. The added population to the SFD services for the project area would be expected to increase as a result of the proposed project. However, there are four fire stations located in close proximity to the proposed project site. The proposed project would be served by SFD Station 10, located approximately 1.5 miles south of the project site, Station 6 located approximately two miles west of the project site Station 8 located approximately 1.4 miles north of the site, and Station 60 located approximately 1.8 miles east of the project site. According to the General Plan Master EIR, the SFD requires a ratio of one fire station per 16,000 residents. The proposed project in consistent with the land use designation in the 2030 General Plan; The General Plan Master EIR concluded that at full buildout of the General Plan, including the proposed project site, the City would be required to provide approximately 12 new fire stations and additional fire personnel to accommodate the increase in population. Furthermore, the proposed project would include fire protection features as required in the City Code including fire alarm systems, fire extinguisher systems and exit illumination. Therefore, impacts to fire service from the proposed project have already been accounted for, and the project would comply with the requirements of the City Code, and General Plan policies regarding adequate fire protection services. As a result, a ***less-than significant*** impact would occur.

Question B

Similar to the SFD, the added population from the proposed project would create an increased demand in police services to the project area. The project area is currently served by the Rooney Police Station of the SPD, located at 5303 Franklin Boulevard, approximately five miles southwest of the project site. The proposed project would also be served by the Rooney Police Station. Although the proposed project would increase the service population for the SPD in the project area, the SPD does not have an adopted office-to-resident ratio. The Department uses a variety of data that includes GIS based data, call and crime frequency information, and available personnel to rebalance the deployment of resources on an annual basis to meet the changing demands of the City. However, the project applicant would be required to pay fees for the provision of public services. Additionally, the location of the project would be consistent with established service areas in the Sacramento General Plan. Therefore, the proposed project would have a ***less than significant*** impact

Question C

Although the proposed project consists of constructing a 224-unit student housing complex, the apartments would not be restricted to students only. Therefore, the potential exists for families and adults with children to be living at the complex. Based on the student generation rates from the General Plan Master EIR, the proposed 224-unit student housing project would generate approximately 34 K-12 students that would require accommodation in local SCUSD schools. However, it is anticipated that the majority of the residents at the proposed project apartment complex would be CSUS students, most of who would not be expected to have children. In addition, the South 65th Street Plan EIR concluded that most if not all of the SCUSD schools that would serve the project site are at or above capacity. The addition of K-12 students from the proposed project would not have an adverse effect on school capacity. The proposed project would also be required to pay statutory developer fees under California Senate Bill (SB) 50; SB 50 requires developers to pay $2.97 per square foot for new residential development.

Therefore, because the SCUSD schools in the project area would not be congested as a result of the proposed project, and the project would pay the required SB 50 developer fees, a ***less-than-significant impact*** would occur regarding school facilities and services.

Question D

The proposed project would include the construction of a clubhouse, volleyball court, basketball court, pool, activity area, and two green space areas. The project site is located adjacently north of Tahoe Tallac Park, across Redding Avenue from Mae Fong Park, approximately 0.68 miles east of Tahoe Park, 0.88 miles west of Granite Regional Park, and 1.31 miles north of Earl Warren Park. The proposed project would add to the current population of the project area, and increase the demand and use of parks and recreational facilities. However, the project would be required to pay a park development impact fee which may be used to add recreational amenities to Mae Fong Park. In addition, the proposed project would comply with General Plan policies regarding parks and recreational facilities. As a result, a ***less-than-significant*** impact would occur.

Question E

No other public facilities beyond those described above are expected to be affected by the proposed project. Therefore, a less-than-significant impact would occur.

Mitigation Measures

None required.

Findings

The project would have no additional project-specific environmental effects relating to Public Services.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
10. RECREATION A) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X
B) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X

Environmental Setting

The proposed project adjoins the Tahoe Tallac Little League baseball fields to the south. As stated previously, the project site has historically been used as a golf driving range.

Standards of Significance

For purposes of this Initial Study, impacts to recreational resources are considered significant if the proposed project would do either of the following:

- Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities; or
- Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2030 General Plan.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

Chapter 6.9 of the Master EIR considered the effects of the 2030 General Plan on the City's existing parkland, urban forest, recreational facilities and recreational services. The General Plan identified a goal of providing an integrated park and recreation system in the City (Goal ERC 2.1). Impacts were considered less than significant after application of the applicable policies (Impacts 6.9-1 and 6.9-2).

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Questions A and B

The proposed project consists of constructing a 224-unit market rate student housing development. As such, recreational and park facilities would be needed to serve the student population living on the project site. Included in the proposed project are two green space areas,

and an activity area on-site to serve the project. Because the project would include green space and an activity area, and the project would comply with General Plan Goal ERC 2.1 and City Policy 2.2.4 a ***less-than-significant*** impact would occur related to recreational facilities.

Mitigation Measures

None required.

Findings

The project would have no additional project-specific environmental effects relating to Recreation.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
11. TRANSPORTATION AND CIRCULATION Would the project: A) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?		X	
B) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?		X	
C) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			X
D) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X
E) Result in inadequate emergency access?			X
F) Conflict with adopted policies, plans, or programs supporting alternative modes of transportation (e.g., bus turnouts, bicycle racks)?		X	

Environmental Setting

The proposed project is located in the eastern portion of Sacramento and south of United States Route 50 (U.S. 50), within the 65th Street Station Area Plan boundaries. The project site is bounded by a lumber yard to the north, a school district corporation yard to the south, UPRR tracks to the east, and Redding Avenue to the west. San Joaquin Street is located just south of the project site. The roadway network in the project vicinity for the proposed project is described below:

U.S. 50

U.S. 50 is an eight-lane, east-west freeway that provides access to Interstate 80, State Route 99 (SR 99), Interstate 5, and serves as a primary commute corridor for communities in eastern Sacramento County and western El Dorado County. U.S. 50 also provides direct access to 65th Street, as eastbound and westbound on-ramps are conveniently located for traveling vehicles. 65th Street is a main access corridor to the project site, and is often accessed via U.S. 50.

65th Street

65th Street is a north-south arterial roadway connecting East Sacramento to Florin Road in Sacramento County east of SR 99. Between U.S. 50 and 14th Avenue, 65th Street is a four-lane arterial roadway that serves commercial, residential, and retail land uses, as well as Hiram Johnson High School. 65th Street would be a connecting roadway to the project site, via 4th Avenue, Redding Avenue, and San Joaquin Street.

Redding Avenue

Redding Avenue is a two-lane, north-south collector street that serves residential, commercial, and light industrial land uses. Redding Avenue is adjacently located to the west of the project site, and would be the main access route to and from the proposed project. Redding Avenue provides connectivity for vehicular circulation for Q Street and San Joaquin Street to and from 65th Street.

San Joaquin Street

San Joaquin Street is a two-lane, east-west collector that extends east of 65th Street and intersects with Redding Avenue and Business Drive west of the UPRR tracks. San Joaquin Street is located just south of the proposed project site, and serves primarily residential land uses, and contains street frontage housing.

4th Avenue

4th Avenue is a two-lane, east-west collector that extends east of 65th Street and serves office and commercial land uses to the north and south. 4th Avenue connects 65th Street to Redding Avenue in an east-west direction to the north of the project site; 4th Avenue would act as an access route for project residents and guests coming from the north.

During construction, the project site would be accessed via Redding Avenue. The main access routes for construction vehicles to the project site would be from 65th Street, 4th Street, and San Joaquin Street. The UPRR tracks east of the project site act as a barrier and would not allow access to the project site.

Class II bike lanes and pedestrian sidewalks exist along Redding Avenue and 4th Avenue, and would provide access to the proposed project site. However, bike lanes do not exist along 65th Street or San Joaquin Street. The Sacramento Regional Transit District (RT) provides public transit service in the City of Sacramento and operates both bus and light rail transit (LRT) within the project area. The University/65th Street light rail station is located on Q Street approximately 0.5 mile from the project site, and is a hub for a number of bus lines and the LRT service between Downtown Sacramento and Rancho Cordova.

Parking for the project site is currently minimal, as the closed golf driving range contains approximately 60 vehicular parking spots. On-street parallel parking exists on San Joaquin Street, and portions of Redding Avenue. The proposed project would have to comply with City parking regulations.

Standards of Significance

The standards of significance for Transportation utilize policies in the 2030 General Plan, Mobility Element and, when appropriate, standards used by regulatory agencies. For traffic flow on the freeway system, the standards of Caltrans have been used.

Roadway Segments

A significant traffic impact occurs for roadway segments when:

- The traffic generated by a project degrades peak period Level of Service (LOS) from A,B,C, D or E (without the project) to F (with project); or
- The LOS (without project) is F, and project generated traffic increases the Volume-to-Capacity Ratio (V/C ratio) by 0.02 or more.

The project is located within an area designated for urban scale development. General Plan Policy M1.2.2 in the Mobility Element exempts six roadway elements from the Level of Service (LOS) standard E-F provided that the project will improve other parts of the transportation system-wide roadway capacity, make intersection improvements, or enhance non-auto travel modes in furtherance of the 2030 General Plan goals.

Intersections

A significant traffic impact occurs for intersections when:

- The traffic generated by a project degrades peak period level of service from A, B, C, D , or E (without project) to F (with project); or
- The LOS (without project) F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

Freeway Facilities

Caltrans considers the following to be significant impacts:

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- Project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service;
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or
- The expected ramp queue is greater than the storage capacity.

Transit

Impacts to the transit system are considered significant if the proposed project would:

- Adversely affect public transit operations or
- Fail to adequately provide for access to public transit.

Bicycle Facilities

Impacts to bicycle facilities are considered significant if the proposed project would:

- Adversely affect bicycle travel, bicycle paths or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

Impacts to pedestrian circulation are considered significant if the proposed project would:

- Adversely affect pedestrian travel, pedestrian paths or
- Fail to adequately provide for access by pedestrians.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

Transportation and circulation were discussed in the Master EIR in Chapter 6.12. Various modes of travel were included in the analysis, including vehicular, transit, bicycle, pedestrian and aviation components. The analysis included consideration of roadway capacity and identification of levels of service, and effects of the 2030 General Plan on the public transportation system. Provisions of the 2030 General Plan that provide substantial guidance include Goal Mobility 1.1, calling for a transportation system that is effectively planned, managed, operated and maintained, promotion of multimodal choices (Policy M 1.2.1), identification of level of service standards (Policy M 1.2.2), development of a fair share funding system for Caltrans facilities (Policy M 1.5.6) and development of complete streets (Goal M 4.2). While the General Plan includes numerous policies that direct the development of the City's transportation system, the Master EIR concluded that the General Plan development would result in significant and unavoidable effects. See Impacts 6.12-1, 6.12-8 (roadway segments in the City), Impacts 6.12-2, 6.12-9 (roadway segments in neighboring jurisdictions), and Impacts 6.12-3, 6.12-10 (freeway segments).

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Summary of Analysis under the 65th Street Station Area Plan EIR

Traffic and circulation impacts from the proposed 65th Street Station Area Plan were discussed in the 65th Street Station Area Plan EIR. Changes in traffic generated by the plan were analyzed, including impacts to vehicle miles traveled (VMT), travel times, daily operations of roadway segments, and peak hour operations of intersections. Impacts to all transportation system components within the project area, including automobile, bicycle, pedestrian movement, and transit were analyzed in the EIR. Goals from the Sacramento 2030 General Plan Mobility Element contains goals and policies that are relevant to the transportation for the 65th Street Station Area, including Goal M 1.2, calling for a multimodal system that provides expanded transportation choices to improve safe and efficient travel, an integrated pedestrian system (Goal M 2.1), a safe, comprehensive, and integrated transit system (Goal M 3.1), a safe and efficient roadway system (Goal M 4.1), and an integrated bicycle system (Goal M 5.1). While the General Plan includes numerous policies that direct the development of the 65th Street Station Area transportation

system, the 65th Street Station Area Plan EIR concluded that the plan would result in significant and unavoidable effects. See Impact 4.3-1 (roadway segments in the 65th Street Station Plan Area), Impact 4.3-3 (freeway system), and Impact 4.3-6 (transit system).

Mitigation Measures from the 65th Street Station Area Plan EIR that apply to the Project

4.3-1 a) *At the time of issuance of building permits, all future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of the City of Sacramento Traffic Operations Center to implement ITS improvements on all major streets including Elvas Avenue, Folsom Boulevard, and 65th Street.*

b) *All future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of designated pedestrian and bicycle improvements in the study area.*

4.3-3 *All future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of widening the westbound U.S. 50 off-ramp at 65th Street.*

Answers to Checklist Questions

Questions A and B

The proposed project site is a vacant former golf driving range located in the 65th Street Station Area of the City of Sacramento. The proposed project consists of a 224-unit student apartment complex located approximately one mile south of the CSUS campus. The proposed project is consistent with type and intensity in the City's General Plan, 65th Street Station Area Plan, and associated EIRs.

Construction

Construction traffic generated by the proposed project would consist of trucks and other commuter vehicles accessing the project site on a daily basis for a limited period of time. The City of Sacramento Municipal Code 12.20.020 requires that a traffic control plan be adopted when construction would obstruct vehicular or pedestrian traffic on City streets. In accordance with Sacramento Municipal Code 12.20.020, the contractor would be required to have a traffic control plan approved and available at the site for inspection during all work. Compliance with the Municipal Code would ensure that adequate access, for both vehicular and pedestrian traffic, to the project vicinity is afforded. With compliance with the City code, the temporary increase in vehicles trips and traffic congestion associated with construction activities would not result in substantial traffic congestion and would exceed any established level of service standards. Therefore, the proposed project would not cause a substantial increase in traffic or exceed any level of service standard, and impacts would be considered ***less than significant.***

Operation

The proposed project consists of developing a 224-unit student housing complex located approximately one mile from the CSUS campus. The project site is located within the 65th Street Station Area Plan boundaries, and is consistent with the residential land use and intensity included in the Area Plan. As such, the project site was anticipated for residential development by the City of Sacramento. It is anticipated that the proposed 224-unit student housing complex would increase the amount of vehicular trips on the local roadway network. To quantify the expected traffic generated from the proposed project, the City prepared a Traffic Study Assessment. The Traffic Study Assessment utilized an estimated trip generation rate from the Jefferson Commons Project Traffic Study (also a student housing project) to determine the number of vehicular trips the proposed project would produce on a daily basis. Using a daily trip generation rate of 7.36 trips per dwelling unit, a 0.37 AM peak hour trip generation rate, and a 0.61 PM peak hour trip generation rate, vehicular trips from the proposed project were calculated. Table 8 below presents the daily, AM peak hour, and PM peak hour trips that would be generated by the proposed project.

Table 8
Proposed Project Vehicle Trip Generation

	Daily and Peak Hour Trip Generation Summary									
	Daily		AM Peak Hour				PM Peak Hour			
				Trips				Trips		
Land Use	Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
224 Dwelling Units	7.36	1,649	0.37	17	66	83	0.61	89	48	137

Source: City of Sacramento Campus Crest Traffic Study Assessment, 2012

As shown above in Table 8, the proposed project would generate 83 new trips in the AM peak hour, 137 new trips in the PM peak hour, and 1,649 new daily trips. Based on this analysis, the City determined that a project-specific traffic impact analysis was not required, and that implementation of the applicable mitigation measures from the 65th Street Station Area Plan EIR would result in a less-than-significant impact. It should be noted that daily, AM, and PM peak hour trips would be reduced due to students riding transit, bicycling, or walking to CSUS (City of Sacramento, 2012). As such, the City anticipates that the proposed project would not significantly increase traffic on local roadways. However, without implementation of the mitigation measures for regional improvements from the 65th Street Station Area Plan EIR, the project would result in a *potentially significant* impact. Implementation of Mitigation Measures 11-1 through 11-3 would reduce the above impact to a ***less-than-significant*** level.

Question C

The proposed project consists of constructing a 224-unit student housing complex. The nearest airport, the Sacramento Executive Airport, is located approximately 13.5 miles from the project site. As such, the proposed project would not result in any changes to air traffic patterns and would not result in any associated safety risks. Therefore, impacts associated with air traffic patterns would be ***less than significant***.

Questions D and E

The proposed project is consistent with the land use designations in the Sacramento 2030 General Plan, and the 65th Street Station Area Plan. The project would not modify the current land use designation on the project site or surrounding area, and would not alter the existing street system or access routes in the project area. The proposed project consists of two driveways to access the project site. The primary access to the proposed project site is via a gated driveway approximately 55 feet wide located in the middle of the site. The design of the primary gated driveway shall be subject to review and approval of the City's Department of Public Works. The second driveway located in the northwest corner of the proposed project would be used either by emergency vehicles only or would be designated for outbound traffic only. The project would not alter the existing street system or any existing access routes, therefore, impacts associated with project would be ***less than significant***.

Question F

The proposed project would not modify the existing land uses on the project site or in the surrounding area. The proposed project is consistent with the 65th Street Station Area Plan and is not located within a Sacramento Regional Transit District (RT) service roadway. In addition, the proposed project would not conflict with the proposed bicycle and pedestrian improvements in the 65th Street Station Area Plan. However, the project applicant would be required to pay a fair-share payment for the designated pedestrian and bicycle improvements included in the 65th Street Station Area Plan. Therefore, failure to contribute a fair-share payment for the pedestrian and bicycle improvements included in the 65th Street Station Area Plan would result in a *potentially significant* impact. Implementation of Mitigation Measure 11-2 would reduce the above impact to a ***less-than-significant*** level.

Mitigation Measures

Implementation of the following mitigation measures would reduce the above identified impact related to traffic and pedestrian and bicycle facilities to a *less-than-significant* level.

11-1 *At the time of issuance of a building permit, the project applicant shall pay, on a fair-share basis, the cost of the City of Sacramento Traffic Operations Center to implement ITS improvements on all major streets including Elvas Avenue, Folsom Boulevard, and 65th Street.*

11-2 *At the time of issuance of a building permit, the project applicant shall pay, on a fair-share basis, the cost of the designated pedestrian and bicycle improvements in the 65th Street Station Area Plan area.*

11-3 *At the time of issuance of a building permit, the project applicant shall pay, on a fair-share basis, the cost of widening the westbound U.S. 50 off-ramp at 65th Street.*

Findings

All project-specific environmental effects of the project relating to Transportation and Circulation would be mitigated to a less-than-significant level.

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
12. UTILITIES AND SERVICE SYSTEMS Would the project: A) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X
B) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X	
C) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X
D) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X
E) Result in a determination by the wastewater treatment provider which serves or may serve the project's projected demand in addition to the provider's existing commitments?		X	
F) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid water disposal needs?			X
G) Comply with federal, state, and local statutes and regulations related to solid waste?			X

Environmental Setting

The project site is an infill location on a vacant, grassy lot surrounded by existing development, baseball fields, and the UPRR tracks. Water service for the project would be provided by the City of Sacramento. Wastewater service would be provided by the Sacramento Regional County Sanitation District (SRCSD), while sewer service would be provided by the City of Sacramento via the Separated Sewer System (SSS). The area is within the original Combined Sewer System (CSS); however, in the vicinity of the project site, sewer and storm drain lines have been separated. The SSS consists of a network of pipelines that collect both stormwater drainage and sewage with conveyance into major trunk-sewer lines owned and operated by the County Sanitation District 1 (CSD-1), which then conveys the mixed flow to the Sacramento Regional Wastewater Treatment Plant (SRWTP) in Elk Grove. Each site within the City is responsible for local drainage and would tap into the local street drainage system. It should be noted that the 65th Street Station Area Financing Plan containing in-lieu fees is in the process of being adopted by the City of Sacramento; the project site is included in the 65th Street Station Area Financing Plan area and would be subject to the fees of the plan. The in-lieu fees included

in the 65th Street Station Area Financing Plan are currently being developed, and would be applied to the proposed project at the time of adoption.

The City assumes responsibility for solid waste removal and disposal. The Sacramento General Plan Master EIR indicates that the City landfills have sufficient capacity for full buildout.

Standards of Significance

For purposes of this Initial Study, an impact is considered significant if the proposed project would:

- Result in a detriment to microwave, radar, or radio transmissions;
- Create an increase in water demand of more than 10 million gallons per day;
- Substantially degrade water quality;
- Generate more than 500 tons of solid waste per year; or
- Generate stormwater that would exceed the capacity of the stormwater system.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

The Master EIR evaluated the effects of development under the 2030 General Plan on water supply, sewer and storm drainage, solid waste, electricity, natural gas and telecommunications. See Chapter 6.11.

The Master EIR evaluated the impacts of increased demand for water that would occur with development under the 2030 General Plan. Policies in the General Plan would reduce the impact generally to a less-than-significant level (See Impact 6.11-1) but the need for new water supply facilities results in a significant and unavoidable effect (Impact 6.11-2). The potential need for expansion of wastewater treatment facilities was identified as having a significant and unavoidable effect (Impacts 6.11-4, 6.11-5). Impacts on solid waste facilities were less than significant (Impacts 6.11-7, 6.11-8). Implementation of energy efficient standards as set forth in Titles 20 and 24 of the California Code of Regulations for residential and non-residential buildings, would reduce effects for energy to a less-than-significant level.

Mitigation Measures from 2030 General Plan Master EIR that apply to the Project

None.

Answers to Checklist Questions

Question A

The proposed project consists of constructing a 224-unit student housing complex. The project is consistent with the City of Sacramento 2030 General Plan, South 65th Street Area Plan EIR, and 65th Street Station Area Plan and EIR. The South 65th Street Plan EIR examined potential impacts to wastewater treatments facilities, water quality, and potential exceedances of the Regional Water Quality Control Board (RWQCB) requirements at full buildout of the EIR study area. According to the EIR, buildout of the area would not result in exceedance of RWQCB wastewater treatment requirements of the SRWTP. Because the proposed project is consistent with the General Plan and the South 65th Street Area Plan EIR determined that buildout of the

area would not result in exceeded wastewater treatment requirements, a ***less-than-significant*** impact would occur in relation to exceeding wastewater treatment requirements of the RWQCB.

Questions B and E

The proposed project consists of constructing a 224-unit student housing complex. An existing eight inch sewer main runs in a north-south direction along Redding Avenue in the existing right-of-way (roadway located adjacently west of the project site); the on-site sewer system for the proposed project would connect to this sewer main for sewer flow conveyance. In addition, a 15-inch sewer main running in an east-west direction is located along San Joaquin Street (just south of the project site); the sewer flow from the proposed project would also be conveyed to this sewer main.

A sewer study for the proposed project was conducted by Morton and Pitalo, Inc., in conjunction with City standards and the City of Sacramento Department of Utilities (DOU) staff. Peak sewer flow conditions with inclusion of the proposed project were calculated. According to the sewer analysis, the proposed project would generate 149,070 gallons per day (GPD) or roughly 0.23 cubic feet per second (cfs) of peak sewer flow into the existing eight inch and 15-inch sewer mains in the project vicinity (along Redding Avenue and San Joaquin Street).

The sewer flow from the proposed project in addition to the existing peak sewer flow of the eight inch sewer main at the Redding Avenue/San Joaquin Street intersection (downstream of the project site) would be approximately 371,838 GPD (or 0.58 cfs). The existing capacity of the Redding Avenue/San Joaquin Street eight inch sewer main is 355,465 (or 0.55 cfs); therefore, implementation of the proposed project would result in the eight inch sewer main operating at 104.6 percent capacity under peak design conditions. As a result, the existing eight inch sewer main along Redding Avenue does not have adequate capacity to serve the proposed project, and a ***potentially significant*** impact would occur. It should be noted that the sewer analysis determined that the existing 15-inch sewer main along San Joaquin Street would have sufficient capacity to serve the proposed project.

Question C

As stated above in the Hydrology and Water Quality section, the proposed project would include an underground drainage system that would include pipe sizes able to handle a 10-year storm event without surcharge, a vegetative swale in the north/northwest corner of the site to capture and filter stormwater runoff prior to entry into the City's stormwater drainage system, and access to Basin 31 to help detain excess flows during high storm events. In addition, the proposed project would include a drainage plan that would be subject to the review of the Sacramento Department of Utilities Department prior to implementation. Therefore, a ***less-than-significant*** impact would occur.

Question D

According to the South 65th Street Plan EIR, the proposed project (224 residential student housing apartments) would create a demand of 50,400 gallons per day (gpd) of water from the City (based on the consumption rate of 225 gallons/unit/day). The projected 50,400 gallons per day demand from the proposed project was accounted for in the City's General Plan, and Master EIR, as the project is consistent with the General Plan land use designation and the South 65th Street Plan EIR. The Master EIR concluded that the city's existing water right permits

and United States Bureau of Reclamation (USBR) contract are sufficient to meet the total water demand projected for buildout of the proposed 2030 General Plan, including the proposed project site. In addition, according to the 2010 Sacramento Urban Water Management Plan (UWMP), the City's water supply would be well below the City's water demand during a multiple-dry year in 2015, 2020, 2025, 2030, and 2030. During a drought year in 2030, the City's water yearly supply is expected to be 346,800 acre feet (AFY), while the City's yearly water demand would be 249,984 AFY; it is anticipated that there would be a 96,816 AFY surplus of water supply in the year 2030 during drought. Because the City would have adequate capacity of water supply at buildout of the General Plan, and the proposed project is consistent with the General Plan, the project would have a ***less-than-significant*** impact related to water supply.

Questions F and G

The proposed project (224 residential student housing units) would generate approximately 560 pounds per day of solid waste (based on a generation rate of 2.5 pounds per day per unit from the South 65th Street Area Plan EIR). The projected solid waste generation of the proposed project was included in the Sacramento Master EIR, which concluded that at full buildout of the 2030 General Plan, the capacities at the Lockwood and Kiefer landfills would not be exceeded. The Master EIR determined that the remaining capacity and expected lifespan at the Lockwood and Kiefer Landfills, combined with the use of the existing transfer stations and development of one new transfer station in the North Sacramento area would not exceed the capacity of the landfills at full buildout of the 2030 General Plan. Because the proposed project is consistent with the General Plan land use designation for the site, impacts related to solid waste from the project have already been accounted for in the Master EIR, and determined to be insignificant. In addition, the proposed project would be required to comply with Title 17.72 of the City of Sacramento City Code which addresses recycling and solid waste disposal requirements for new and existing developments. Such requirements include compliance with all federal, state, and local statutes and regulations related to waste reduction and recycling, including the requirement that all planning documents prepared for the project be submitted to the City Solid Waste Division for approval. Therefore, a ***less-than-significant*** impact would occur related to solid waste disposal.

Mitigation Measures

Implementation of the following mitigation measures would reduce the above identified impact related to sewer capacity to a *less-than-significant* level.

12-1 *Prior to issuance of a building permit for the proposed project, if the 65th Street Station Area Financing Plan is not approved, the project applicant shall upsize the existing eight inch sewer main to 12 inches from sewer manhole no. 201 in Redding Avenue per City Map Book page II21 the project site frontage to sewer manhole no. 810 located at the Redding Avenue / San Joaquin St intersection per City Map Book page II21, for the review and approval of the Director of Utilities City Engineer.*

Findings

All environmental impacts related to Utilities and Service Systems to a less-than-significant level.

MANDATORY FINDINGS OF SIGNIFICANCE

Issues:	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact
13. MANDATORY FINDINGS OF SIGNIFICANCE			
A.) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X
B.) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X
C.) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

Answers to Checklist Questions

Question A

As described in Section 2, Biological Resources, and Section 3, Cultural Resources, of this Initial Study, the proposed project, with implementation of the identified mitigation measures, would not have a significant impact on the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, the proposed project's impact would be ***less than significant***.

Question B

The proposed project was anticipated by and would be consistent with the City of Sacramento 2030 General Plan, the 65th Street Station Area Plan and EIR, and the South 65th Street Area Plan EIR. As such, buildout of the proposed project was anticipated and has been analyzed. As presented throughout this Initial Study, all potential impacts associated with the project would be reduced to less-than-significant levels with implementation of the identified mitigation measures. Thus, the project would not be expected to result in a considerable cumulative contribution to

impacts on the environment; therefore, the proposed project would also result in a ***less-than-significant*** cumulative impact.

Question C

The only potentially significant impacts associated with the proposed project's effects on human beings are related to noise. However, as discussed in Section 8, Noise, of this Initial Study, with implementation of the identified mitigation measures, all impacts would be reduces to less-than-significant levels. Therefore, the proposed project's impact associated with effects on human beings would be ***less than significant***.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by this project.

	Air Quality	X	Noise
X	Biological Resources		Public Services
X	Cultural Resources		Recreation
X	Geology and Soils	X	Transportation and Circulation
X	Hazards	X	Utilities and Service Systems
	Hydrology and Water Quality		None Identified
X	Light and Glare		

SECTION V - DETERMINATION

On the basis of the initial study:

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2030 General Plan Master EIR; (b) the proposed project is consistent with the 2030 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the proposed project; and (d) the proposed project **will not** have additional significant environmental effects not previously examined in the Master EIR. A Mitigated Negative Declaration will be prepared. Mitigation measures from the Master EIR will be applied to the project as appropriate, and additional feasible mitigation measures and alternatives will be incorporated to revise the proposed project before the negative declaration is circulated for public review, to avoid or mitigate the identified effects to a level of insignificance. (CEQA Guidelines Section 15178(b))

Signature

Date

Printed Name

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APPENDIX A

Campus Crest Student Housing

Sacramento Metropolitan AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	224	Dwelling Unit
Parking Lot	604	Space

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Utility Company**	Sacramento Municipal Utility District
Climate Zone	6	**Precipitation Freq (Days)**	58		

1.3 User Entered Comments

Project Characteristics -

Land Use - Lot Acreage calculated based on default parking acreage

Construction Phase - Building phase calculations based on Jefferson Lofts AQ construction dates

Grading - Site acreage

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	26.88	177.34	124.77	0.22	11.03	10.19	21.22	3.38	10.16	13.54	0.00	22,520.96	0.00	2.24	0.00	22,567.91
2014	555.75	45.28	51.14	0.10	4.71	2.64	7.35	0.07	2.61	2.68	0.00	9,161.02	0.00	0.67	0.00	9,175.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	26.88	177.34	124.77	0.22	6.75	10.19	16.94	3.38	10.16	13.54	0.00	22,520.96	0.00	2.24	0.00	22,567.91
2014	555.75	45.28	51.14	0.10	0.20	2.64	2.84	0.07	2.61	2.68	0.00	9,161.02	0.00	0.67	0.00	9,175.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.04	0.23	19.16	0.00		0.00	0.10		0.00	0.10	0.00	33.68		0.04	0.00	34.43
Energy	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Mobile	10.11	18.47	85.38	0.13	14.67	0.69	15.35	0.21	0.65	0.85		13,429.90		0.52		13,440.79
Total	**24.24**	**19.46**	**104.86**	**0.13**	**14.67**	**0.69**	**15.51**	**0.21**	**0.65**	**1.01**	**0.00**	**14,430.63**		**0.58**	**0.02**	**14,448.16**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.04	0.23	19.16	0.00		0.00	0.10		0.00	0.10	0.00	33.68		0.04	0.00	34.43
Energy	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Mobile	10.11	18.47	85.38	0.13	14.67	0.69	15.35	0.21	0.65	0.85		13,429.90		0.52		13,440.79
Total	**24.24**	**19.46**	**104.86**	**0.13**	**14.67**	**0.69**	**15.51**	**0.21**	**0.65**	**1.01**	**0.00**	**14,430.63**		**0.58**	**0.02**	**14,448.16**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Grading - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.56	0.00	6.56	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59		10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**6.56**	**4.59**	**11.15**	**3.31**	**4.59**	**7.90**		**10,856.66**		**1.06**		**10,878.90**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.13	0.11	1.28	0.00	0.26	0.01	0.27	0.00	0.01	0.01		201.64		0.01		201.88
Total	**0.13**	**0.11**	**1.28**	**0.00**	**0.26**	**0.01**	**0.27**	**0.00**	**0.01**	**0.01**		**201.64**		**0.01**		**201.88**

3.2 Grading - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.56	0.00	6.56	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59	0.00	10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**6.56**	**4.59**	**11.15**	**3.31**	**4.59**	**7.90**	**0.00**	**10,856.66**		**1.06**		**10,878.90**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.13	0.11	1.28	0.00	0.01	0.01	0.02	0.00	0.01	0.01		201.64		0.01		201.88
Total	**0.13**	**0.11**	**1.28**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**		**201.64**		**0.01**		**201.88**

3.3 Paving - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.53	33.81	20.89	0.03		2.93	2.93		2.93	2.93		2,917.64		0.50		2,928.05
Paving	1.30					0.00	0.00		0.00	0.00						0.00
Total	**6.83**	**33.81**	**20.89**	**0.03**		**2.93**	**2.93**		**2.93**	**2.93**		**2,917.64**		**0.50**		**2,928.05**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.09	0.96	0.00	0.20	0.01	0.20	0.00	0.00	0.01		151.23		0.01		151.41
Total	**0.10**	**0.09**	**0.96**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.00**	**0.01**		**151.23**		**0.01**		**151.41**

3.3 Paving - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.53	33.81	20.89	0.03		2.93	2.93		2.93	2.93	0.00	2,917.64		0.50		2,928.05
Paving	1.30					0.00	0.00		0.00	0.00						0.00
Total	**6.83**	**33.81**	**20.89**	**0.03**		**2.93**	**2.93**		**2.93**	**2.93**	**0.00**	**2,917.64**		**0.50**		**2,928.05**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.09	0.96	0.00	0.01	0.01	0.01	0.00	0.00	0.01		151.23		0.01		151.41
Total	**0.10**	**0.09**	**0.96**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**	**0.00**	**0.01**		**151.23**		**0.01**		**151.41**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28		4,040.62		0.46		4,050.31
Total	**5.17**	**34.66**	**23.45**	**0.04**		**2.28**	**2.28**		**2.28**	**2.28**		**4,040.62**		**0.46**		**4,050.31**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.04	9.70	8.53	0.02	0.59	0.29	0.88	0.02	0.27	0.28		1,701.58		0.05		1,702.65
Worker	1.76	1.50	16.81	0.03	3.43	0.09	3.52	0.05	0.08	0.13		2,651.58		0.15		2,654.70
Total	**2.80**	**11.20**	**25.34**	**0.05**	**4.02**	**0.38**	**4.40**	**0.07**	**0.35**	**0.41**		**4,353.16**		**0.20**		**4,357.35**

3.4 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28	0.00	4,040.62		0.46		4,050.31
Total	**5.17**	**34.66**	**23.45**	**0.04**		**2.28**	**2.28**		**2.28**	**2.28**	**0.00**	**4,040.62**		**0.46**		**4,050.31**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.04	9.70	8.53	0.02	0.05	0.29	0.34	0.02	0.27	0.28		1,701.58		0.05		1,702.65
Worker	1.76	1.50	16.81	0.03	0.13	0.09	0.22	0.05	0.08	0.13		2,651.58		0.15		2,654.70
Total	**2.80**	**11.20**	**25.34**	**0.05**	**0.18**	**0.38**	**0.56**	**0.07**	**0.35**	**0.41**		**4,353.16**		**0.20**		**4,357.35**

3.4 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.74	32.06	23.20	0.04		2.02	2.02		2.02	2.02		4,040.61		0.42		4,049.51
Total	**4.74**	**32.06**	**23.20**	**0.04**		**2.02**	**2.02**		**2.02**	**2.02**		**4,040.61**		**0.42**		**4,049.51**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.95	8.82	7.59	0.02	0.59	0.26	0.85	0.02	0.24	0.26		1,708.26		0.05		1,709.23
Worker	1.63	1.35	15.34	0.03	3.43	0.09	3.52	0.05	0.08	0.13		2,605.83		0.14		2,608.71
Total	**2.58**	**10.17**	**22.93**	**0.05**	**4.02**	**0.35**	**4.37**	**0.07**	**0.32**	**0.39**		**4,314.09**		**0.19**		**4,317.94**

3.4 Building Construction - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.74	32.06	23.20	0.04		2.02	2.02		2.02	2.02	0.00	4,040.61		0.42		4,049.51
Total	**4.74**	**32.06**	**23.20**	**0.04**		**2.02**	**2.02**		**2.02**	**2.02**	**0.00**	**4,040.61**		**0.42**		**4,049.51**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.95	8.82	7.59	0.02	0.05	0.26	0.31	0.02	0.24	0.26		1,708.26		0.05		1,709.23
Worker	1.63	1.35	15.34	0.03	0.13	0.09	0.22	0.05	0.08	0.13		2,605.83		0.14		2,608.71
Total	**2.58**	**10.17**	**22.93**	**0.05**	**0.18**	**0.35**	**0.53**	**0.07**	**0.32**	**0.39**		**4,314.09**		**0.19**		**4,317.94**

3.5 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	547.67					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24		281.19		0.04		282.03
Total	**548.12**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**		**281.19**		**0.04**		**282.03**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.33	0.27	3.09	0.01	0.69	0.02	0.71	0.01	0.02	0.03		525.13		0.03		525.71
Total	**0.33**	**0.27**	**3.09**	**0.01**	**0.69**	**0.02**	**0.71**	**0.01**	**0.02**	**0.03**		**525.13**		**0.03**		**525.71**

3.5 Architectural Coating - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	547.67					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24	0.00	281.19		0.04		282.03
Total	**548.12**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**	**0.00**	**281.19**		**0.04**		**282.03**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.33	0.27	3.09	0.01	0.03	0.02	0.04	0.01	0.02	0.03		525.13		0.03		525.71
Total	**0.33**	**0.27**	**3.09**	**0.01**	**0.03**	**0.02**	**0.04**	**0.01**	**0.02**	**0.03**		**525.13**		**0.03**		**525.71**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.11	18.47	85.38	0.13	14.67	0.69	15.35	0.21	0.65	0.85		13,429.90		0.52		13,440.79
Unmitigated	10.11	18.47	85.38	0.13	14.67	0.69	15.35	0.21	0.65	0.85		13,429.90		0.52		13,440.79
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,476.16	1,603.84	1359.68	4,083,158	4,083,158
Parking Lot	0.00	0.00	0.00		
Total	1,476.16	1,603.84	1,359.68	4,083,158	4,083,158

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10
Parking Lot	10.80	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
NaturalGas Unmitigated	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Apartments Mid Rise	8219.95	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.09**	**0.76**	**0.32**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**		**967.05**		**0.02**	**0.02**	**972.94**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Apartments Mid Rise	8.21995	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.09**	**0.76**	**0.32**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**		**967.05**		**0.02**	**0.02**	**972.94**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.04	0.23	19.16	0.00		0.00	0.10		0.00	0.10	0.00	33.68		0.04	0.00	34.43
Unmitigated	14.04	0.23	19.16	0.00		0.00	0.10		0.00	0.10	0.00	33.68		0.04	0.00	34.43
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.45					0.00	0.00		0.00	0.00						0.00
Consumer Products	9.96					0.00	0.00		0.00	0.00						0.00
Hearth	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
Landscaping	0.62	0.23	19.16	0.00		0.00	0.10		0.00	0.10		33.68		0.04		34.43
Total	**14.03**	**0.23**	**19.16**	**0.00**		**0.00**	**0.10**		**0.00**	**0.10**	**0.00**	**33.68**		**0.04**	**0.00**	**34.43**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.45					0.00	0.00		0.00	0.00						0.00
Consumer Products	9.96					0.00	0.00		0.00	0.00						0.00
Hearth	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
Landscaping	0.62	0.23	19.16	0.00		0.00	0.10		0.00	0.10		33.68		0.04		34.43
Total	**14.03**	**0.23**	**19.16**	**0.00**		**0.00**	**0.10**		**0.00**	**0.10**	**0.00**	**33.68**		**0.04**	**0.00**	**34.43**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Campus Crest Student Housing

Sacramento Metropolitan AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	224	Dwelling Unit
Parking Lot	604	Space

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Utility Company**	Sacramento Municipal Utility District
Climate Zone	6	**Precipitation Freq (Days)**	58		

1.3 User Entered Comments

Project Characteristics -

Land Use - Lot Acreage calculated based on default parking acreage

Construction Phase - Building phase calculations based on Jefferson Lofts AQ construction dates

Grading - Site acreage

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	27.01	177.69	124.17	0.22	11.03	10.19	21.23	3.38	10.16	13.54	0.00	22,104.89	0.00	2.23	0.00	22,151.71
2014	555.86	45.58	50.54	0.09	4.71	2.64	7.36	0.07	2.61	2.69	0.00	8,726.10	0.00	0.67	0.00	8,740.11
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	27.01	177.69	124.17	0.22	6.75	10.19	16.94	3.38	10.16	13.54	0.00	22,104.89	0.00	2.23	0.00	22,151.71
2014	555.86	45.58	50.54	0.09	0.20	2.64	2.84	0.07	2.61	2.69	0.00	8,726.10	0.00	0.67	0.00	8,740.11
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.04	0.23	19.16	0.00		0.00	0.10		0.00	0.10	0.00	33.68		0.04	0.00	34.43
Energy	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Mobile	9.85	19.35	82.70	0.12	14.67	0.69	15.36	0.21	0.65	0.86		11,993.42		0.55		12,005.02
Total	**23.98**	**20.34**	**102.18**	**0.12**	**14.67**	**0.69**	**15.52**	**0.21**	**0.65**	**1.02**	**0.00**	**12,994.15**		**0.61**	**0.02**	**13,012.39**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.04	0.23	19.16	0.00		0.00	0.10		0.00	0.10	0.00	33.68		0.04	0.00	34.43
Energy	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Mobile	9.85	19.35	82.70	0.12	14.67	0.69	15.36	0.21	0.65	0.86		11,993.42		0.55		12,005.02
Total	**23.98**	**20.34**	**102.18**	**0.12**	**14.67**	**0.69**	**15.52**	**0.21**	**0.65**	**1.02**	**0.00**	**12,994.15**		**0.61**	**0.02**	**13,012.39**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Grading - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.56	0.00	6.56	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59		10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**6.56**	**4.59**	**11.15**	**3.31**	**4.59**	**7.90**		**10,856.66**		**1.06**		**10,878.90**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.13	0.12	1.14	0.00	0.26	0.01	0.27	0.00	0.01	0.01		174.39		0.01		174.61
Total	**0.13**	**0.12**	**1.14**	**0.00**	**0.26**	**0.01**	**0.27**	**0.00**	**0.01**	**0.01**		**174.39**		**0.01**		**174.61**

3.2 Grading - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.56	0.00	6.56	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59	0.00	10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**6.56**	**4.59**	**11.15**	**3.31**	**4.59**	**7.90**	**0.00**	**10,856.66**		**1.06**		**10,878.90**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.13	0.12	1.14	0.00	0.01	0.01	0.02	0.00	0.01	0.01		174.39		0.01		174.61
Total	**0.13**	**0.12**	**1.14**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**		**174.39**		**0.01**		**174.61**

3.3 Paving - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.53	33.81	20.89	0.03		2.93	2.93		2.93	2.93		2,917.64		0.50		2,928.05
Paving	1.30					0.00	0.00		0.00	0.00						0.00
Total	**6.83**	**33.81**	**20.89**	**0.03**		**2.93**	**2.93**		**2.93**	**2.93**		**2,917.64**		**0.50**		**2,928.05**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.09	0.86	0.00	0.20	0.01	0.20	0.00	0.00	0.01		130.80		0.01		130.96
Total	**0.10**	**0.09**	**0.86**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.00**	**0.01**		**130.80**		**0.01**		**130.96**

3.3 Paving - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.53	33.81	20.89	0.03		2.93	2.93		2.93	2.93	0.00	2,917.64		0.50		2,928.05
Paving	1.30					0.00	0.00		0.00	0.00						0.00
Total	**6.83**	**33.81**	**20.89**	**0.03**		**2.93**	**2.93**		**2.93**	**2.93**	**0.00**	**2,917.64**		**0.50**		**2,928.05**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.09	0.86	0.00	0.01	0.01	0.01	0.00	0.00	0.01		130.80		0.01		130.96
Total	**0.10**	**0.09**	**0.86**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**	**0.00**	**0.01**		**130.80**		**0.01**		**130.96**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28		4,040.62		0.46		4,050.31
Total	**5.17**	**34.66**	**23.45**	**0.04**		**2.28**	**2.28**		**2.28**	**2.28**		**4,040.62**		**0.46**		**4,050.31**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.18	9.89	9.93	0.02	0.59	0.30	0.89	0.02	0.27	0.29		1,691.50		0.06		1,692.72
Worker	1.75	1.64	15.05	0.02	3.43	0.09	3.52	0.05	0.08	0.13		2,293.28		0.14		2,296.15
Total	**2.93**	**11.53**	**24.98**	**0.04**	**4.02**	**0.39**	**4.41**	**0.07**	**0.35**	**0.42**		**3,984.78**		**0.20**		**3,988.87**

3.4 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28	0.00	4,040.62		0.46		4,050.31
Total	**5.17**	**34.66**	**23.45**	**0.04**		**2.28**	**2.28**		**2.28**	**2.28**	**0.00**	**4,040.62**		**0.46**		**4,050.31**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.18	9.89	9.93	0.02	0.05	0.30	0.34	0.02	0.27	0.29		1,691.50		0.06		1,692.72
Worker	1.75	1.64	15.05	0.02	0.13	0.09	0.22	0.05	0.08	0.13		2,293.28		0.14		2,296.15
Total	**2.93**	**11.53**	**24.98**	**0.04**	**0.18**	**0.39**	**0.56**	**0.07**	**0.35**	**0.42**		**3,984.78**		**0.20**		**3,988.87**

3.4 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.74	32.06	23.20	0.04		2.02	2.02		2.02	2.02		4,040.61		0.42		4,049.51
Total	**4.74**	**32.06**	**23.20**	**0.04**		**2.02**	**2.02**		**2.02**	**2.02**		**4,040.61**		**0.42**		**4,049.51**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.06	8.97	8.98	0.02	0.59	0.27	0.86	0.02	0.25	0.26		1,697.62		0.05		1,698.72
Worker	1.62	1.48	13.69	0.02	3.43	0.09	3.52	0.05	0.08	0.13		2,252.71		0.13		2,255.35
Total	**2.68**	**10.45**	**22.67**	**0.04**	**4.02**	**0.36**	**4.38**	**0.07**	**0.33**	**0.39**		**3,950.33**		**0.18**		**3,954.07**

3.4 Building Construction - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.74	32.06	23.20	0.04		2.02	2.02		2.02	2.02	0.00	4,040.61		0.42		4,049.51
Total	**4.74**	**32.06**	**23.20**	**0.04**		**2.02**	**2.02**		**2.02**	**2.02**	**0.00**	**4,040.61**		**0.42**		**4,049.51**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.06	8.97	8.98	0.02	0.05	0.27	0.31	0.02	0.25	0.26		1,697.62		0.05		1,698.72
Worker	1.62	1.48	13.69	0.02	0.13	0.09	0.22	0.05	0.08	0.13		2,252.71		0.13		2,255.35
Total	**2.68**	**10.45**	**22.67**	**0.04**	**0.18**	**0.36**	**0.53**	**0.07**	**0.33**	**0.39**		**3,950.33**		**0.18**		**3,954.07**

3.5 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	547.67					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24		281.19		0.04		282.03
Total	**548.12**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**		**281.19**		**0.04**		**282.03**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.33	0.30	2.76	0.00	0.69	0.02	0.71	0.01	0.02	0.03		453.97		0.03		454.50
Total	**0.33**	**0.30**	**2.76**	**0.00**	**0.69**	**0.02**	**0.71**	**0.01**	**0.02**	**0.03**		**453.97**		**0.03**		**454.50**

3.5 Architectural Coating - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	547.67					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24	0.00	281.19		0.04		282.03
Total	**548.12**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**	**0.00**	**281.19**		**0.04**		**282.03**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.33	0.30	2.76	0.00	0.03	0.02	0.04	0.01	0.02	0.03		453.97		0.03		454.50
Total	**0.33**	**0.30**	**2.76**	**0.00**	**0.03**	**0.02**	**0.04**	**0.01**	**0.02**	**0.03**		**453.97**		**0.03**		**454.50**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.85	19.35	82.70	0.12	14.67	0.69	15.36	0.21	0.65	0.86		11,993.42		0.55		12,005.02
Unmitigated	9.85	19.35	82.70	0.12	14.67	0.69	15.36	0.21	0.65	0.86		11,993.42		0.55		12,005.02
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,476.16	1,603.84	1359.68	4,083,158	4,083,158
Parking Lot	0.00	0.00	0.00		
Total	1,476.16	1,603.84	1,359.68	4,083,158	4,083,158

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10
Parking Lot	10.80	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
NaturalGas Unmitigated	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Apartments Mid Rise	8219.95	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.09**	**0.76**	**0.32**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**		**967.05**		**0.02**	**0.02**	**972.94**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Apartments Mid Rise	8.21995	0.09	0.76	0.32	0.00		0.00	0.06		0.00	0.06		967.05		0.02	0.02	972.94
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.09**	**0.76**	**0.32**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**		**967.05**		**0.02**	**0.02**	**972.94**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.04	0.23	19.16	0.00		0.00	0.10		0.00	0.10	0.00	33.68		0.04	0.00	34.43
Unmitigated	14.04	0.23	19.16	0.00		0.00	0.10		0.00	0.10	0.00	33.68		0.04	0.00	34.43
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.45					0.00	0.00		0.00	0.00						0.00
Consumer Products	9.96					0.00	0.00		0.00	0.00						0.00
Hearth	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
Landscaping	0.62	0.23	19.16	0.00		0.00	0.10		0.00	0.10		33.68		0.04		34.43
Total	**14.03**	**0.23**	**19.16**	**0.00**		**0.00**	**0.10**		**0.00**	**0.10**	**0.00**	**33.68**		**0.04**	**0.00**	**34.43**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.45					0.00	0.00		0.00	0.00						0.00
Consumer Products	9.96					0.00	0.00		0.00	0.00						0.00
Hearth	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
Landscaping	0.62	0.23	19.16	0.00		0.00	0.10		0.00	0.10		33.68		0.04		34.43
Total	**14.03**	**0.23**	**19.16**	**0.00**		**0.00**	**0.10**		**0.00**	**0.10**	**0.00**	**33.68**		**0.04**	**0.00**	**34.43**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Scenario Two (baseline)

Mon May 06 2013 15:18:00 GMT-0700 (Pacific Daylight Time)

Setup Information:

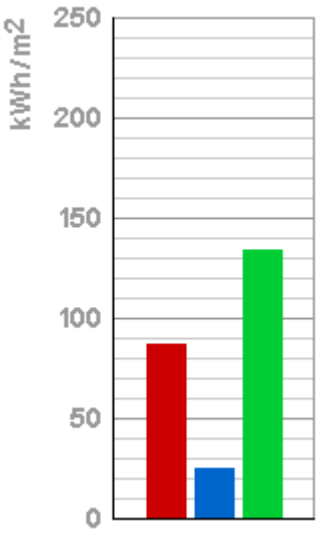
Building	
Location	CA - Sacremento
Building length, side A	N/A
Building length, side B	N/A
Simulation Type	
Simulation Type	one_sided
Window Description	
Typology	sgu_nb
Glazing Type	clear
Window Area	50%
Wall Description	
Insulation R-Value	1 m^2-K/W
Occupancy	
Type	Low-rise Residential
Occupancy Load	0.025 people per m^2
Lighting Requirements	750 lux
Equipment Load	5.00 W/m^2
Room Ventilation	
Air Change Rate per Occupant	15.0 liters / sec per person
Total Air Change Rate	0.5 roomfuls per hour
Lighting Control	
Lighting Control	lights respond to sunlight: all lights controlled by a single dimming switch
Representative Room	
Orientation	north
Room Depth	5 m
Room Width	5 m
Room Height	3 m
Thermal Mass	
Thermal Mass	high
Overhang	
Overhang Depth	0 m
Roof	

Roof Type	bitumen roof
Roof Insulation R-Value	1 m^2-K/W
Roof Insulation Location	top of roof slab
Number of Floors	2 floor(s)

Simulation Results:

Primary Energy Use and CO_2 Emissions

	heating energy	cooling energy	lighting energy	total energy	CO_2 emissions
	(kWh/m^2)	(kWh/m^2)	(kWh/m^2)	(kWh/m^2)	(kg/m^2)
January	22.6	0.0	12.8	35.4	7.1
February	13.8	0.0	11.4	25.2	5.0
March	10.8	0.0	12.0	22.8	4.6
April	4.6	0.0	10.7	15.3	3.1
May	0.5	0.7	10.0	11.2	2.2
June	0.0	4.4	8.9	13.3	2.7
July	0.0	9.8	9.5	19.3	3.9
August	0.0	8.3	10.6	18.9	3.8
September	0.0	2.0	11.2	13.2	2.6
October	0.6	0.2	12.3	13.1	2.6
November	11.4	0.0	12.2	23.6	4.7
December	22.9	0.0	12.8	35.7	7.1
Total	87.2	25.4	134.4	247.0	49.4



yearly energy

January

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	($W-h/m^2$)	($W-h/m^2$)	(K)	(K)	(K)	($W-h/m^2$)	(% time)
midnight	-71.3	22.3	0.0	0.0	278.9	293.1	283.7	41.0	0
1 am	-63.9	54.2	0.0	0.0	278.7	293.1	283.6	41.4	0

2 am	-53.4	72.3	0.0	0.0	278.6	293.1	283.5	41.6	0
3 am	-42.0	84.3	0.0	0.0	278.4	293.1	283.4	42.0	0
4 am	-30.3	93.9	0.0	0.0	278.2	293.1	283.2	42.6	0
5 am	-18.7	102.5	0.0	0.0	278.2	293.1	283.2	42.5	0
6 am	-7.5	111.2	0.0	0.0	278.1	293.1	283.2	42.7	0
7 am	2.9	120.4	0.0	2.7	278.5	293.1	283.4	41.3	0
8 am	12.4	130.7	0.0	30.1	279.1	291.1	283.3	6.3	0
9 am	20.4	142.7	0.0	53.9	280.0	291.1	284.0	6.0	0
10 am	26.4	156.5	0.0	78.4	281.1	291.2	284.9	4.2	0
11 am	29.5	171.9	0.0	94.2	282.3	291.3	285.8	2.6	0
noon	29.5	-171.9	0.0	93.2	283.5	291.4	286.7	2.1	0
1 pm	26.4	-156.5	0.0	81.4	284.2	291.5	287.1	2.4	0
2 pm	20.4	-142.7	0.0	66.0	284.4	291.5	287.1	3.0	0
3 pm	12.4	-130.7	0.0	42.8	283.8	291.3	286.5	4.4	0
4 pm	2.9	-120.4	0.0	16.9	283.0	291.2	285.8	7.0	0
5 pm	-7.5	-111.2	0.0	0.0	281.9	293.1	285.7	35.8	0
6 pm	-18.7	-102.5	0.0	0.0	281.0	293.1	285.0	36.2	0
7 pm	-30.3	-93.9	0.0	0.0	280.2	293.1	284.5	38.1	0
8 pm	-42.0	-84.3	0.0	0.0	279.7	293.1	284.2	39.1	0
9 pm	-53.4	-72.3	0.0	0.0	279.5	293.1	284.1	39.7	0
10 pm	-63.9	-54.2	0.0	0.0	279.1	293.1	283.8	40.9	0
11 pm	-71.3	-22.3	0.0	0.0	278.9	293.1	283.7	41.1	0

February

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-63.7	16.7	0.0	0.0	280.8	293.1	284.9	32.0	0
1 am	-57.7	44.2	0.0	0.0	280.7	293.1	284.9	32.4	0
2 am	-48.3	62.9	0.0	0.0	280.6	293.1	284.8	32.5	0
3 am	-37.3	76.1	0.0	0.0	280.4	293.1	284.7	33.3	0
4 am	-25.8	86.6	0.0	0.0	280.3	293.1	284.6	33.5	0
5 am	-14.1	95.9	0.0	0.0	280.2	293.1	284.5	33.7	0
6 am	-2.6	105.1	0.0	0.0	280.0	293.1	284.4	34.3	0
7 am	8.3	114.7	0.0	18.6	280.8	293.1	285.0	31.9	0
8 am	18.4	125.5	0.0	51.5	281.8	291.3	285.3	1.0	0
9 am	27.1	138.2	0.0	79.9	283.3	291.5	286.5	0.6	0
10 am	33.7	153.4	0.0	106.9	285.0	291.9	287.9	0.0	0
11 am	37.3	170.8	0.0	120.4	286.6	292.3	289.1	0.0	0

noon	37.3	-170.8	0.0	121.1	288.1	292.6	290.2	0.0	0
1 pm	33.7	-153.4	0.0	113.8	289.1	292.8	290.9	0.0	0
2 pm	27.1	-138.2	0.0	100.7	289.3	292.7	290.9	0.0	0
3 pm	18.4	-125.5	0.0	71.0	288.7	292.4	290.3	0.0	0
4 pm	8.3	-114.7	0.0	37.3	287.3	292.0	289.1	0.6	0
5 pm	-2.6	-105.1	0.0	5.5	285.9	293.1	288.3	16.5	0
6 pm	-14.1	-95.9	0.0	0.0	284.3	293.1	287.3	20.2	0
7 pm	-25.8	-86.6	0.0	0.0	283.1	293.1	286.4	24.4	0
8 pm	-37.3	-76.1	0.0	0.0	282.4	293.1	286.0	26.8	0
9 pm	-48.3	-62.9	0.0	0.0	281.8	293.1	285.6	28.7	0
10 pm	-57.7	-44.2	0.0	0.0	281.4	293.1	285.3	29.9	0
11 pm	-63.7	-16.7	0.0	0.0	281.1	293.1	285.2	30.7	0

March

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-52.5	12.4	0.0	0.0	282.1	293.2	285.8	24.6	0
1 am	-47.8	34.7	0.0	0.0	281.8	293.1	285.6	25.7	0
2 am	-39.7	52.3	0.0	0.0	281.5	293.1	285.4	26.8	0
3 am	-29.7	65.9	0.0	0.0	281.2	293.1	285.2	27.7	0
4 am	-18.6	77.0	0.0	0.0	280.9	293.1	285.0	29.0	0
5 am	-7.0	86.8	0.0	0.0	280.6	293.1	284.8	30.0	0
6 am	4.5	96.2	0.0	9.8	281.1	293.1	285.2	28.5	0
7 am	16.0	106.0	0.0	45.0	282.1	293.1	286.1	25.7	0
8 am	26.9	117.2	0.0	81.8	283.2	291.9	286.6	0.5	0
9 am	36.6	130.7	0.0	119.6	284.8	292.3	287.9	0.2	0
10 am	44.2	147.7	0.0	144.0	286.5	292.8	289.4	0.1	0
11 am	48.6	168.6	0.0	157.6	288.3	293.2	290.7	0.0	0
noon	48.6	-168.6	0.0	158.8	289.7	293.6	291.8	0.1	0
1 pm	44.2	-147.7	0.0	150.5	291.0	293.9	292.7	0.3	0
2 pm	36.6	-130.7	0.0	129.5	291.6	293.9	293.0	0.2	0
3 pm	26.9	-117.2	0.0	101.7	291.2	293.7	292.6	0.2	0
4 pm	16.0	-106.0	0.0	62.6	290.1	293.2	291.5	0.4	0
5 pm	4.5	-96.2	0.0	28.2	288.6	293.7	290.5	7.7	0
6 pm	-7.0	-86.8	0.0	0.0	286.9	293.4	289.1	9.7	0
7 pm	-18.6	-77.0	0.0	0.0	285.4	293.3	288.1	13.4	0
8 pm	-29.7	-65.9	0.0	0.0	284.2	293.2	287.3	17.5	0
9 pm	-39.7	-52.3	0.0	0.0	283.5	293.2	286.8	19.9	0

10 pm	-47.8	-34.7	0.0	0.0	282.9	293.2	286.4	21.8	0
11 pm	-52.5	-12.4	0.0	0.0	282.4	293.2	286.0	23.5	0

April

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-40.7	9.7	0.0	0.0	283.8	293.1	286.9	14.2	0
1 am	-36.9	28.1	0.0	0.0	283.4	293.1	286.7	15.7	0
2 am	-30.0	43.8	0.0	0.0	283.0	293.1	286.4	17.6	0
3 am	-21.0	56.8	0.0	0.0	282.6	293.1	286.1	19.3	0
4 am	-10.6	67.8	0.0	0.0	282.2	293.1	285.9	21.0	0
5 am	0.4	77.5	0.0	3.7	282.2	293.1	285.9	21.4	0
6 am	12.0	86.8	18.1	46.7	283.0	293.1	286.6	20.0	0
7 am	23.7	96.3	0.0	84.9	284.1	293.1	287.6	15.8	0
8 am	35.1	107.1	0.0	109.9	285.4	292.7	288.4	0.0	0
9 am	45.8	120.5	0.0	137.2	287.1	293.2	289.8	0.0	0
10 am	54.8	139.0	0.0	163.9	288.9	293.8	291.4	0.0	0
11 am	60.4	164.9	0.0	177.1	290.8	294.3	292.8	0.0	0
noon	60.4	-164.9	0.0	178.8	292.5	294.8	294.2	0.0	0
1 pm	54.8	-139.0	0.0	171.7	293.9	295.1	295.1	0.0	0
2 pm	45.8	-120.5	0.0	149.8	294.6	295.2	295.6	0.0	0
3 pm	35.1	-107.1	0.0	119.3	294.8	295.1	295.5	0.0	0
4 pm	23.7	-96.3	0.0	86.7	294.2	294.8	294.8	0.0	0
5 pm	12.0	-86.8	18.4	50.7	292.9	295.0	293.8	0.8	0
6 pm	0.4	-77.5	8.7	9.5	291.3	294.7	292.5	1.0	0
7 pm	-10.6	-67.8	0.0	0.0	289.4	294.1	291.0	1.6	0
8 pm	-21.0	-56.8	0.0	0.0	287.8	293.6	289.8	2.6	0
9 pm	-30.0	-43.8	0.0	0.0	286.6	293.4	288.9	4.7	0
10 pm	-36.9	-28.1	0.0	0.0	285.3	293.2	288.0	8.3	0
11 pm	-40.7	-9.7	0.0	0.0	284.4	293.2	287.3	11.6	0

May

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)

midnight	-31.5	8.3	0.0	0.0	287.2	294.5	289.7	1.7	0
1 am	-28.2	24.2	0.0	0.0	286.7	294.4	289.3	2.5	0
2 am	-22.1	38.3	0.0	0.0	286.1	294.2	288.9	3.5	0
3 am	-13.9	50.5	0.0	0.0	285.5	294.0	288.4	5.1	0
4 am	-4.3	61.0	0.0	0.0	285.0	293.9	288.0	6.5	0
5 am	6.3	70.3	67.5	36.0	285.7	294.2	289.1	4.0	0
6 am	17.6	79.1	67.6	76.0	286.5	294.2	289.8	3.5	0
7 am	29.2	87.9	15.3	109.0	287.9	294.4	290.6	2.7	0
8 am	40.8	97.8	0.0	140.0	289.4	295.1	292.0	0.0	0
9 am	52.2	110.2	0.0	153.2	291.1	295.6	293.4	0.0	0
10 am	62.4	128.6	0.0	180.1	293.1	296.2	295.0	0.0	0
11 am	69.4	159.4	0.0	190.2	295.1	296.8	296.6	0.0	0
noon	69.4	-159.4	0.0	189.9	297.0	297.3	298.0	0.0	0
1 pm	62.4	-128.6	0.0	177.3	298.5	297.7	299.1	0.0	0
2 pm	52.2	-110.2	0.0	152.2	299.3	297.8	299.5	0.0	0
3 pm	40.8	-97.8	0.0	137.3	299.4	297.8	299.5	0.0	0
4 pm	29.2	-87.9	17.1	106.0	298.6	297.5	298.8	0.0	0
5 pm	17.6	-79.1	80.2	77.3	297.3	297.7	298.1	-5.0	0
6 pm	6.3	-70.3	73.7	36.1	295.5	297.5	296.7	-3.4	0
7 pm	-4.3	-61.0	0.0	0.0	293.7	296.8	294.8	-0.5	0
8 pm	-13.9	-50.5	0.0	0.0	291.8	296.2	293.3	0.0	0
9 pm	-22.1	-38.3	0.0	0.0	290.2	295.7	292.1	0.0	0
10 pm	-28.2	-24.2	0.0	0.0	288.9	295.2	291.0	0.3	0
11 pm	-31.5	-8.3	0.0	0.0	287.8	294.8	290.2	1.0	0

June

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-27.4	7.7	0.0	0.0	290.6	297.2	292.9	0.0	0
1 am	-24.3	22.6	0.0	0.0	290.1	297.0	292.4	0.0	0
2 am	-18.6	36.1	0.0	0.0	289.6	296.7	292.0	0.0	0
3 am	-10.8	47.8	0.0	0.0	289.1	296.5	291.6	0.0	0
4 am	-1.4	58.0	0.0	0.0	288.7	296.2	291.2	0.0	0
5 am	8.9	67.1	115.3	49.9	289.4	296.9	292.8	0.0	0
6 am	19.9	75.5	104.5	87.2	290.3	296.9	293.4	0.0	0
7 am	31.4	83.9	49.0	121.9	291.6	297.3	294.3	0.0	0
8 am	43.1	93.1	0.0	144.5	293.1	297.9	295.5	0.0	0
9 am	54.7	104.7	0.0	166.2	294.9	298.5	296.9	0.0	0

10 am	65.4	122.2	0.0	174.8	296.6	299.0	298.3	0.0	0
11 am	73.3	155.3	0.0	182.6	298.5	299.6	299.8	0.0	0
noon	73.3	-155.3	0.0	179.6	300.4	300.0	301.1	-0.3	0
1 pm	65.4	-122.2	0.0	174.3	301.7	300.3	302.1	-1.0	0
2 pm	54.7	-104.7	0.0	174.7	302.5	300.5	302.7	-2.2	0
3 pm	43.1	-93.1	0.0	148.7	302.6	300.5	302.6	-2.1	0
4 pm	31.4	-83.9	52.5	120.2	302.1	300.4	302.3	-2.4	0
5 pm	19.9	-75.5	122.4	94.1	300.8	299.0	301.1	-25.7	0
6 pm	8.9	-67.1	118.9	56.2	299.0	299.0	299.9	-19.5	0
7 pm	-1.4	-58.0	0.0	0.0	297.1	298.8	297.7	-9.0	0
8 pm	-10.8	-47.8	0.0	0.0	295.3	298.6	296.5	-4.4	0
9 pm	-18.6	-36.1	0.0	0.0	293.7	298.4	295.3	-1.1	0
10 pm	-24.3	-22.6	0.0	0.0	292.4	298.0	294.3	0.0	0
11 pm	-27.4	-7.7	0.0	0.0	291.4	297.6	293.5	0.0	0

July

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-29.6	8.0	0.0	0.0	292.8	298.5	294.8	-0.6	0
1 am	-26.4	23.4	0.0	0.0	292.3	298.3	294.4	-0.3	0
2 am	-20.5	37.2	0.0	0.0	291.7	298.1	293.9	0.0	0
3 am	-12.4	49.2	0.0	0.0	291.2	297.8	293.5	0.0	0
4 am	-2.9	59.5	0.0	0.0	290.8	297.6	293.1	0.0	0
5 am	7.5	68.8	86.2	39.4	291.3	298.2	294.3	-0.2	0
6 am	18.7	77.4	87.6	80.9	292.2	298.2	295.0	-0.3	0
7 am	30.3	86.1	32.9	112.7	293.4	298.3	295.6	-0.6	0
8 am	41.9	95.6	0.0	132.9	295.0	299.1	297.0	0.0	0
9 am	53.4	107.6	0.0	152.7	296.9	299.7	298.6	0.0	0
10 am	63.9	125.7	0.0	165.5	299.0	300.2	300.2	-0.1	0
11 am	71.3	157.7	0.0	174.7	300.9	300.7	301.7	-1.0	0
noon	71.3	-157.7	0.0	175.1	302.8	301.0	303.0	-3.6	0
1 pm	63.9	-125.7	0.0	167.2	304.3	301.0	304.0	-6.4	0
2 pm	53.4	-107.6	0.0	162.1	305.3	301.1	304.7	-8.6	0
3 pm	41.9	-95.6	0.0	137.3	305.5	301.1	304.6	-8.2	0
4 pm	30.3	-86.1	36.5	114.9	304.7	301.0	304.0	-6.0	0
5 pm	18.7	-77.4	108.0	94.5	303.3	299.1	302.7	-40.5	0
6 pm	7.5	-68.8	109.5	52.6	301.6	299.1	301.5	-33.8	0
7 pm	-2.9	-59.5	0.0	0.0	299.6	299.1	299.4	-20.7	0

8 pm	-12.4	-49.2	0.0	0.0	297.7	299.1	298.2	-13.4	0
9 pm	-20.5	-37.2	0.0	0.0	296.1	299.1	297.1	-7.4	0
10 pm	-26.4	-23.4	0.0	0.0	294.7	298.9	296.1	-3.4	0
11 pm	-29.6	-8.0	0.0	0.0	293.5	298.7	295.3	-1.4	0

August

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-37.4	9.2	0.0	0.0	293.1	298.4	294.9	-0.9	0
1 am	-33.7	26.6	0.0	0.0	292.5	298.3	294.5	-0.4	0
2 am	-27.2	41.7	0.0	0.0	292.0	298.1	294.1	-0.1	0
3 am	-18.4	54.4	0.0	0.0	291.5	297.8	293.6	0.0	0
4 am	-8.3	65.3	0.0	0.0	291.0	297.6	293.3	0.0	0
5 am	2.6	74.9	8.3	9.2	291.2	297.7	293.5	0.0	0
6 am	14.1	84.0	40.4	54.4	292.0	297.9	294.4	0.0	0
7 am	25.7	93.3	0.0	89.2	293.1	298.1	295.2	-0.2	0
8 am	37.3	103.8	0.0	116.7	294.6	298.7	296.6	0.0	0
9 am	48.2	117.1	0.0	139.3	296.3	299.3	298.0	0.0	0
10 am	57.7	135.7	0.0	158.8	298.2	299.9	299.6	0.0	0
11 am	63.7	163.3	0.0	169.4	300.1	300.4	301.0	-0.5	0
noon	63.7	-163.3	0.0	170.3	301.7	300.7	302.2	-1.9	0
1 pm	57.7	-135.7	0.0	160.5	303.2	300.9	303.2	-3.5	0
2 pm	48.2	-117.1	0.0	146.7	304.3	301.0	303.8	-4.7	0
3 pm	37.3	-103.8	0.0	127.2	304.4	301.0	303.8	-4.5	0
4 pm	25.7	-93.3	0.0	101.2	303.9	300.9	303.4	-3.1	0
5 pm	14.1	-84.0	42.8	66.8	302.6	299.1	301.9	-33.5	0
6 pm	2.6	-74.9	43.8	27.1	301.0	299.1	300.7	-27.4	0
7 pm	-8.3	-65.3	0.0	0.0	299.2	299.1	299.1	-18.0	0
8 pm	-18.4	-54.4	0.0	0.0	297.4	299.1	298.0	-11.4	0
9 pm	-27.2	-41.7	0.0	0.0	295.8	299.0	296.9	-6.1	0
10 pm	-33.7	-26.6	0.0	0.0	294.6	298.8	296.0	-3.2	0
11 pm	-37.4	-9.2	0.0	0.0	293.5	298.6	295.3	-1.7	0

September

	solar	solar	direct	diffuse	outdoor	indoor	window	heating	blinds

	altitude	azimuth	radiation	radiation	temp.	temp.	temp.	load	closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-48.7	11.4	0.0	0.0	291.6	297.5	293.6	0.0	0
1 am	-44.3	32.3	0.0	0.0	291.2	297.3	293.3	0.0	0
2 am	-36.6	49.3	0.0	0.0	290.8	297.1	292.9	0.0	0
3 am	-26.9	62.8	0.0	0.0	290.4	296.9	292.6	0.0	0
4 am	-16.0	73.9	0.0	0.0	289.9	296.7	292.2	0.0	0
5 am	-4.6	83.7	0.0	0.0	289.6	296.5	291.9	0.0	0
6 am	7.0	93.2	0.0	29.3	290.4	296.7	292.7	0.0	0
7 am	18.6	103.0	0.0	62.1	291.3	296.8	293.5	0.0	0
8 am	29.7	114.1	0.0	97.4	292.7	297.4	294.8	0.0	0
9 am	39.7	127.7	0.0	126.3	294.4	298.0	296.2	0.0	0
10 am	47.8	145.2	0.0	142.7	296.2	298.6	297.7	0.0	0
11 am	52.5	167.6	0.0	152.0	297.8	299.1	299.0	0.0	0
noon	52.5	-167.6	0.0	148.4	299.5	299.5	300.2	0.0	0
1 pm	47.8	-145.2	0.0	141.8	300.9	299.9	301.2	0.0	0
2 pm	39.7	-127.7	0.0	124.8	301.7	300.0	301.7	0.0	0
3 pm	29.7	-114.1	0.0	96.2	301.8	299.9	301.6	0.0	0
4 pm	18.6	-103.0	0.0	63.1	301.0	299.6	300.8	0.0	0
5 pm	7.0	-93.2	0.0	33.0	299.7	299.0	299.6	-13.9	0
6 pm	-4.6	-83.7	0.0	0.1	298.0	299.0	298.4	-8.5	0
7 pm	-16.0	-73.9	0.0	0.0	296.3	298.9	297.2	-3.5	0
8 pm	-26.9	-62.8	0.0	0.0	294.9	298.6	296.1	-1.1	0
9 pm	-36.6	-49.3	0.0	0.0	293.8	298.3	295.3	-0.4	0
10 pm	-44.3	-32.3	0.0	0.0	292.9	298.0	294.6	-0.1	0
11 pm	-48.7	-11.4	0.0	0.0	292.1	297.7	294.0	0.0	0

October

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-60.4	15.1	0.0	0.0	288.3	294.4	290.3	1.5	0
1 am	-54.9	40.9	0.0	0.0	288.0	294.3	290.1	2.1	0
2 am	-45.9	59.4	0.0	0.0	287.7	294.2	289.9	2.2	0
3 am	-35.2	72.9	0.0	0.0	287.5	294.1	289.7	2.7	0
4 am	-23.7	83.7	0.0	0.0	287.2	294.0	289.5	3.0	0
5 am	-12.0	93.2	0.0	0.0	286.9	293.9	289.2	3.7	0
6 am	-0.5	102.4	0.0	7.8	287.2	293.9	289.5	3.6	0

7 am	10.6	112.2	0.0	42.3	288.0	294.0	290.3	2.9	0
8 am	21.0	123.1	0.0	73.7	289.3	294.1	291.3	0.0	0
9 am	30.0	136.1	0.0	103.2	290.9	294.7	292.7	0.0	0
10 am	36.9	151.8	0.0	119.2	292.5	295.1	294.0	0.0	0
11 am	40.7	170.2	0.0	129.6	294.1	295.6	295.3	0.0	0
noon	40.7	-170.2	0.0	128.4	295.5	296.0	296.3	0.0	0
1 pm	36.9	-151.8	0.0	116.9	296.6	296.2	297.0	0.0	0
2 pm	30.0	-136.1	0.0	99.1	297.0	296.2	297.2	0.0	0
3 pm	21.0	-123.1	0.0	69.8	296.5	296.0	296.6	0.0	0
4 pm	10.6	-112.2	0.0	37.2	295.2	295.5	295.5	0.0	0
5 pm	-0.5	-102.4	0.0	2.5	293.6	296.0	294.5	0.0	0
6 pm	-12.0	-93.2	0.0	0.0	292.2	295.6	293.4	0.0	0
7 pm	-23.7	-83.7	0.0	0.0	290.9	295.2	292.4	0.2	0
8 pm	-35.2	-72.9	0.0	0.0	290.1	294.9	291.7	0.4	0
9 pm	-45.9	-59.4	0.0	0.0	289.4	294.7	291.2	0.5	0
10 pm	-54.9	-40.9	0.0	0.0	288.9	294.5	290.8	0.9	0
11 pm	-60.4	-15.1	0.0	0.0	288.4	294.3	290.4	1.1	0

November

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-69.4	20.5	0.0	0.0	283.2	293.1	286.6	22.3	0
1 am	-62.4	51.3	0.0	0.0	283.0	293.1	286.4	23.0	0
2 am	-52.2	69.8	0.0	0.0	282.8	293.1	286.2	23.9	0
3 am	-40.9	82.2	0.0	0.0	282.7	293.1	286.2	24.2	0
4 am	-29.2	92.0	0.0	0.0	282.4	293.1	286.0	25.1	0
5 am	-17.6	100.9	0.0	0.0	282.3	293.1	285.9	25.5	0
6 am	-6.3	109.6	0.0	0.0	282.0	293.1	285.8	26.4	0
7 am	4.2	119.0	0.0	22.9	282.7	293.1	286.3	24.9	0
8 am	13.9	129.5	0.0	51.2	283.6	291.6	286.6	0.9	0
9 am	22.1	141.6	0.0	80.7	284.8	291.9	287.6	0.6	0
10 am	28.2	155.7	0.0	94.5	285.9	292.1	288.5	0.1	0
11 am	31.5	171.6	0.0	105.6	287.1	292.4	289.4	0.0	0
noon	31.5	-171.6	0.0	99.5	288.1	292.5	290.1	0.0	0
1 pm	28.2	-155.7	0.0	83.5	288.8	292.6	290.5	0.0	0
2 pm	22.1	-141.6	0.0	68.8	289.0	292.5	290.6	0.0	0
3 pm	13.9	-129.5	0.0	40.5	288.6	292.2	290.1	0.2	0
4 pm	4.2	-119.0	0.0	11.6	287.6	291.9	289.1	1.1	0

5 pm	-6.3	-109.6	0.0	0.0	286.5	293.2	288.7	15.5	0
6 pm	-17.6	-100.9	0.0	0.0	285.6	293.2	288.1	16.2	0
7 pm	-29.2	-92.0	0.0	0.0	284.8	293.1	287.6	18.2	0
8 pm	-40.9	-82.2	0.0	0.0	284.3	293.1	287.3	19.5	0
9 pm	-52.2	-69.8	0.0	0.0	283.9	293.1	287.0	20.6	0
10 pm	-62.4	-51.3	0.0	0.0	283.5	293.1	286.8	21.9	0
11 pm	-69.4	-20.5	0.0	0.0	283.2	293.1	286.5	23.0	0

December

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-73.3	24.7	0.0	0.0	278.8	293.1	283.6	41.4	0
1 am	-65.4	57.7	0.0	0.0	278.8	293.1	283.6	41.2	0
2 am	-54.7	75.2	0.0	0.0	278.7	293.1	283.6	41.1	0
3 am	-43.1	86.8	0.0	0.0	278.7	293.1	283.5	41.1	0
4 am	-31.4	96.0	0.0	0.0	278.6	293.1	283.5	41.2	0
5 am	-19.9	104.4	0.0	0.0	278.6	293.1	283.5	41.0	0
6 am	-8.9	112.8	0.0	0.0	278.6	293.1	283.5	40.9	0
7 am	1.4	121.9	0.0	4.7	278.9	293.1	283.7	39.8	0
8 am	10.8	132.1	0.0	33.2	279.6	291.1	283.7	5.4	0
9 am	18.6	143.8	0.0	56.3	280.4	291.2	284.3	5.3	0
10 am	24.3	157.3	0.0	78.2	281.5	291.2	285.2	3.7	0
11 am	27.4	172.2	0.0	84.1	282.6	291.3	286.0	2.9	0
noon	27.4	-172.2	0.0	82.6	283.6	291.5	286.7	2.6	0
1 pm	24.3	-157.3	0.0	77.1	284.3	291.5	287.1	2.5	0
2 pm	18.6	-143.8	0.0	59.9	284.2	291.4	286.9	3.4	0
3 pm	10.8	-132.1	0.0	33.2	283.6	291.3	286.4	5.0	0
4 pm	1.4	-121.9	0.0	6.4	282.7	291.2	285.6	8.2	0
5 pm	-8.9	-112.8	0.0	0.0	281.6	293.1	285.5	36.8	0
6 pm	-19.9	-104.4	0.0	0.0	280.7	293.1	284.9	37.3	0
7 pm	-31.4	-96.0	0.0	0.0	280.0	293.1	284.4	38.9	0
8 pm	-43.1	-86.8	0.0	0.0	279.6	293.1	284.1	39.8	0
9 pm	-54.7	-75.2	0.0	0.0	279.2	293.1	283.9	40.6	0
10 pm	-65.4	-57.7	0.0	0.0	279.1	293.1	283.8	40.7	0
11 pm	-73.3	-24.7	0.0	0.0	279.0	293.1	283.7	41.0	0

Scenario One (proposed project)

Mon May 06 2013 15:24:49 GMT-0700 (Pacific Daylight Time)

Setup Information:

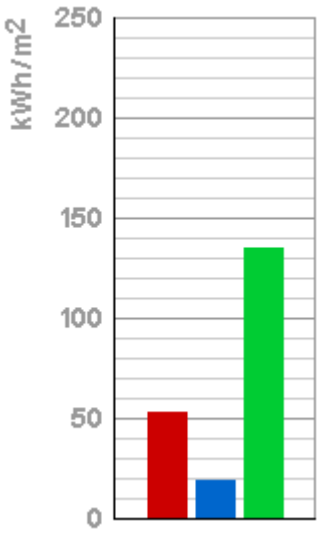
Building	
Location	CA - Sacremento
Building length, side A	N/A
Building length, side B	N/A
Simulation Type	
Simulation Type	one_sided
Window Description	
Typology	sgu_nb
Glazing Type	low-e
Window Area	50%
Wall Description	
Insulation R-Value	21 m^2-K/W
Occupancy	
Type	Low-rise Residential
Occupancy Load	0.025 people per m^2
Lighting Requirements	750 lux
Equipment Load	5.00 W/m^2
Room Ventilation	
Air Change Rate per Occupant	15.0 liters / sec per person
Total Air Change Rate	0.5 roomfuls per hour
Lighting Control	
Lighting Control	lights respond to sunlight: all lights controlled by a single dimming switch
Representative Room	
Orientation	north
Room Depth	5 m
Room Width	5 m
Room Height	3 m
Thermal Mass	
Thermal Mass	low
Overhang	
Overhang Depth	0 m
Roof	

Roof Type	bitumen roof
Roof Insulation R-Value	50 m^2-K/W
Roof Insulation Location	top of roof slab
Number of Floors	2 floor(s)

Simulation Results:

Primary Energy Use and CO_2 Emissions

	heating energy	cooling energy	lighting energy	total energy	CO_2 emissions
	(kWh/m^2)	(kWh/m^2)	(kWh/m^2)	(kWh/m^2)	(kg/m^2)
January	13.5	0.0	12.8	26.3	5.3
February	8.2	0.0	11.4	19.6	3.9
March	6.7	0.0	12.1	18.8	3.8
April	3.2	0.0	10.8	14.0	2.8
May	0.6	0.7	10.1	11.4	2.3
June	0.0	3.0	9.0	12.0	2.4
July	0.0	6.5	9.6	16.1	3.2
August	0.0	6.2	10.7	16.9	3.4
September	0.0	1.9	11.3	13.2	2.6
October	0.3	0.2	12.3	12.8	2.6
November	6.3	0.0	12.2	18.5	3.7
December	13.7	0.0	12.8	26.5	5.3
Total	52.5	18.5	135.1	206.1	41.2



yearly energy

January

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	($W-h/m^2$)	($W-h/m^2$)	(K)	(K)	(K)	($W-h/m^2$)	(% time)
midnight	-71.3	22.3	0.0	0.0	278.9	293.1	281.9	26.5	0
1 am	-63.9	54.2	0.0	0.0	278.7	293.1	281.8	26.9	0

2 am	-53.4	72.3	0.0	0.0	278.6	293.1	281.7	27.3	0
3 am	-42.0	84.3	0.0	0.0	278.4	293.1	281.5	27.8	0
4 am	-30.3	93.9	0.0	0.0	278.2	293.1	281.4	28.4	0
5 am	-18.7	102.5	0.0	0.0	278.2	293.1	281.4	28.4	0
6 am	-7.5	111.2	0.0	0.0	278.1	293.1	281.3	28.7	0
7 am	2.9	120.4	0.0	2.7	278.5	293.1	281.6	27.8	0
8 am	12.4	130.7	0.0	30.1	279.1	291.3	282.1	0.5	0
9 am	20.4	142.7	0.0	53.9	280.0	291.2	283.1	2.7	0
10 am	26.4	156.5	0.0	78.4	281.1	291.2	284.2	3.7	0
11 am	29.5	171.9	0.0	94.2	282.3	291.2	285.3	3.2	0
noon	29.5	-171.9	0.0	93.2	283.5	291.3	286.3	3.0	0
1 pm	26.4	-156.5	0.0	81.4	284.2	291.3	286.7	3.2	0
2 pm	20.4	-142.7	0.0	66.0	284.4	291.3	286.6	3.8	0
3 pm	12.4	-130.7	0.0	42.8	283.8	291.2	285.9	5.2	0
4 pm	2.9	-120.4	0.0	16.9	283.0	291.2	284.9	7.3	0
5 pm	-7.5	-111.2	0.0	0.0	281.9	293.1	284.2	30.6	0
6 pm	-18.7	-102.5	0.0	0.0	281.0	293.1	283.5	25.3	0
7 pm	-30.3	-93.9	0.0	0.0	280.2	293.1	282.9	24.6	0
8 pm	-42.0	-84.3	0.0	0.0	279.7	293.1	282.6	24.7	0
9 pm	-53.4	-72.3	0.0	0.0	279.5	293.1	282.4	25.0	0
10 pm	-63.9	-54.2	0.0	0.0	279.1	293.1	282.0	26.1	0
11 pm	-71.3	-22.3	0.0	0.0	278.9	293.1	281.9	26.3	0

February

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-63.7	16.7	0.0	0.0	280.8	293.1	283.4	20.7	0
1 am	-57.7	44.2	0.0	0.0	280.7	293.1	283.3	21.1	0
2 am	-48.3	62.9	0.0	0.0	280.6	293.1	283.3	21.3	0
3 am	-37.3	76.1	0.0	0.0	280.4	293.1	283.1	22.0	0
4 am	-25.8	86.6	0.0	0.0	280.3	293.1	283.0	22.2	0
5 am	-14.1	95.9	0.0	0.0	280.2	293.1	282.9	22.5	0
6 am	-2.6	105.1	0.0	0.0	280.0	293.1	282.8	23.0	0
7 am	8.3	114.7	0.0	18.6	280.8	293.1	283.6	21.5	0
8 am	18.4	125.5	0.0	51.5	281.8	291.7	284.6	0.0	0
9 am	27.1	138.2	0.0	79.9	283.3	291.6	286.1	0.1	0
10 am	33.7	153.4	0.0	106.9	285.0	291.8	287.8	0.2	0
11 am	37.3	170.8	0.0	120.4	286.6	292.1	289.2	0.1	0

noon	37.3	-170.8	0.0	121.1	288.1	292.4	290.5	0.0	0
1 pm	33.7	-153.4	0.0	113.8	289.1	292.6	291.2	0.1	0
2 pm	27.1	-138.2	0.0	100.7	289.3	292.8	291.2	0.1	0
3 pm	18.4	-125.5	0.0	71.0	288.7	292.6	290.4	0.3	0
4 pm	8.3	-114.7	0.0	37.3	287.3	292.3	288.8	1.3	0
5 pm	-2.6	-105.1	0.0	5.5	285.9	293.2	287.5	11.7	0
6 pm	-14.1	-95.9	0.0	0.0	284.3	293.1	286.2	12.1	0
7 pm	-25.8	-86.6	0.0	0.0	283.1	293.1	285.2	14.5	0
8 pm	-37.3	-76.1	0.0	0.0	282.4	293.1	284.6	16.3	0
9 pm	-48.3	-62.9	0.0	0.0	281.8	293.1	284.2	17.9	0
10 pm	-57.7	-44.2	0.0	0.0	281.4	293.1	283.9	19.0	0
11 pm	-63.7	-16.7	0.0	0.0	281.1	293.1	283.7	19.7	0

March

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-52.5	12.4	0.0	0.0	282.1	293.3	284.5	16.7	0
1 am	-47.8	34.7	0.0	0.0	281.8	293.2	284.2	17.7	0
2 am	-39.7	52.3	0.0	0.0	281.5	293.2	283.9	18.6	0
3 am	-29.7	65.9	0.0	0.0	281.2	293.2	283.7	19.2	0
4 am	-18.6	77.0	0.0	0.0	280.9	293.1	283.5	20.3	0
5 am	-7.0	86.8	0.0	0.0	280.6	293.1	283.2	21.1	0
6 am	4.5	96.2	0.0	9.8	281.1	293.1	283.8	20.1	0
7 am	16.0	106.0	0.0	45.0	282.1	293.1	285.0	18.4	0
8 am	26.9	117.2	0.0	81.8	283.2	292.2	286.2	0.0	0
9 am	36.6	130.7	0.0	119.6	284.8	292.4	287.9	0.0	0
10 am	44.2	147.7	0.0	144.0	286.5	292.8	289.6	0.1	0
11 am	48.6	168.6	0.0	157.6	288.3	293.2	291.2	0.1	0
noon	48.6	-168.6	0.0	158.8	289.7	293.8	292.5	0.2	0
1 pm	44.2	-147.7	0.0	150.5	291.0	294.3	293.5	0.4	0
2 pm	36.6	-130.7	0.0	129.5	291.6	294.6	293.7	0.3	0
3 pm	26.9	-117.2	0.0	101.7	291.2	294.6	293.1	0.3	0
4 pm	16.0	-106.0	0.0	62.6	290.1	294.3	291.7	0.4	0
5 pm	4.5	-96.2	0.0	28.2	288.6	294.7	290.2	5.6	0
6 pm	-7.0	-86.8	0.0	0.0	286.9	294.3	288.5	5.0	0
7 pm	-18.6	-77.0	0.0	0.0	285.4	293.9	287.2	6.6	0
8 pm	-29.7	-65.9	0.0	0.0	284.2	293.6	286.2	8.6	0
9 pm	-39.7	-52.3	0.0	0.0	283.5	293.4	285.6	11.3	0

10 pm	-47.8	-34.7	0.0	0.0	282.9	293.4	285.1	13.8	0
11 pm	-52.5	-12.4	0.0	0.0	282.4	293.3	284.7	15.6	0

April

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-40.7	9.7	0.0	0.0	283.8	293.2	285.8	8.5	0
1 am	-36.9	28.1	0.0	0.0	283.4	293.2	285.5	11.0	0
2 am	-30.0	43.8	0.0	0.0	283.0	293.1	285.1	13.1	0
3 am	-21.0	56.8	0.0	0.0	282.6	293.1	284.8	14.7	0
4 am	-10.6	67.8	0.0	0.0	282.2	293.1	284.5	16.2	0
5 am	0.4	77.5	0.0	3.7	282.2	293.1	284.5	16.6	0
6 am	12.0	86.8	18.1	46.7	283.0	293.1	285.7	16.1	0
7 am	23.7	96.3	0.0	84.9	284.1	293.1	287.1	13.0	0
8 am	35.1	107.1	0.0	109.9	285.4	292.8	288.3	0.0	0
9 am	45.8	120.5	0.0	137.2	287.1	293.1	290.0	0.0	0
10 am	54.8	139.0	0.0	163.9	288.9	293.7	291.9	0.0	0
11 am	60.4	164.9	0.0	177.1	290.8	294.4	293.6	0.0	0
noon	60.4	-164.9	0.0	178.8	292.5	295.1	295.2	0.0	0
1 pm	54.8	-139.0	0.0	171.7	293.9	295.8	296.3	0.0	0
2 pm	45.8	-120.5	0.0	149.8	294.6	296.3	296.7	0.0	0
3 pm	35.1	-107.1	0.0	119.3	294.8	296.5	296.6	0.0	0
4 pm	23.7	-96.3	0.0	86.7	294.2	296.5	295.7	0.0	0
5 pm	12.0	-86.8	18.4	50.7	292.9	296.8	294.3	0.5	0
6 pm	0.4	-77.5	8.7	9.5	291.3	296.6	292.6	0.4	0
7 pm	-10.6	-67.8	0.0	0.0	289.4	296.0	290.8	0.7	0
8 pm	-21.0	-56.8	0.0	0.0	287.8	295.3	289.4	0.8	0
9 pm	-30.0	-43.8	0.0	0.0	286.6	294.6	288.3	1.3	0
10 pm	-36.9	-28.1	0.0	0.0	285.3	293.9	287.1	2.7	0
11 pm	-40.7	-9.7	0.0	0.0	284.4	293.4	286.3	5.0	0

May

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)

midnight	-31.5	8.3	0.0	0.0	287.2	295.1	288.9	0.7	0
1 am	-28.2	24.2	0.0	0.0	286.7	294.6	288.4	1.5	0
2 am	-22.1	38.3	0.0	0.0	286.1	294.2	287.8	2.8	0
3 am	-13.9	50.5	0.0	0.0	285.5	293.9	287.3	4.7	0
4 am	-4.3	61.0	0.0	0.0	285.0	293.7	286.8	6.6	0
5 am	6.3	70.3	67.5	36.0	285.7	293.8	288.7	5.0	0
6 am	17.6	79.1	67.6	76.0	286.5	293.7	289.6	4.7	0
7 am	29.2	87.9	15.3	109.0	287.9	293.8	290.4	4.0	0
8 am	40.8	97.8	0.0	140.0	289.4	294.2	292.1	0.0	0
9 am	52.2	110.2	0.0	153.2	291.1	294.8	293.7	0.0	0
10 am	62.4	128.6	0.0	180.1	293.1	295.6	295.7	0.0	0
11 am	69.4	159.4	0.0	190.2	295.1	296.6	297.7	0.0	0
noon	69.4	-159.4	0.0	189.9	297.0	297.5	299.3	0.0	0
1 pm	62.4	-128.6	0.0	177.3	298.5	298.3	300.5	-0.1	0
2 pm	52.2	-110.2	0.0	152.2	299.3	298.9	301.0	-0.9	0
3 pm	40.8	-97.8	0.0	137.3	299.4	299.3	301.0	-1.5	0
4 pm	29.2	-87.9	17.1	106.0	298.6	299.4	300.0	-1.5	0
5 pm	17.6	-79.1	80.2	77.3	297.3	298.8	299.2	-13.3	0
6 pm	6.3	-70.3	73.7	36.1	295.5	298.8	297.5	-8.8	0
7 pm	-4.3	-61.0	0.0	0.0	293.7	298.5	294.7	-3.3	0
8 pm	-13.9	-50.5	0.0	0.0	291.8	298.0	293.1	-1.0	0
9 pm	-22.1	-38.3	0.0	0.0	290.2	297.3	291.7	0.0	0
10 pm	-28.2	-24.2	0.0	0.0	288.9	296.5	290.5	0.0	0
11 pm	-31.5	-8.3	0.0	0.0	287.8	295.7	289.5	0.1	0

June

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-27.4	7.7	0.0	0.0	290.6	297.4	292.1	0.0	0
1 am	-24.3	22.6	0.0	0.0	290.1	297.0	291.6	0.0	0
2 am	-18.6	36.1	0.0	0.0	289.6	296.5	291.0	0.0	0
3 am	-10.8	47.8	0.0	0.0	289.1	296.0	290.5	0.0	0
4 am	-1.4	58.0	0.0	0.0	288.7	295.6	290.1	0.0	0
5 am	8.9	67.1	115.3	49.9	289.4	295.9	292.8	0.0	0
6 am	19.9	75.5	104.5	87.2	290.3	295.9	293.5	0.0	0
7 am	31.4	83.9	49.0	121.9	291.6	296.3	294.5	0.0	0
8 am	43.1	93.1	0.0	144.5	293.1	296.8	295.6	0.0	0
9 am	54.7	104.7	0.0	166.2	294.9	297.5	297.4	0.0	0

10 am	65.4	122.2	0.0	174.8	296.6	298.4	299.0	0.0	0
11 am	73.3	155.3	0.0	182.6	298.5	299.3	300.8	0.0	0
noon	73.3	-155.3	0.0	179.6	300.4	300.1	302.4	-0.7	0
1 pm	65.4	-122.2	0.0	174.3	301.7	300.6	303.5	-2.8	0
2 pm	54.7	-104.7	0.0	174.7	302.5	300.8	304.2	-5.9	0
3 pm	43.1	-93.1	0.0	148.7	302.6	300.9	304.0	-7.1	0
4 pm	31.4	-83.9	52.5	120.2	302.1	301.0	303.7	-8.0	0
5 pm	19.9	-75.5	122.4	94.1	300.8	299.0	302.6	-33.3	0
6 pm	8.9	-67.1	118.9	56.2	299.0	299.0	301.2	-22.8	0
7 pm	-1.4	-58.0	0.0	0.0	297.1	299.0	297.5	-11.9	0
8 pm	-10.8	-47.8	0.0	0.0	295.3	299.0	296.1	-5.8	0
9 pm	-18.6	-36.1	0.0	0.0	293.7	298.8	294.8	-2.0	0
10 pm	-24.3	-22.6	0.0	0.0	292.4	298.5	293.7	-0.2	0
11 pm	-27.4	-7.7	0.0	0.0	291.4	298.0	292.8	0.0	0

July

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-29.6	8.0	0.0	0.0	292.8	298.5	294.0	-0.6	0
1 am	-26.4	23.4	0.0	0.0	292.3	298.3	293.6	-0.3	0
2 am	-20.5	37.2	0.0	0.0	291.7	297.9	293.1	-0.1	0
3 am	-12.4	49.2	0.0	0.0	291.2	297.6	292.6	0.0	0
4 am	-2.9	59.5	0.0	0.0	290.8	297.2	292.1	0.0	0
5 am	7.5	68.8	86.2	39.4	291.3	297.6	294.2	-0.1	0
6 am	18.7	77.4	87.6	80.9	292.2	297.5	295.1	-0.2	0
7 am	30.3	86.1	32.9	112.7	293.4	297.6	295.6	-0.3	0
8 am	41.9	95.6	0.0	132.9	295.0	298.3	297.2	0.0	0
9 am	53.4	107.6	0.0	152.7	296.9	299.0	299.1	0.0	0
10 am	63.9	125.7	0.0	165.5	299.0	299.8	301.1	-0.2	0
11 am	71.3	157.7	0.0	174.7	300.9	300.5	302.9	-1.8	0
noon	71.3	-157.7	0.0	175.1	302.8	300.9	304.5	-5.2	0
1 pm	63.9	-125.7	0.0	167.2	304.3	301.1	305.6	-8.5	0
2 pm	53.4	-107.6	0.0	162.1	305.3	301.1	306.3	-11.3	0
3 pm	41.9	-95.6	0.0	137.3	305.5	301.1	306.2	-11.5	0
4 pm	30.3	-86.1	36.5	114.9	304.7	301.1	305.3	-10.0	0
5 pm	18.7	-77.4	108.0	94.5	303.3	299.1	304.5	-40.8	0
6 pm	7.5	-68.8	109.5	52.6	301.6	299.1	303.0	-30.4	0
7 pm	-2.9	-59.5	0.0	0.0	299.6	299.1	299.5	-18.8	0

8 pm	-12.4	-49.2	0.0	0.0	297.7	299.1	298.0	-12.0	0
9 pm	-20.5	-37.2	0.0	0.0	296.1	299.1	296.7	-6.7	0
10 pm	-26.4	-23.4	0.0	0.0	294.7	299.0	295.6	-3.1	0
11 pm	-29.6	-8.0	0.0	0.0	293.5	298.8	294.6	-1.3	0

August

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-37.4	9.2	0.0	0.0	293.1	298.6	294.2	-0.9	0
1 am	-33.7	26.6	0.0	0.0	292.5	298.3	293.7	-0.4	0
2 am	-27.2	41.7	0.0	0.0	292.0	298.1	293.3	-0.1	0
3 am	-18.4	54.4	0.0	0.0	291.5	297.7	292.8	-0.1	0
4 am	-8.3	65.3	0.0	0.0	291.0	297.4	292.4	0.0	0
5 am	2.6	74.9	8.3	9.2	291.2	297.3	292.7	0.0	0
6 am	14.1	84.0	40.4	54.4	292.0	297.3	294.1	0.0	0
7 am	25.7	93.3	0.0	89.2	293.1	297.4	295.0	-0.1	0
8 am	37.3	103.8	0.0	116.7	294.6	297.9	296.6	0.0	0
9 am	48.2	117.1	0.0	139.3	296.3	298.6	298.4	0.0	0
10 am	57.7	135.7	0.0	158.8	298.2	299.4	300.3	0.0	0
11 am	63.7	163.3	0.0	169.4	300.1	300.1	302.0	-1.0	0
noon	63.7	-163.3	0.0	170.3	301.7	300.6	303.4	-3.4	0
1 pm	57.7	-135.7	0.0	160.5	303.2	300.9	304.6	-5.9	0
2 pm	48.2	-117.1	0.0	146.7	304.3	301.0	305.3	-8.3	0
3 pm	37.3	-103.8	0.0	127.2	304.4	301.1	305.2	-9.1	0
4 pm	25.7	-93.3	0.0	101.2	303.9	301.1	304.5	-8.1	0
5 pm	14.1	-84.0	42.8	66.8	302.6	299.1	303.1	-36.7	0
6 pm	2.6	-74.9	43.8	27.1	301.0	299.1	301.5	-26.6	0
7 pm	-8.3	-65.3	0.0	0.0	299.2	299.1	299.2	-17.3	0
8 pm	-18.4	-54.4	0.0	0.0	297.4	299.1	297.8	-11.1	0
9 pm	-27.2	-41.7	0.0	0.0	295.8	299.1	296.5	-6.0	0
10 pm	-33.7	-26.6	0.0	0.0	294.6	299.0	295.5	-3.0	0
11 pm	-37.4	-9.2	0.0	0.0	293.5	298.8	294.6	-1.6	0

September

	solar	solar	direct	diffuse	outdoor	indoor	window	heating	blinds

	altitude (degrees)	azimuth (degrees)	radiation ($W\text{-}h/m^2$)	radiation ($W\text{-}h/m^2$)	temp. (K)	temp. (K)	temp. (K)	load ($W\text{-}h/m^2$)	closed (% time)
midnight	-48.7	11.4	0.0	0.0	291.6	297.9	292.9	0.0	0
1 am	-44.3	32.3	0.0	0.0	291.2	297.6	292.6	0.0	0
2 am	-36.6	49.3	0.0	0.0	290.8	297.2	292.1	0.0	0
3 am	-26.9	62.8	0.0	0.0	290.4	296.9	291.8	0.0	0
4 am	-16.0	73.9	0.0	0.0	289.9	296.5	291.3	0.0	0
5 am	-4.6	83.7	0.0	0.0	289.6	296.1	290.9	0.0	0
6 am	7.0	93.2	0.0	29.3	290.4	296.0	292.0	0.0	0
7 am	18.6	103.0	0.0	62.1	291.3	296.1	293.0	0.0	0
8 am	29.7	114.1	0.0	97.4	292.7	296.4	294.6	0.0	0
9 am	39.7	127.7	0.0	126.3	294.4	297.0	296.4	0.0	0
10 am	47.8	145.2	0.0	142.7	296.2	297.7	298.2	0.0	0
11 am	52.5	167.6	0.0	152.0	297.8	298.5	299.7	0.0	0
noon	52.5	-167.6	0.0	148.4	299.5	299.3	301.2	0.0	0
1 pm	47.8	-145.2	0.0	141.8	300.9	300.0	302.4	-0.4	0
2 pm	39.7	-127.7	0.0	124.8	301.7	300.4	302.9	-1.5	0
3 pm	29.7	-114.1	0.0	96.2	301.8	300.6	302.6	-2.0	0
4 pm	18.6	-103.0	0.0	63.1	301.0	300.7	301.6	-1.5	0
5 pm	7.0	-93.2	0.0	33.0	299.7	299.1	300.0	-25.3	0
6 pm	-4.6	-83.7	0.0	0.1	298.0	299.1	298.2	-15.7	0
7 pm	-16.0	-73.9	0.0	0.0	296.3	299.1	296.9	-8.7	0
8 pm	-26.9	-62.8	0.0	0.0	294.9	299.0	295.7	-3.9	0
9 pm	-36.6	-49.3	0.0	0.0	293.8	298.9	294.9	-1.5	0
10 pm	-44.3	-32.3	0.0	0.0	292.9	298.6	294.1	-0.5	0
11 pm	-48.7	-11.4	0.0	0.0	292.1	298.2	293.4	-0.2	0

October

	solar altitude (degrees)	solar azimuth (degrees)	direct radiation ($W\text{-}h/m^2$)	diffuse radiation ($W\text{-}h/m^2$)	outdoor temp. (K)	indoor temp. (K)	window temp. (K)	heating load ($W\text{-}h/m^2$)	blinds closed (% time)
midnight	-60.4	15.1	0.0	0.0	288.3	295.0	289.7	0.6	0
1 am	-54.9	40.9	0.0	0.0	288.0	294.7	289.4	0.8	0
2 am	-45.9	59.4	0.0	0.0	287.7	294.4	289.2	1.3	0
3 am	-35.2	72.9	0.0	0.0	287.5	294.2	288.9	1.8	0
4 am	-23.7	83.7	0.0	0.0	287.2	294.0	288.6	2.3	0
5 am	-12.0	93.2	0.0	0.0	286.9	293.8	288.3	2.9	0
6 am	-0.5	102.4	0.0	7.8	287.2	293.8	288.7	3.0	0

7 am	10.6	112.2	0.0	42.3	288.0	293.8	289.8	2.7	0
8 am	21.0	123.1	0.0	73.7	289.3	293.7	291.1	0.0	0
9 am	30.0	136.1	0.0	103.2	290.9	294.1	292.8	0.0	0
10 am	36.9	151.8	0.0	119.2	292.5	294.7	294.4	0.0	0
11 am	40.7	170.2	0.0	129.6	294.1	295.3	295.9	0.0	0
noon	40.7	-170.2	0.0	128.4	295.5	296.0	297.1	0.0	0
1 pm	36.9	-151.8	0.0	116.9	296.6	296.5	298.0	0.0	0
2 pm	30.0	-136.1	0.0	99.1	297.0	296.9	298.1	0.0	0
3 pm	21.0	-123.1	0.0	69.8	296.5	297.0	297.4	0.0	0
4 pm	10.6	-112.2	0.0	37.2	295.2	296.8	295.9	0.0	0
5 pm	-0.5	-102.4	0.0	2.5	293.6	297.2	294.4	-2.5	0
6 pm	-12.0	-93.2	0.0	0.0	292.2	297.0	293.2	-1.0	0
7 pm	-23.7	-83.7	0.0	0.0	290.9	296.7	292.1	-0.3	0
8 pm	-35.2	-72.9	0.0	0.0	290.1	296.3	291.4	0.0	0
9 pm	-45.9	-59.4	0.0	0.0	289.4	295.9	290.8	0.3	0
10 pm	-54.9	-40.9	0.0	0.0	288.9	295.5	290.3	0.5	0
11 pm	-60.4	-15.1	0.0	0.0	288.4	295.2	289.9	0.5	0

November

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-69.4	20.5	0.0	0.0	283.2	293.2	285.3	13.3	0
1 am	-62.4	51.3	0.0	0.0	283.0	293.1	285.2	14.0	0
2 am	-52.2	69.8	0.0	0.0	282.8	293.1	284.9	14.6	0
3 am	-40.9	82.2	0.0	0.0	282.7	293.1	284.9	15.1	0
4 am	-29.2	92.0	0.0	0.0	282.4	293.1	284.7	15.9	0
5 am	-17.6	100.9	0.0	0.0	282.3	293.1	284.6	16.4	0
6 am	-6.3	109.6	0.0	0.0	282.0	293.1	284.4	17.1	0
7 am	4.2	119.0	0.0	22.9	282.7	293.1	285.2	16.4	0
8 am	13.9	129.5	0.0	51.2	283.6	292.0	286.0	0.0	0
9 am	22.1	141.6	0.0	80.7	284.8	292.0	287.3	0.1	0
10 am	28.2	155.7	0.0	94.5	285.9	292.1	288.4	0.2	0
11 am	31.5	171.6	0.0	105.6	287.1	292.3	289.5	0.3	0
noon	31.5	-171.6	0.0	99.5	288.1	292.4	290.2	0.2	0
1 pm	28.2	-155.7	0.0	83.5	288.8	292.5	290.6	0.3	0
2 pm	22.1	-141.6	0.0	68.8	289.0	292.5	290.6	0.5	0
3 pm	13.9	-129.5	0.0	40.5	288.6	292.4	289.9	1.1	0
4 pm	4.2	-119.0	0.0	11.6	287.6	292.1	288.7	2.2	0

5 pm	-6.3	-109.6	0.0	0.0	286.5	293.5	287.9	13.3	0
6 pm	-17.6	-100.9	0.0	0.0	285.6	293.4	287.2	10.3	0
7 pm	-29.2	-92.0	0.0	0.0	284.8	293.3	286.6	10.2	0
8 pm	-40.9	-82.2	0.0	0.0	284.3	293.2	286.2	10.8	0
9 pm	-52.2	-69.8	0.0	0.0	283.9	293.2	285.9	11.4	0
10 pm	-62.4	-51.3	0.0	0.0	283.5	293.2	285.6	12.5	0
11 pm	-69.4	-20.5	0.0	0.0	283.2	293.1	285.3	13.4	0

December

	solar altitude	solar azimuth	direct radiation	diffuse radiation	outdoor temp.	indoor temp.	window temp.	heating load	blinds closed
	(degrees)	(degrees)	(W-h/m^2)	(W-h/m^2)	(K)	(K)	(K)	(W-h/m^2)	(% time)
midnight	-73.3	24.7	0.0	0.0	278.8	293.1	281.8	26.8	0
1 am	-65.4	57.7	0.0	0.0	278.8	293.1	281.8	26.7	0
2 am	-54.7	75.2	0.0	0.0	278.7	293.1	281.8	26.9	0
3 am	-43.1	86.8	0.0	0.0	278.7	293.1	281.7	27.0	0
4 am	-31.4	96.0	0.0	0.0	278.6	293.1	281.7	27.2	0
5 am	-19.9	104.4	0.0	0.0	278.6	293.1	281.7	27.2	0
6 am	-8.9	112.8	0.0	0.0	278.6	293.1	281.7	27.3	0
7 am	1.4	121.9	0.0	4.7	278.9	293.1	282.0	26.6	0
8 am	10.8	132.1	0.0	33.2	279.6	291.3	282.5	0.2	0
9 am	18.6	143.8	0.0	56.3	280.4	291.2	283.4	2.1	0
10 am	24.3	157.3	0.0	78.2	281.5	291.2	284.5	3.3	0
11 am	27.4	172.2	0.0	84.1	282.6	291.3	285.5	3.6	0
noon	27.4	-172.2	0.0	82.6	283.6	291.3	286.3	3.5	0
1 pm	24.3	-157.3	0.0	77.1	284.3	291.3	286.7	3.4	0
2 pm	18.6	-143.8	0.0	59.9	284.2	291.3	286.4	4.2	0
3 pm	10.8	-132.1	0.0	33.2	283.6	291.2	285.6	5.8	0
4 pm	1.4	-121.9	0.0	6.4	282.7	291.2	284.6	8.0	0
5 pm	-8.9	-112.8	0.0	0.0	281.6	293.1	284.1	31.3	0
6 pm	-19.9	-104.4	0.0	0.0	280.7	293.1	283.3	26.1	0
7 pm	-31.4	-96.0	0.0	0.0	280.0	293.1	282.8	25.3	0
8 pm	-43.1	-86.8	0.0	0.0	279.6	293.1	282.4	25.2	0
9 pm	-54.7	-75.2	0.0	0.0	279.2	293.1	282.2	25.7	0
10 pm	-65.4	-57.7	0.0	0.0	279.1	293.1	282.1	25.9	0
11 pm	-73.3	-24.7	0.0	0.0	279.0	293.1	282.0	26.2	0

Campus Crest Student Housing

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Parking Lot	604	Space
Apartments Mid Rise	224	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Utility Company**	Sacramento Municipal Utility District
Climate Zone	6	**Precipitation Freq (Days)**	58		

1.3 User Entered Comments

Project Characteristics -

Land Use - Lot Acreage calculated based on default parking acreage

Construction Phase - Building phase calculations based on Jefferson Lofts AQ construction dates

Grading - Site acreage

Vehicle Trips - trip rate from project traffic study

Energy Use - project would not use natural gas; energy intensity based on info from applicant and energy reduction due to project features

Area Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013																475.44
2014																541.32
Total																**1,016.76**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013																475.44
2014																541.32
Total																**1,016.76**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																2.80
Energy																532.16
Mobile																1,761.68
Waste																46.87
Water																41.15
Total																**2,384.66**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																2.80
Energy																532.16
Mobile																1,761.68
Waste																46.87
Water																41.15
Total																**2,384.66**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Grading - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.00
Off-Road																133.20
Total																**133.20**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																0.00
Worker																2.24
Total																**2.24**

3.2 Grading - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.00
Off-Road																133.20
Total																**133.20**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																0.00
Worker																2.24
Total																**2.24**

3.3 Paving - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																14.61
Paving																0.00
Total																**14.61**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																0.00
Worker																0.69
Total																**0.69**

3.3 Paving - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																14.61
Paving																0.00
Total																**14.61**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																0.00
Worker																0.69
Total																**0.69**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																148.77
Total																**148.77**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																62.38
Worker																88.50
Total																**150.88**

3.4 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																148.77
Total																**148.77**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																62.38
Worker																88.50
Total																**150.88**

3.4 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																246.07
Total																**246.07**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																103.57
Worker																143.83
Total																**247.40**

3.4 Building Construction - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																246.07
Total																**246.07**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																103.57
Worker																143.83
Total																**247.40**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.00
Off-Road																9.21
Total																**9.21**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																0.00
Worker																15.85
Total																**15.85**

3.5 Architectural Coating - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.00
Off-Road																9.21
Total																**9.21**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																0.00
Worker																15.85
Total																**15.85**

3.5 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.00
Off-Road																17.78
Total																**17.78**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																0.00
Worker																30.07
Total																**30.07**

3.5 Architectural Coating - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.00
Off-Road																17.78
Total																**17.78**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.00
Vendor																0.00
Worker																30.07
Total																**30.07**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																1,761.68
Unmitigated																1,761.68
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,648.64	1,648.64	1648.64	4,555,312	4,555,312
Parking Lot	0.00	0.00	0.00		
Total	1,648.64	1,648.64	1,648.64	4,555,312	4,555,312

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10
Parking Lot	10.80	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																532.16
Electricity Unmitigated																532.16
NaturalGas Mitigated																0.00
NaturalGas Unmitigated																0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments Mid Rise	0																0.00
Parking Lot	0																0.00
Total																	**0.00**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments Mid Rise	0																0.00
Parking Lot	0																0.00
Total																	**0.00**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Mid Rise	2.09774e+006								532.16
Parking Lot	0								0.00
Total									**532.16**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Mid Rise	2.09774e+006								532.16
Parking Lot	0								0.00
Total									**532.16**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																2.80
Unmitigated																2.80
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.00
Consumer Products																0.00
Hearth																0.00
Landscaping																2.80
Total																**2.80**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.00
Consumer Products																0.00
Hearth																0.00
Landscaping																2.80
Total																**2.80**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated								41.15
Unmitigated								41.15
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Mid Rise	14.5945 / 9.20088								41.15
Parking Lot	0 / 0								0.00
Total									**41.15**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Mid Rise	14.5945 / 9.20088								41.15
Parking Lot	0 / 0								0.00
Total									**41.15**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated								46.87
Unmitigated								46.87
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Mid Rise	103.04								46.87
Parking Lot	0								0.00
Total									**46.87**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Mid Rise	103.04								46.87
Parking Lot	0								0.00
Total									**46.87**

9.0 Vegetation

Campus Crest Student Housing - BAU

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	224	Dwelling Unit
Parking Lot	604	Space

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Utility Company**	Sacramento Municipal Utility District
Climate Zone	6	**Precipitation Freq (Days)**	58		

1.3 User Entered Comments

Project Characteristics -

Land Use - based on site plan

Construction Phase - construction would be the same under BAU scenario

Vehicle Trips - trip rate from traffic study

Energy Use - same assumptions as proposed project

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																2.84
Energy																638.09
Mobile																2,303.75
Waste																46.87
Water																41.15
Total																**3,032.70**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																2.84
Energy																638.09
Mobile																2,303.75
Waste																46.87
Water																41.15
Total																**3,032.70**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																2,303.75
Unmitigated																2,303.75
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,648.64	1,648.64	1648.64	4,555,312	4,555,312
Parking Lot	0.00	0.00	0.00		
Total	1,648.64	1,648.64	1,648.64	4,555,312	4,555,312

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10
Parking Lot	10.80	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																638.09
Electricity Unmitigated																638.09
NaturalGas Mitigated																0.00
NaturalGas Unmitigated																0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments Mid Rise	0																0.00
Parking Lot	0																0.00
Total																	**0.00**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments Mid Rise	0																0.00
Parking Lot	0																0.00
Total																	**0.00**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Mid Rise	2.51528e+006								638.09
Parking Lot	0								0.00
Total									**638.09**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Mid Rise	2.51528e+006								638.09
Parking Lot	0								0.00
Total									**638.09**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																2.84
Unmitigated																2.84
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.00
Consumer Products																0.00
Hearth																0.00
Landscaping																2.84
Total																**2.84**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.00
Consumer Products																0.00
Hearth																0.00
Landscaping																2.84
Total																**2.84**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated								41.15
Unmitigated								41.15
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Mid Rise	14.5945 / 9.20088								41.15
Parking Lot	0 / 0								0.00
Total									**41.15**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Mid Rise	14.5945 / 9.20088								41.15
Parking Lot	0 / 0								0.00
Total									**41.15**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated								46.87
Unmitigated								46.87
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Mid Rise	103.04								46.87
Parking Lot	0								0.00
Total									**46.87**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Mid Rise	103.04								46.87
Parking Lot	0								0.00
Total									**46.87**

9.0 Vegetation

APPENDIX B

JURISDICTIONAL DELINEATION & SPECIAL STATUS SPECIES ASSESSMENT

CAMPUS CREST STUDENT HOUSING

Gibson & Skordal, LLC
WETLAND CONSULTANTS
2617 K Street, Suite 175
Sacramento, California 95816

JURISDICTIONAL DELINEATION & SPECIAL STATUS SPECIES ASSESSMENT

CAMPUS CREST STUDENT HOUSING

Sacramento County, California

May 2012

Prepared For:

Campus Crest Development, LLC
2100 Rexford Road #414
Charlotte, North Carolina 28211

Prepared By:

Gibson & Skordal, LLC
WETLAND CONSULTANTS
2617 K Street, Suite 175
Sacramento, California 95816

INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the Campus Crest Student Housing property.

LOCATION

The study area includes an approximately 12.6-acre parcel located south of Highway 50, north of San Joaquin Street and immediately east of Redding Avenue in the City of Sacramento, California. It lies in the northwest ¼ of Section 15, Township 8 North and Range 5 East of Sacramento County (Latitude 38°32'51" North, Longitude 121°25'14" West). Figure 1 is a vicinity map.

METHODOLOGY

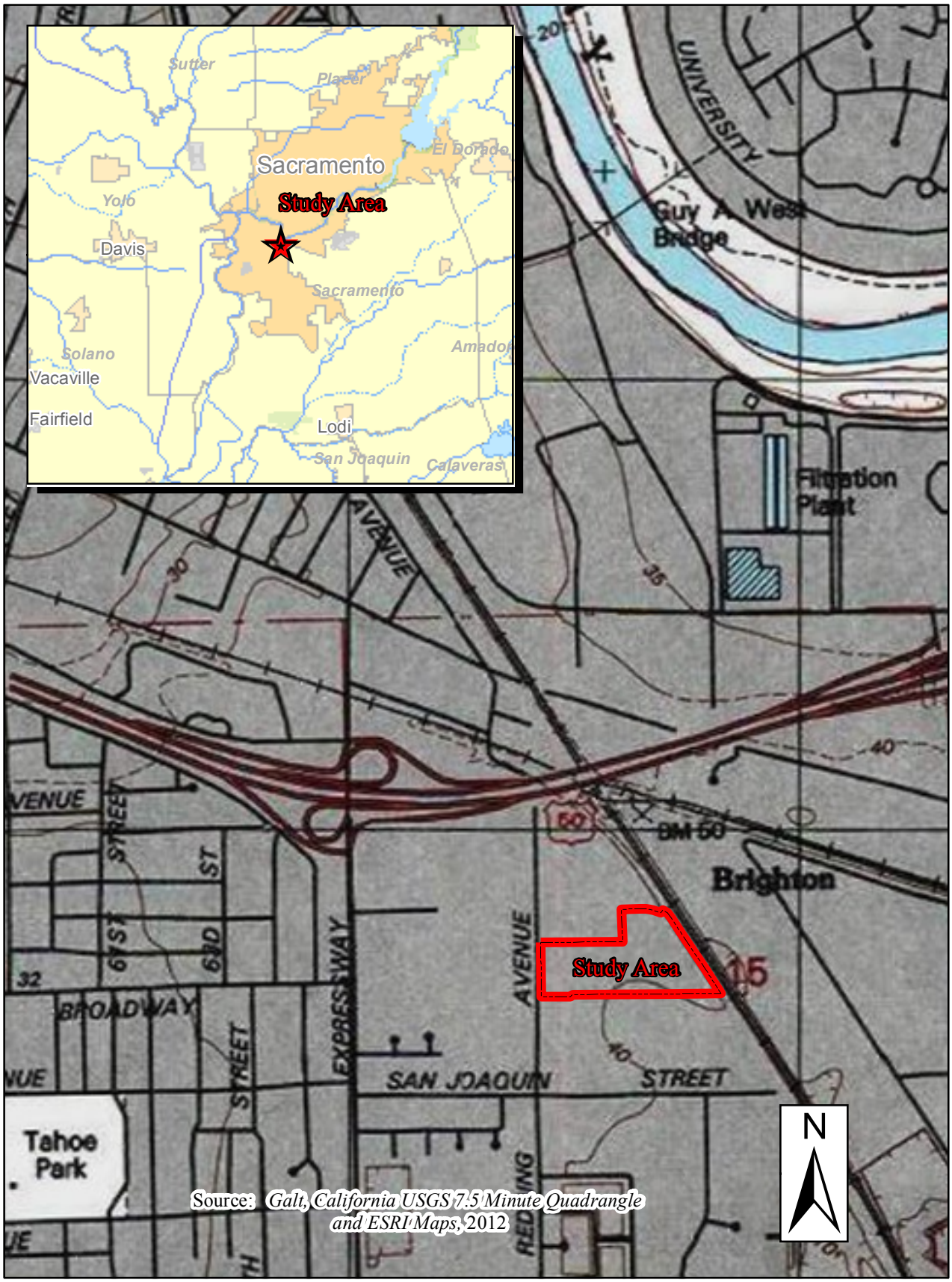
Field studies were conducted on March 18, 2004 for the purpose of delineating all potential waters and wetlands existing in the study area (at that time called JPI Cal State Golf property) and conducting an evaluation of special status species and their habitats. The property was field reviewed on May 9, 2012, to determine if conditions remained the same as they were in 2004. We also updated the special status species discussion utilizing the latest Natural Diversity Data Base information.

The boundaries of waters/wetlands, site reference features, and data points were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS data over base aerial photography flown in 2007.

This delineation was performed in accordance with the 1987 **"Corps of Engineers Wetlands Delineation Manual,"**[1] the **"Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0),"**[2] and Sacramento District's **"Minimum Standards for Acceptance of Preliminary Wetlands Delineations"** dated November 30, 2001. Corps' regulations (33 CFR 328) were used to determine the presence of

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Wetlands Regulatory Assistance Program. September 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). U.S. Army Engineer Research and Development Center, Vicksburg, Miss.



Source: *Galt, California USGS 7.5 Minute Quadrangle and ESRI Maps*, 2012

Figure 1
Vicinity Map

waters of the United States other than wetlands. The **"U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook, May 30, 2007"**[3] was consulted in evaluating the jurisdictional status of the water features within the study area. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[4] was used to determine the wetland indicator status of plants observed in the study area.

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data sheets documenting the basis for determining which areas are wetland or upland are provided in Appendix A.

GENERAL SITE CONDITIONS AND HABITATS

The study area is bordered by commercial development to the north and south, railroad right of way to the east, and Redding Avenue to the west. A baseball park borders the southeast corner of the site. The study area has been historically utilized as a golf driving range complex, and it was fully operated as such until January of 2004 when the facility was shut down. The driving range complex included parking lots, storage sheds, and a clubhouse on the western side adjacent to Redding Avenue. The storage sheds and the clubhouse has been demolished since our original field survey. It also includes two man-made ponds including a cement-lined pond located in the center of the driving range and a detention basin located in the southeastern corner of the property.

A majority of the site supported turf/lawn that was irrigated, mowed, and otherwise maintained as part of the driving range operation. The entire site now contains non-native annual grassland. Typical grassland habitat is dominated by soft chess (*Bromus mollis*), rip-gut brome (*Bromus diandrus*), hairy hawkbit (*Leontodon leysseri*), rat-tail fescue (*Vulpia myuros*), perennial rye (*Lolium perenne*), and filaree (*Erodium sp.*). Sparse trees include a variety of ornamental species planted around the clubhouse and along the east edge of the range adjacent to the detention pond, and several willows (*Salix sp.*) associated with the detention pond. Photographs of the site are provided in Appendix B.

Soils in the study area are mapped as San Joaquin-Urban land complex, 0 to 2 percent slopes. These are generally described as moderately deep, moderately well drained soils mapped on low

[3] U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook. May 30, 2007. U.S. Army Corps of Engineers & U.S. Environmental Protection Agency.

[4] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

terraces that have been altered and shaped for urban use. It includes areas that support San Joaquin soils that have been cut and leveled, but it also includes urbanized features such as parking lots, roads, and buildings. Figure 2 provides a soils map of the study area.

JURISDICTIONAL DELINEATION FINDINGS

We identified a total of 1.13 acres of potential waters in the study area comprised of a 28,763-sq. ft. driving range pond (P1) and a 20,448-sq. ft. detention basin (P2). Appendix C provides a delineation map showing the location of the ponds as well as the location of the data points, study area boundary, and other site features. A list of plant species observed in the study area is provided in Appendix D.

During our recent field review of the property, we noted an area dominated by perennial rye in the vicinity of Data Point 1. This area apparently is receiving nuisance water from Dorris Molding along the northern border of the study area. This condition is very recent in nature. Review of Google Earth photography shows this area green in October 2011, however, there is no signature at this location in June 2011 or any of the previous photographs dating back to 1993. Therefore, we consider this a temporary artificial condition.

The concrete lined pond in the center of the driving range was constructed for driving range purposes. It is not in the vicinity or connected to any other waters of the U.S. The detention basin collects water from the site. It does not have an outlet.

Given that the ponds are hydrologically isolated, it is our opinion that they are not regulated by the Corps of Engineers.

Campus Crest Student Housing
Jurisdictional Delineation & Special Status Species Assessment
May 2012

Figure 2
Soils Map

SPECIAL STATUS SPECIES ASSESSMENT

This section summarizes our assessment of the potential presence of special status species within the study area. The special status species assessment considers those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern by CDFG. We also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS).

A record search of the CNDDB was conducted to identify all documented sightings of special status species within ten miles of the study area. In addition to species identified in the CNDDB search, we included other special status species that may occur in the study area based on historical range data. Appendix E contains a CNDDB elemental occurrence map.

Table 1 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Mammals

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is a CDFG species of special concern. It is considered to be one of the most widespread of all American bats with a range extending from Canada to central Chile and Argentina as well as Hawaii. Hoary bats prefer older large leaf species such as cottonwoods, willows, and fruit or nut trees for daytime roosts. This species is primarily crepuscular or nocturnal and requires open areas to hunt moths, which are its main prey item. The hoary bat is considered a forest/woodland species, and in California they are often associated with undisturbed riparian or stream corridors.

The appropriate habitat is not present within the study area.

TABLE 1
SPECIAL STATUS SPECIES HABITAT ASSESSMENT

Scientific Name (Common Name)	Federal Status	State Status	CNPS Listing	Habitat Requirements	Potential for Occurrence
Mammals					
Lasiurus cinereus (hoary bat)	None	Species of Special Concern		Prefer older large leaf trees such as cottonwoods, willows, and fruit/nut trees for daytime roosts. Often found in association with riparian corridors. Need open spaces to forage.	Habitat is not present
Taxidea taxus (American badger)	None	Species of Special Concern		This species prefers dry open fields, grasslands, and pastures.	Unlikely due to urbanization
Birds					
Accipiter cooperi (Cooper's hawk)	None	CDFG-Special Animals		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Low quality nesting and foraging habitat present
Agelaius tricolor (tricolored blackbird)	None	Species of Special Concern		Colonial nester in cattails, bulrush, or blackberries associated with marsh habitats.	Low quality nesting and foraging habitat present
Aquila chrysaetos (golden eagle)	None	CDFG-Species of Special Concern/Fully Protected Species		Solitary nester preferring larger trees. Forages in open areas.	Low quality foraging habitat present
Ardea alba (great egret)	None	CDFG-Special Animals		Rivers, streams, lakes, marsh and other aquatic habitats.	Low quality foraging habitat present
Ardea herodias (great blue heron)	None	CDFG-Special Animals		Rivers, streams, lakes, marsh and other aquatic habitats.	Low quality foraging habitat present
Athene cunicularia (burrowing owl)	None	Species of Special Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Nesting and foraging habitat present
Buteo regalis (ferruginous hawk)	None	CDFG-Special Animals		Solitary tree nester. Forages in open areas such as grasslands and fields for ground squirrels as well as other small mammals, birds, lizards, snakes, and rabbits.	Low quality nesting and foraging habitat present
Buteo swainsoni (Swainson's hawk)	None	Threatened		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	Low quality nesting and foraging habitat present
Coccyzus americanus occidentalis (western yellow-billed cuckoo)	Candidate	Endangered		Forages and nests in riparian corridors with thick stands of willows and/or cottonwoods.	Habitat not present
Elanus leucurus (white-tailed kite)	None	Fully Protected Species		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Low quality nesting and foraging habitat present
Falco columbarius (Merlin)	None	CDFG-Special Animals		It is not known to nest in California, but it is a winter transient throughout most of California with wintering populations in the Central Valley.	Low quality foraging habitat present
Nycticorax nycticorax (black-crowned night heron)	None	CDFG-Special Animals		Forages in wetlands or open waters with decent vegetative cover. This species is a colonial tree nester.	Habitat not present

TABLE 1
SPECIAL STATUS SPECIES HABITAT ASSESSMENT

Phalacrocorax auritus (double-crested cormorant)	None	CDFG-Special Animals		Nests in colonies on rocks, cliff, or in trees. It prefers open water habitats such as coastlines, ponds, rivers, lakes, estuaries, or lagoons.	Habitat not present
Progne subis (purple martin)	None	Species of Special Concern		Prefers open areas near bodies of water or wetlands. It is a colonial nester which utilizes cavities in trees, cliff faces, buildings.	Low quality foraging habitat present
Riparia riparia (bank swallow)	None	Threatened		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	Low quality foraging habitat present
Xanthocephalus xanthocephalus (yellow-headed blackbird)	None	Species of Special Concern		Colonial nester associated with deeper tule, bulrush, or cattail marsh habitats. Also may be found in open areas such as grasslands or agricultural fields during migration.	Low quality foraging habitat present
Amphibians & Reptiles					
Emys marmorata *(Western pond turtle)*	None	Species of Special Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	Habitat not present
Spea hammondii (western spadefoot toad)	None	Species of Special Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Habitat present
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Habitat not present
Fish					
Archoplites interruptus Sacramento perch	None	Species of Special Concern		Historically favored slow moving rivers, sloughs, lakes, ponds, and streams within the Central Valley.	Habitat not present
Oncorhynchus tshawytscha (chinook salmon - Central Valley spring-run ESU)	Threatened	Threatened		Anadromous species requiring freshwater water courses with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments.	Habitat not present
Oncorhynchus tshawytscha (chinook salmon - Sacramento River winter-run ESU)	Endangered	Endangered		Anadromous species requiring freshwater water courses with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments.	Habitat not present
Pogonichthys macrolepidotus (Sacramento splittail)	None	Species of Special Concern		Adults migrate upstream from brackish areas to spawn in freshwater on submerged vegetation in temporarily flooded upland and riparian habitat in the lower reaches of rivers, bypasses, sloughs. The young remain in shallow, weedy areas inshore near spawning sites and move to deeper offshore habitat as they mature.	Habitat not present

TABLE 1
SPECIAL STATUS SPECIES HABITAT ASSESSMENT

Invertebrates					
Andrena subapasta *(No common name)*	None	None		The life cycle of this bee is poorly understood. It is known to collect pollen from goldfields, sandwort, and butter and eggs, which are associated with vernal pools or grasslands.	Habitat not present
Branchinecta lynchi *(vernal pool fairy shrimp)*	Threatened	None		Vernal pools.	Habitat not present
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools.	Habitat not present
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	Threatened	None		Dependent upon elderberry plant as primary host species	Habitat not present
Dumontia oregonensis (hairy water flea)	None	None		Vernal pools.	Habitat not present
Hydrochara rickseckeri (Ricksecker's water scavenger beetle)	None	None		Ponds, lakes, streams, rivers, vernal pools, and other freshwater features.	Habitat present
Lepidurus packardi (vernal pool tadpole shrimp)	Endangered	None		Vernal pools.	Habitat not present
Linderiella occidentalis (California linderiella)	None	None		Vernal pools.	Habitat not present
Plants					
Cuscuta obtusiflora var. *glandulosa* *(Peruvian dodder)*	None	None	CNPS-2 2	Freshwater marshes and swamp	Habitat not present
Downingia pusilla (dwarf downingia)	None	None	CNPS-2.2	Vernal pools and other seasonally ponded features.	Habitat not present
Fritillaria agrestis (stinkbells)	None	None	CNPS-4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, non-native grasslands with heavy clay soils -- sometimes found on serpentine soils.	Habitat not present
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	None	Endangered	CNPS-1B.2	Vernal pools and margins of lakes/ponds	Habitat not present
Hibiscus lasiocarpus var. *occidentalis* (woolly rose-mallow)	None	None	CNPS-2.2	Species typically occurs in freshwater wetlands/marshes or other areas with wet soils. In California, the species is strongly associated with the Delta.	Habitat not present
Juncus leiospermus var. *ahartii* (Ahart's dwarf rush)	None	None	CNPS-1B.2	Edges of vernal pool and other seasonally ponded features.	Habitat not present
Juglans hindsii (Northern California black walnut)	None	None	CNPS-1B.1	Only two of three known native stands are still in existence. This species prefers riparian scrub and riparian woodland habitats.	Habitat not present

TABLE 1
SPECIAL STATUS SPECIES HABITAT ASSESSMENT

Legenere limosa (legenere)	None	None	CNPS-1B.1	Vernal pools and other seasonally ponded features.	Habitat not present
Lilaeopsis masonii (Mason's lilaeopsis)	None	Rare	CNPS-1B.1	Prefers brackish or freshwater swamps, intertidal marshes, and riparian scrub at or below 35 feet.	Habitat not present
Orcuttia tenuis (slender orcutt grass)	Threatened	Endangered	CNPS-1B.1	Vernal pools and other seasonally ponded features.	Habitat not present
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Endangered	CNPS-1B.1	Vernal pools and other seasonally ponded features.	Habitat not present
Plagiobothrys hystriculus (bearded popcorn-flower)	None	None	CNPS-1B.1	Vernal pools and other seasonally ponded features.	Habitat not present
Sagittaria sanfordii (Sanford's arrowhead)	None	None	CNPS-1B.2	Emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches.	Habitat not present
Symphyotrichum lentum (Suisun Marsh aster)	None	None	CNPS-1B.2	Fresh and salt water marshes, often associated with blackberries, cattails, and bulrush.	Habitat not present
Trifolium hydrophilum (saline clover)	None	None	CNPS-1B.2	Grows in marshes, swamps, and vernal pools with alkaline soils.	Habitat not present

American Badger

American badger (*Taxidea taxus*) is a listed CDFG species of special concern. This burrowing carnivorous mammal is solitary and very territorial preferring to feed on small mammals, lizards, snakes, insects, and carrion. It has no known natural enemies and inhabits dry, open fields, grasslands, and pastures.

Though the open field provide appropriate foraging and burrowing habitat, it is unlikely that the species occupies the site due to the urbanization of the surrounding area.

Birds

Cooper's Hawk

Cooper's hawk (*Accipiter cooperi*), which is also known as the blue darter or chicken hawk, is listed by CDFG as a special animal. This raptor is an ambush predator that prefers to forage in or near wooded locations for birds, domestic poultry, and small mammals. Unlike falcons which use their beaks, Cooper's hawks subdue prey by continuously squeezing with talon-equipped feet. It has been observed on occasion drowning captured prey in water. This species prefers tree nesting in wooded areas typically 10 to 60 feet above ground level.

Low quality nesting and foraging habitat is present.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are listed by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters that favor dense stands of cattails and/or bulrush, but they also commonly utilize blackberry thickets associated with drainages, ditches, and canals. The closest recorded nesting colony is approximately 5 miles to the southeast.

Low quality nesting and foraging habitat is present.

Golden Eagle

The golden eagle (*Aquila chrysaetos*) is afforded protection by CDFG as a species of special concern and a fully protected species. It is a very large solitary tree nesting raptor which feeds on mammals, carrion, and reptiles. Though its natural densities are generally believed to be low,

it once was relatively common to the open areas of California. Today, the golden eagle is rarely observed in the Great Central Valley.

Low quality foraging habitat is present.

Great Egret

The great egret (*Ardea alba*) is listed by CDFG as a special animal. This bird usually forages alone in shallow open water and wetlands for fish, amphibians, and aquatic invertebrates. The species has recovered from historic persecution by plume hunters, but destruction of wetlands, especially in the West where colonies are few and widely scattered, poses a current threat. Great egrets prefer breeding habitat in or near open waters and wetlands.

Low quality foraging habitat is present.

Great Blue Heron

The great blue heron (*Ardea herodias*) is listed by CDFG as a special animal. This wading bird forages in wetlands and shallow open waters for fish, aquatic invertebrates, small mammals, and amphibians. It usually nests in rookeries that are situated in wetlands or near open waters.

Low quality foraging habitat is present.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species that is afforded protection by CDFG as a species of special concern due to declining populations in the Great Central Valley of California. They typically inhabit open grasslands and nest in abandoned ground squirrel burrows, cavities associated with raised mounds, levees, or soft berm features. The nearest CNDDB occurrence is located approximately 0.3 mile north of the site.

Nesting and foraging habitat is present.

Ferruginous Hawk

The ferruginous hawk (*Buteo regalis*) is listed a CDFG special animal. It is a solitary tree nester that forages in grasslands or other open areas for small mammals, birds, reptiles, and large

insects. This large and powerful buteo often winters in California and may nest in riparian corridors.

Low quality nesting and foraging habitat is present.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. Breeding pairs typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors, grassland, irrigated pasture, and cropland with a high density of rodents. The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter. Numerous occurrences of Swainson's hawk nesting sites are located within ten miles of the study area including one less than 1.5 miles to the northwest along the American River.

Low quality nesting and foraging habitat is present.

Western Yellow-Billed Cuckoo

The western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a California endangered species and a federal candidate species. Strongly associated with riparian corridors, this bird prefers to nest and forage in thick willow and cottonwood stands for invertebrates and tree frogs. Also known as the raincrow because of its perceived tendency to call before rainfall, it is mostly confined to small enclaves on the upper Sacramento River and parts of the Kern River, though it was once widespread throughout California. The only recorded occurrence by the CNDDB within 10 miles of the study area is located approximately 10 miles southwest of the parcel near Clarksburg, but this is based on a historic specimen collected in 1896 and archived at the Museum of Vertebrate Zoology at Berkeley. Presently, western yellow-billed cuckoo is believed to be extirpated from the area.

The necessary habitat to support this species is not present.

White-Tailed Kite

White-tailed kite (*Elanus leucurus*), also known as black-shouldered kite, is a CDFG fully protected species. This non-migrating bird typically attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. It builds a platform-like nest of sticks in trees or shrubs and lays 3 to 5

eggs, but may brood a second clutch if prey is abundant. The kite's distinct style of hunting includes hovering before diving onto its target.

Low quality foraging and nesting habitats are present within the study area.

Merlin

The Merlin (*Falco columbarius*) is a CDFG species of special concern that has never been observed nesting in California. Though it is a transient throughout most of the state, wintering populations are known to occur in the Central Valley and along the coast.

Low quality foraging habitat is present within the study area.

Black-Crowned Night Heron

Black-crowned night heron (*Nycticorax nycticorax*) is listed by CDFG as a special animal. Most colonies are associated with large wetlands, streams, rivers, marshes, mud flats, and the edges of lakes that have become overgrown with cattails and/or rushes. Its diet consists mainly of fish, though earthworms, insects, crayfish, mussels, squid, amphibians, lizards, snakes, rodents, birds, eggs, trash, carrion, and plant materials are also commonly consumed. Black-crowned night herons defend their foraging territory and hunt usually alone at night. This species, like many heron species, is also a colonial tree nester.

Habitat is not present within the study area.

Double-Crested Cormorant

The double-crested cormorant (*Phalacrocorax auritus*) is listed by CDFG as a special animal. This diving aquatic bird is the most widespread cormorant in North America. It prefers open water habitats such as ponds, rivers, estuaries, lagoons, and open coastlines where is forages for fish, amphibians, and crustaceans. It constructs nests near water in colonies on cliffs, rocks, or in trees.

Habitat is not present within the study area.

Purple Martin

The purple martin (*Progne subis*) is a California species of special concern. This bird winters in South American and migrates to Mexico, the United States, and southern Canada to breed. It is a colonial nester and utilizes natural cavities such as hollow trees, cliffs, and abandoned woodpecker dens, though it also takes advantage of created nesting sites such as bird houses or gourds. It feeds on winged insects which it catches on the fly, and it prefers open areas near lakes, ponds, marshes or other water features. Purple martins were observed nesting in the weep holes of the Highway 50 overpass less than 0.2 miles to the north.

Low quality foraging habitat is present within the study area.

Bank Swallow

The bank swallow (*Riparia riparia*) is a California threatened species. This bird nests in colonies of two or three pairs to a few thousand in vertical cliffs and banks associated with riparian zones, lakes, and streams. The species is known to colonize human-made vertical banks or building structures. The nearest recorded nesting colonies are located approximately 2.5 miles to the northeast along the American River corridor.

Low quality foraging habitat is present within the study area.

Yellow-Headed Blackbird

The yellow-headed blackbird (*Xanthocephalus xanthocephalus*) is a California species of special concern. It nests in the deeper portions of tule, bulrush, or cattail marshes than other blackbirds and typically breeds in California from April to June. Though some populations are known to over-winter in California, many migrate to Mexico and Costa Rica. Yellow-headed blackbirds feed on seeds and insects, and flocks are often observed in open areas such as grasslands and agricultural fields during migration. The only recorded occurrence within the CNDDB search is located near Freeport approximately 8 miles to the southeast. This occurrence information is based on historical egg samples collected June 10, 1899, and archived at the Museum of Vertebrate Zoology at Berkeley.

Low quality foraging habitat is present within the study area.

Amphibians & Reptiles

Western Pond Turtle

The western pond turtle (*Emys marmorata*) is a CDFG species of special concern. Its favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks.

The necessary habitat is not present for western pond turtle.

Western Spadefoot Toad

The western spadefoot toad (*Spea hammondii)* is a California species of special concern. It is a nocturnally active animal, and prefers to forage in grassland, scrub, and chaparral for a variety of invertebrates such as insects and worms. This species breeds from January to May in vernal pools, pools in ephemeral stream courses, and other fish-free water features. Females commonly lay more than 500 eggs in one season. The tadpoles develop in 3 to 11 weeks, and must complete their metamorphosis before the temporary pools dry.

The study area provides marginal habitat for this species.

Giant Garter Snake

Giant garter snake (*Thamnophis gigas*) is designated as a federal threatened and state threatened species afforded special protection by FWS and CDFG. The snakes are generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation. Several occurrences of giant garter snake are recorded within the search area, including two undisclosed sightings within the Rio Linda 7.5-minute quadrangle, which is situated about five miles to the north.

Habitat is not present within the study area.

Fish

Sacramento Perch

Sacramento perch (*Archoplites interruptus*), which is a CDFG species of special concern, is the only native centrarchid (sunfish) west of the Rocky Mountains. The species was once very abundant in lakes, sloughs, rivers, ponds, and drainages throughout the Central Valley but has been adversely affected by habitat destruction and the introduction of non-native fishes. Introduced sunfish such as largemouth bass and bluegill typically spawn in nests that the male builds and protects until the off-spring are free swimming. Conversely, the Sacramento perch usually spawns on unprepared substrate and provides no further parental care. This likely results in a higher rate of predation of eggs.

Habitat is not present within the study area.

Chinook Salmon

The CNDDB identified two listed runs of Chinook salmon (*Oncorhynchus tshawytscha*) as occurring within 10 miles of the study area: the spring-run (California-listed and federally-listed threatened) and the winter-run—Sacramento River (California-listed and federally-listed endangered). Chinook salmon require cold freshwater water courses with gravelly substrates for breeding. The young remain in freshwater habitats foraging for a variety of terrestrial and aquatic vertebrates before migrating to estuarine and marine environments. The Chinook is the largest salmonid with individuals reaching sizes as large as 120 pounds.

Habitat is not present within the study area.

Sacramento Splittail

Sacramento splittail (*Pogonichthys macrolepidotus*) is a California species of special concern that was recently de-listed by the USFWS. Adults migrate upstream from brackish areas to spawn in freshwater on submerged vegetation in temporarily flooded upland and riparian habitats. It usually prefers the lower reaches of rivers, bypasses, and sloughs. The young remain in shallow, vegetated areas near spawning sites and eventually migrate to deeper offshore habitat upon maturation.

The study area does not provide suitable habitat for this species.

Invertebrates

Bee (No Common Name)

This bee (*Andrena subapasta*) is not a state or federal listed species; however, it has been assigned a State Ranking code of S3 meaning that 21 to 100 elemental occurrences or 3,000 to 10,000 individuals have been identified within the state. This species is known to collect pollen from sandwort (*Arenaria sp.*), butter and eggs (*Triphysaria erianthus*), and goldfields (*Lasthenia sp.*) which grow in vernal pools or adjacent grasslands. Though its life cycle is poorly understood, other bees of this genus are solitary and burrow into the ground to cache collected pollen and lay eggs.

The site lacks the appropriate habitat to support this species.

Vernal Pool Branchiopods

The record search lists several occurrences of the federally threatened vernal pool fairy shrimp *(Branchinecta lynchi*) and the federally endangered vernal pool tadpole shrimp (*Lepidurus packardi*) as well as the non-listed California linderiella (*Linderiella occidentalis*) and the midvalley fairy shrimp (*Branchinecta mesovallensis*) as occurring within ten miles of the study area. These species exclusively inhabit vernal pools or other seasonally ponded wetlands that sustain inundation during the winter before drying in the late spring

The excavated basins/ponds do not provide the seasonal wetland habitat necessary to support these species.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is a federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region. The nearest occurrence is approximately 2.2 miles north of the site along the American River.

The lack of elderberry shrubs would preclude the likelihood that valley elderberry longhorn beetles occur within the study area.

Hairy Water Flea

Hairy water flea (*Dumontia oregonensis*) is not a state or federal listed species; however, it has been assigned a State Ranking code of S1 meaning that less than six elemental occurrences or less than 1,000 individuals have been identified within the state. The habits of this poorly understood species have not been thoroughly documented, though they are associated with vernal pools. In California specimens have only been observed within the confines of Travis Air Force Base and Mather Field.

The excavated basins/ponds do not provide the seasonal wetland habitat necessary to support this species.

Ricksecker's Water Scavenger Beetle

This aquatic beetle (*Hydrochara rickseckeri*) is not a state or federal listed species; however, it has been assigned a State Ranking code of S1S2 meaning that <6 to 20 elemental occurrences or <1,000 to 3,000 individuals have been identified within the state. The habits of this poorly understood species have not been thoroughly documented. They are believed to be scavengers and metamorphose from a predacious larval stage. This species favors shallow, weedy freshwater habitats such as vernal pools, lakes, ponds, and slow moving streams. It is capable of flight, but its dispersal tendencies are not well documented.

The appropriate habitat for the above species is present within the study area.

Plants

Plants Associated with Vernal Pools and Other Wet Habitats

Special status plant species identified by CNDDB as occurring in the search area include Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*), dwarf downingia (*Downingia pusilla*), legenere (*Legenere limosa*), slender orcutt grass (*Orcuttia tenuis*), Sacramento orcutt grass (*Orcuttia viscida*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), bearded popcorn-flower (*Plagiobothrys hystriculus*), woolly rose-mallow (*Hibiscus lasiocarpus* var. *occidentalis*), and Sanford's arrowhead (*Sagittaria sanfordii*). Peruvian dodder favors freshwater swamps and marshes. Slender orcutt grass, Sacramento orcutt grass, dwarf downingia, bearded popcorn-flower, and legenere are strongly associated with vernal pools or other seasonal wetlands. Bogg's Lake hedge-hyssop is found in vernal pools, but it also favors other shallow water habitats such as lake margins and marshes.

Ahart's dwarf rush occurs in vernal pools, but it is also found in the wetter portions of other habitats such as chaparral, cismontane woodland, meadows, seeps, and valley and foothill grasslands. Wooly rose-mallow typically occurs on freshwater-saturated riverbanks and low peat islands located within sloughs at elevations below 360 feet. Sanford's arrowhead generally occurs in or near standing or slow-moving drainages, canals, ditches, or ponds.

Several special status plants found in association with salt, brackish, and fresh marshes were identified in the CNDDB search as occurring within the search area and include saline clover (*Trifolium hydrophilum*), Mason's lilaeopsis (*Lilaeopsis masonii*), and the Suisun Marsh aster (*Symphyotrichum lentum*). Mason's lilaeopsis, which is also known as the mudflat quillwort, prefers intertidal marshes, brackish and/or freshwater swamps, but it also inhabits riparian scrub habitats below approximately 40 feet in elevation.

The necessary habitat to support these species is not present.

Special Status Species Plants Associated with Upland Habitats

The CNDDB lists two special status species plants known to grow in dryer habitats: Northern California black walnut (*Juglans hindsii*) and stinkbells (*Fritillaria agrestis*). Northern California black walnut (*Juglans hindsii*) is a CNPS list 1B.1 species. Northern California black walnuts naturally occur in riparian woodlands or forests with deep alluvial soils, though it was used extensively as rootstock for English walnut (*Juglans regia*) with which is readily hybridizes. Currently, only two of three native stands are still in existence. Stinkbells, so named because of its strong odor, is a species of lily commonly associated with non-native annual grasslands with heavy clay soils from 30 to 5,100 feet. It blooms from March to June and also favors other habitat types such as chaparral, cismontane woodland, and pinyon and juniper woodland. Stinkbells have also been documented on serpentine soils.

The site lacks the habitat for both of the above species.

SUMMARY OF SPECIAL STATUS SPECIES HABITAT ASSESSMENT

Based on the presence of suitable habitat, several special status species may occur within the study area including Cooper's hawk, tricolored blackbird, golden eagle, great egret, great blue heron, burrowing owl, ferruginous hawk, Swainson's hawk, white-tailed kite, Merlin, purple martin, bank swallow, yellow-headed blackbird, western spadefoot toad, and Ricksecker's water scavenger beetle.

If future development of the study area will occur during the raptor nesting season, which extends from February to September, we recommend that a pre-construction nesting survey be completed two weeks prior to the start of work.

APPENDIX A

DATA SHEETS

Gibson & Skordal, LLC
WETLAND CONSULTANTS

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: JPI Cal State Golf	Date: 3-18-04
Applicant/Owner: JPI	City/County: City of Sacramento
Investigator(s): D. Skordal, J. Gibson	State:
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Upland turf - lawn
Is the site significantly disturbed (Atypical Situation)? Irrigation - Landscaping (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 1

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator
1. Lolium perenne		
2. Unid. grass (turf)	recently	
3. Trifolium sp.	MOWED	
4. Trifolium repens		
5. Poa annua		
6.		
7.		
8.		

Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). N/A

Remarks: Site has been irrigated, landscaped, and otherwise maintained as turf/lawn for driving range complex. The operation was abandoned in January of 2004.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Nearly level to gently sloping terrain that was sprinkler irrigated in the past as part of golf range maintenance. Lacks wetland hydrology indicators.

SOILS

Map Unit Name (Series and Phase): San Joaquin - Urban land complex, 0-2 %

Drainage Class: Moderately well drained

Taxonomy (Subgroup): Aboptic Durixeralfs

Field Observations
Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 3/3	None	—	Silt loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Unknown Yes No
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: JPI-CAL State Golf	Date: 3-18-04
Applicant/Owner: JPI	City/County: City of Sacramento
Investigator(s): D. Skordal, J. Gibson	State: CA
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Upland - grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 2

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)		FAC	9.		
2. Bromus diandrus (D)		UPL	10.		
3. Geranium dissectum (D)		UPL	11.		
4. Avena sp.		UPL	12.		
5. Hordeum hystrix		FAC	13.		
6. Bromus mollis		FACU	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33 %

Remarks: Disturbed Grassland (fallow field)

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Undulating terrain lacking depression; oxidized root channels or other wetland hydrology indicators.

SOILS

Map Unit Name (Series and Phase): San Joaquin – Urban land complex, 0-2 %

Drainage Class: Moderately well drained

Taxonomy (Subgroup): Abruptic Durixeralfs

Field Observations
Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 3/3	None	—	sandy silt loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

APPENDIX B

PHOTOGRAPHS

Gibson & Skordal, LLC
WETLAND CONSULTANTS

Photo 1 – Detention Basin Looking South

Photo 2 – Site Looking West

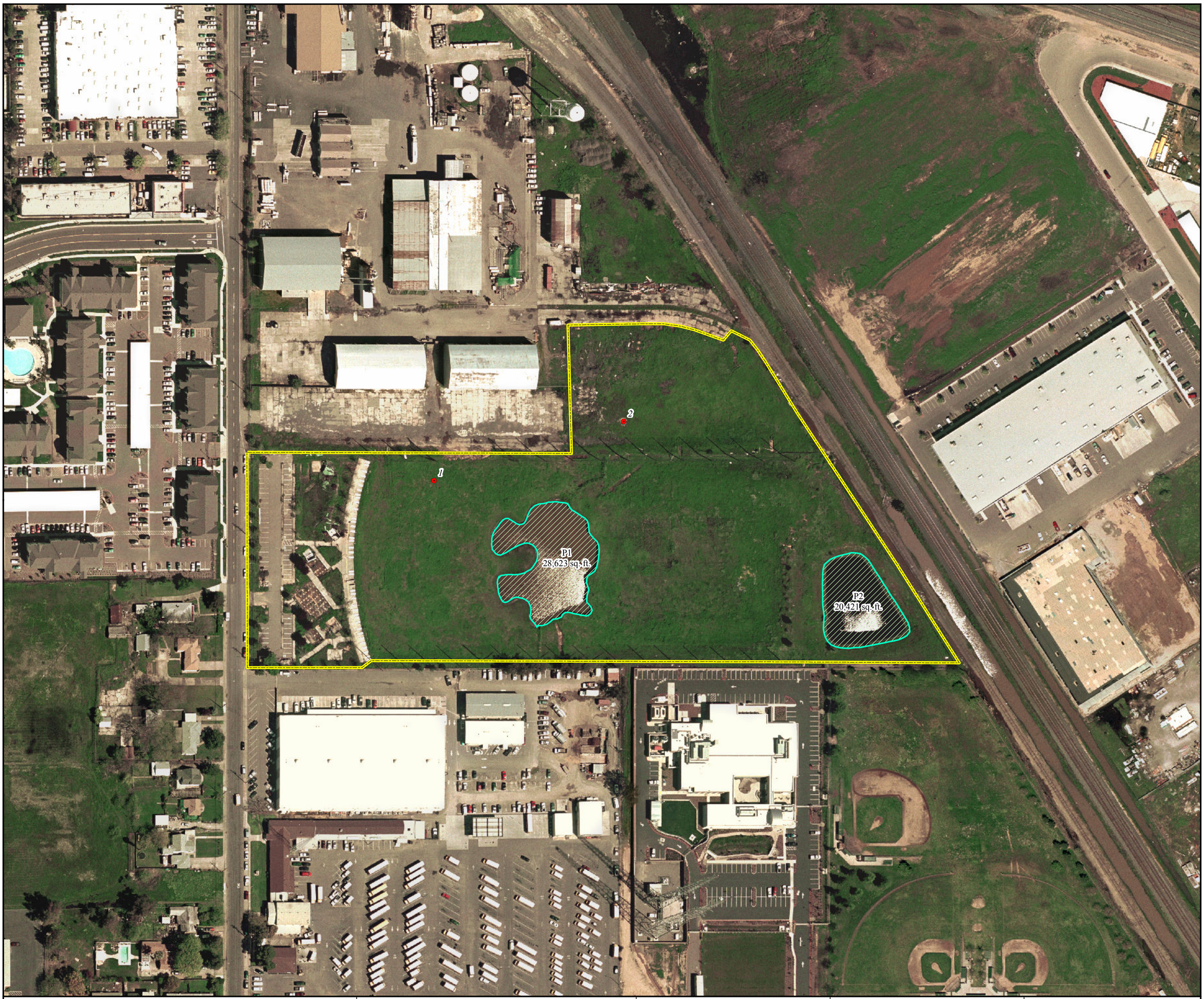
Photo 3 – Concrete Lined Pond Looking North

Photo 4 – Site Looking East

APPENDIX C

JURISDICTIONAL DELINEATION MAP

Gibson & Skordal, LLC
WETLAND CONSULTANTS



Jurisdictional Delineation Map

Campus Crest Student Housing

Sacramento County, California

- Data Point
- Excavated Ponds/Basin (totaling 1.13 acres)
- Study Area Boundary (12.6 acres)

N

100 50 0 100

Feet

Prepared For:

Campus Crest Development, LLC
2100 Rexford Road #414
Charlotte, North Carolina 28211

2617 K Street, Suite 175
Sacramento, California 95816
www.gibsonandskordal.com
phone: 916.822.3230

Gibson & Skordal, LLC
WETLAND CONSULTANTS

Prepared By:	M. Hirkala
Prepared Date:	March 2004
Revision Date:	May 2012
Date Aerial Flown:	2007

APPENDIX D

PLANT LIST

Gibson & Skordal, LLC
WETLAND CONSULTANTS

LIST OF PLANTS OBSERVED ON THE CAMPUS CREST STUDENT HOUSING PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	**Common Name**	**Status** [1]&[2]
Anagallis arvensis	scarlet pimpernel	FAC
Avena fatua	wild oats	UPL
Baccharis pilularis	coyote brush	UPL
Bromus diandrus	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cerastium viscosum	chickweed	UPL
Convolvulus arvensis	bindweed	UPL
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Eremocarpus setigerus	doveweed	UPL
Erodium botrys	filaree	UPL
Eucalyptus sp.	gum	UPL
Festuca arundinacea	tall fescue	FAC-
Holocarpha virgata	tarweed	UPL
Hordeum hystrix	Mediterranean barley	FAC
Hordeum leporinum	barley	FACU-UPL
Hypochaeris glabra	smooth cats tongue	UPL
Juncus bufonius	toad rush	FACW
Lactuca serriola	prickly lettuce	FAC
Leontodon leysseri	hairy hawkbit	FACU
Lolium perenne	perennial ryegrass	FAC
Lotus corniculatus	bird's foot trefoil	FAC
Melilotus sp.	sweet clover	FACU-FAC
Paspalum dilatatum	dallis grass	FAC
Plantago lanceolata	English plantain	FAC-
Picris echioides	bristly ox-tongue	FAC
Poa annua	annual bluegrass	FACW-
Populus fremontii	Fremont cottonwood	FACW
Ranunculus muricatus	spiny-fruited buttercup	FACW+
Raphanus sativus	wild radish	UPL
Rubus procerus	Himalaya blackberry	FAC
Rumex crispus	curly dock	FACW-
Salix lasiolepis	arroyo willow	FACW
Salix sp.	willow	FACW-OBL
Senecio vulgaris	common groundsel	---
Sonchus arvensis	field sow thistle	FACU
Trifolium hirtum	rose clover	UPL
Typha angustifolia	slender-leaf cattail	OBL
Vicia villosa	winter vetch	UPL
Vulpia myuros	rat-tail fescue	FACU

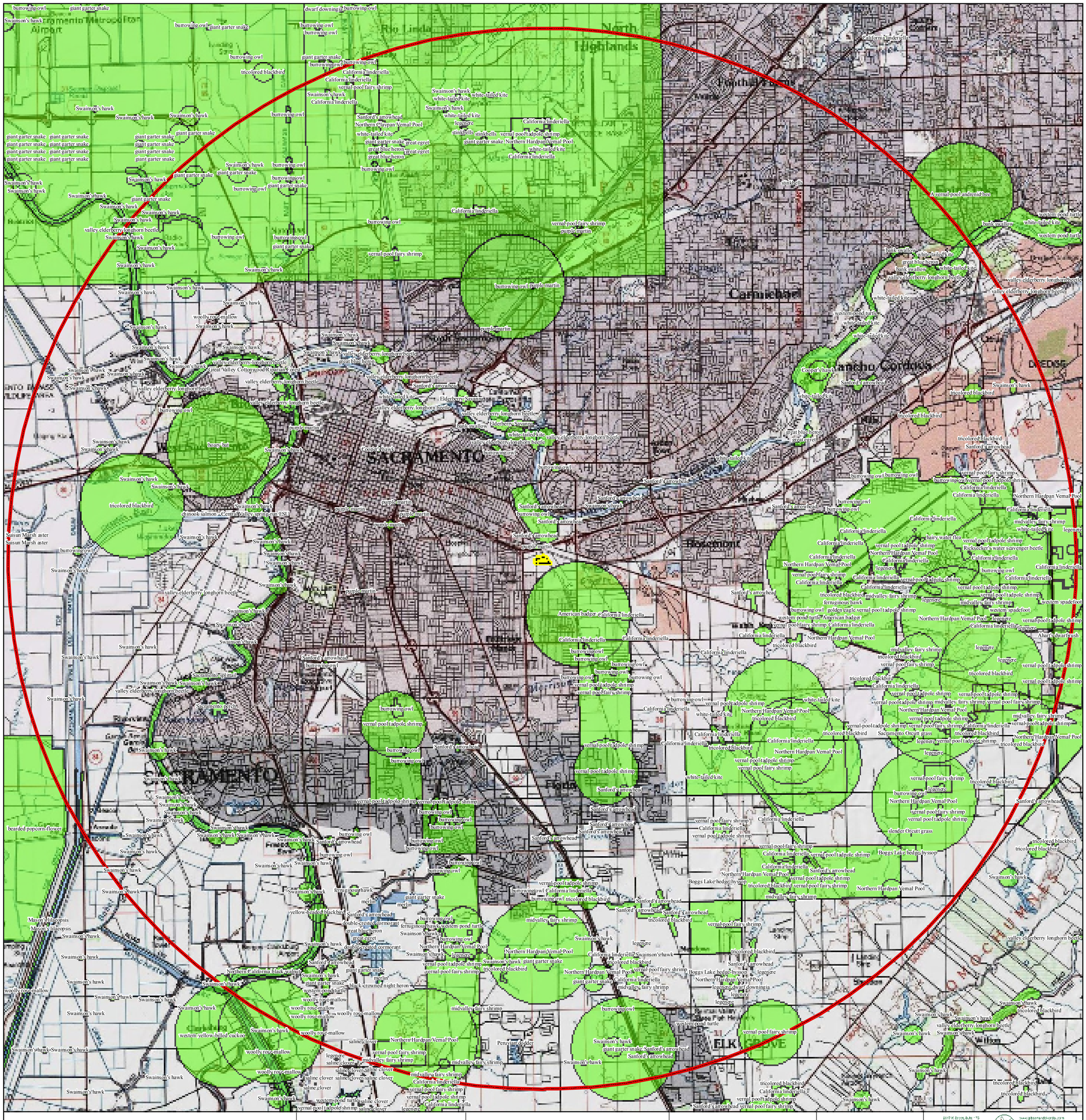
[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

APPENDIX E

CNDDB OCCURRENCES MAP

Gibson & Skordal, LLC
WETLAND CONSULTANTS



CNDDB Occurrence Exhibit

Campus Crest Student Housing

Sacramento County, California

The elemental occurrence location data was provided by the California Department of Fish and Game's Natural Diversity Data Base (Version 3.1.0). The size of elemental occurrence polygons are dependent upon several factors including DFG mapping policies and the age and specificity of reported special status species sightings.

Source: *ESRI On-Line USA Topo Maps*, 2012

Prepared For:

Campus Crest Development, LLC
2100 Rexford Road #414
Charlotte, North Carolina 28211

2617 K Street, Suite 170
Sacramento, California 95816
www.gibsonandskordal.com
phone: 916.922.3332

Gibson & Skordal, LLC
WETLAND CONSULTANTS

Prepared By: M. Hirkala

Prepared Date: May 2012

Date Aerial Flown:

Date of CNDDB Shapefiles: May 2012

RESPONSE TO COMMENTS

RESPONSE TO COMMENTS

This Response to Comments document contains comments received during the public review period of the Campus Crest Student Housing project (proposed project) Initial Study/Mitigated Negative Declaration (IS/MND).

BACKGROUND

The City of Sacramento, as lead agency, released the IS/MND for public review beginning on Tuesday June 4, 2013 and ending on Wednesday July 3, 2013 pursuant to CEQA Guidelines Section 15105. The Draft IS/MND and supporting documents were made available at the City of Sacramento, Community Development Department, located at 300 Richards Boulevard in Sacramento, CA. According to CEQA Guidelines Sections 15073 and 15074, the lead agency must consider the comments received during consultation and review periods together with the IS/MND. However, unlike with an Environmental Impact Report, comments received on an IS/MND are not required to be attached to the IS/MND, nor must the lead agency make specific written responses to public agencies. Nonetheless, the lead agency has chosen to provide responses to the comments received during the public review process for the proposed project IS/MND.

LIST OF COMMENTERS

The City of Sacramento received eight comment letters during the open comment period on the IS/MND for the proposed project. The comment letters were authored by the following representatives of agencies and individuals:

Letter 1	Eric Fredericks, California Department of Transportation
Letter 2	Paul Philley, Sacramento Metropolitan Air Quality Management District
Letter 3	Patrick R. McGill, Union Pacific Railroad Company
Letter 4	Chris Holm, Walk Sacramento
Letter 5	Chandra Y. Clady
Letter 6	Karen Cotton, KCMKC
Letter 7	Tom Harrington, Reasonable Development For Tahoe Park
Letter 8	Bill Motmans, Tahoe Park Neighborhood Association

RESPONSE TO COMMENTS

The Response to Comments section includes responses to each of the comment letters submitted regarding the proposed project. Master Responses are provided below regarding concerns that are brought forth in a number of comments received on the IS/MND. Each bracketed comment letter is followed by numbered responses to each bracketed comment from the City intended to supplement, clarify, or amend information provided in the IS/MND and/or refer the reader to a Master Response or the appropriate place in the IS/MND where the requested information can be found.

Master Response 1: Trip Generation Rates used for the project traffic analysis, particularly regarding the nature of the student housing.

Summary of Comments

Several comments received on the IS/MND questioned the trip generation rates used for the project traffic analysis, particularly regarding the nature of the student housing and use of a trip generation rate per dwelling unit rather than per bed.

Master Response to Comments

The City prepared a Traffic Study Assessment for the proposed project (see Attachment 1 to this Response to Comments document). Due to the proposed project proximity to California State University Sacramento (CSUS) and the anticipated high number of student's residents, it is anticipated that the project's trip generation characteristics would be different from a traditional apartment complex.

Additionally, *Trip Generation, 9th Edition* does not list a land use specific for student housing; therefore, the City used an estimated trip generation rate used for a similar project located at 4th Avenue within close proximity to the project site.

The Jefferson Commons Project Traffic Study (March 10, 2003) developed a trip generation rate for student housing based on surveys of existing apartment complexes that have a high number of student residents in the cities of Sacramento and Davis. The trip generation rates for the surveyed complexes used two independent variables (dwelling units and beds).

The study found that the trip rate based on dwelling units as the independent variable are more highly correlated than the data based on the number of beds. Consequently, a trip generation rate of 7.36 per dwelling unit was used to estimate the daily trip generation, while a trip generation rate of 0.37 and 0.61 were used to estimate the AM and PM peak hours, respectively.

The proposed project is located within walking distance from the light rail station at 65th Street and is in close proximity to CSUS. Therefore, it is expected that the number of vehicle trips would be reduced further, as students would be riding transit, bicycling, or walking to school. Accordingly, the rates used in the assessment are appropriate for the type of project.

Master Response 2: The traffic section did not take into account the traffic impact on local residential streets, and the traffic data to show the impact of the project is not provided in the report.

Summary of Comments

Several comments received on the IS/MND questioned where to find the data that shows that the project would not increase the peak average delay by more than 5 seconds for the intersection elements, and the V/C ratio for roadway segments would not be increased by 0.02 or more. Additionally, several comments stated that the project is in conflict with the General Plan 2030

goal of development of complete streets (Goal M4.2) and the 65th Street Station Area Plan for smart growth.

Master Response to Comments

As provided on page 69 of the IS/MND, the proposed project is consistent with the type of land use analyzed in the 65th Street Station Area Plan EIR and the City of Sacramento General Plan Master EIR. Traffic and circulation impacts from the 65th Street Station Area Plan were discussed in the 65th Street Station Area Plan EIR. The 65th Street Station Area Plan analyzed impacts to all transportation system components including automobile, bicycle, pedestrian and transit within the 65th Street Station Area Plan. The 65th Street Station Area Plan EIR concluded that the plan would result in significant and unavoidable effects (i.e., Impact 4.31 related to roadway segments in the 65th Street Station Area, Impact 4.3.3 related to the freeway system, and Impact 4.3-6 related to the transit system) and defined several mitigation measures to improve the overall transportation system with the 65th Street Station Area Plan.

Mitigation measures defined in the IS/MND for the proposed project are consistent with the 65th Street Area Plan mitigation measures, which require payment of fair-share fees to implement Intelligent Transportation System (ITS) improvements on major streets and designated pedestrian and bicycle improvements in the study area. Additionally, the City is in the process of preparing a finance plan for the infrastructure improvements required with the area plan. The applicant shall be required to join the finance plan and pay the appropriate fee, once created. As a condition of approval, preparation/construction of the proposed project's frontage improvements shall be required to be consistent with the approved Redding Avenue cross-section, per the approved 65th Street Station Area Plan. Therefore, additional analysis is not required.

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
703 B STREET
MARYSVILLE, CA 95901
PHONE (916) 274-0635
FAX (916) 274-0602
TTY 711

Letter 1

Flex your power!
Be energy efficient!

July 2, 2013

032013-SAC-0087
03-SAC-50/PM 2.97

Ms. Dana Allen
City of Sacramento
Community Development Department
300 Richards Blvd.
Sacramento, CA 95811

Campus Crest Student Housing- Mitigated Negative Declaration (MND)

Dear Ms. Allen:

1-1 Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above. The project proposes to construct and operate a 224-unit student housing development consisting of 12 buildings, a clubhouse, activity area, and green space. The proposed project will provide 604 on-site parking spaces to accommodate the number of student residents. The project is located on Redding Ave. in the 65th Street Station Area of the City of Sacramento, one mile south of US Highway 50 (US 50). The following comments are based on the MND.

Traffic Mitigation

1-2 According to the City of Sacramento's MND for the proposed project, there will be 83 AM peak hour trips and 137 PM peak hour trips generated by the project. Although these results include bicyclists, pedestrians, and students riding transit, trip generation from the project will result in additional peak hour motorists. Currently, US 50 motorists experience congestion delay near the 65th Street interchange during peak commute hours. The proposed project's MND includes as mitigation for fair share costs to widen the westbound US 50 off-ramp onto 65th Street. We concur with the project's mitigation measure for widening the westbound US 50 /65th Street off-ramp.

Pedestrian and Bicycle Mobility

1-3 In order to ensure mobility for pedestrians and bicyclists in the vicinity of the US 50 /65th Street interchange, we encourage the City to incorporate best pedestrian and bicycle design practices. For reference, Caltrans has produced the Complete Intersections Guide and can be accessed at the following website address:

http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html

Please provide our office with copies of any further actions related to this project. We would appreciate the opportunity to review and comment on any changes related to this development.

1-4

If you have any questions regarding these comments or require additional information, please contact Angela Shepard, Intergovernmental Review Coordinator, at (916) 274-0566 or by email at: angela.shepard@dot.ca.gov.

Sincerely,

ERIC FREDERICKS, Chief
Office of Transportation Planning – South

cc: Scott Morgan, State Clearinghouse

LETTER 1: ERIC FREDERICKS, CALIFORNIA DEPARTMENT OF TRANSPORTATION

Response to Comment 1-1

The comment is an introductory comment and describes the proposed project. The comment does not address the adequacy of the IS/MND.

Response to Comment 1-2

The comment concurs with the mitigation requiring fair share contributions for the widening of the westbound US 50/65th Street off-ramp.

Response to Comment 1-3

The comment encourages the City to incorporate best pedestrian and bicycle design practices in the vicinity of the US 50/65th Street interchange. The comment does not address the adequacy of the IS/MND.

Response to Comment 1-4

The comment request copies of any further actions related to the proposed project and does not address the adequacy of the IS/MND.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Letter 2

Larry Greene
AIR POLLUTION CONTROL OFFICER

July 3, 2013

Dana Allen & Antonio Ablog
Community Development Department, City of Sacramento
300 Richards Boulevard
Sacramento, CA 95811
dallen@cityofsacramento.org & aablog@cityofsacramento.org

RE: Campus Crest Student Housing - SAC201301457

Ms. Allen and Mr. Ablog,

2-1 This letter responds to the Mitigated Negative Declaration for the Campus Crest Student Housing project received by the Sacramento Metropolitan Air Quality Management District (District) on May 30, 2013. The District is exhorted by State Law to "represent the citizens of the Sacrament district in influencing the decisions of other public and private agencies whose actions may have an adverse impact on air quality within the Sacramento district."[1] We offer our comments in that spirit.

Consistency with Climate Action Plan

On February 14, 2012, The City of Sacramento adopted the Sacramento Climate Action Plan (CAP).[2] This plan includes specific actions and benchmarks that projects within the City of Sacramento must meet. The first of these actions involves reducing vehicle miles traveled:

2-2 Action 1.1.1: Require new development within the city to demonstrate that it would reduce vehicle miles traveled (VMT)/capita by 35 percent compared to the statewide average VMT/capita based on project density, diversity, design, destination accessibility and distance to transit.

Unfortunately, the mitigated negative declaration (MND) did not demonstrate that the project's projected VMT/capita would meet the benchmark required by Action 1.1.1. While the project's current greenhouse gas analysis asserts that state actions will reduce the project's emissions to a level consistent with City targets, the targets cited are for the average of the entire City. The CAP clearly indicates that new development

[1] California Public Health and Safety Code section 40961
[2] http://www.sacgp.org/documents/2__Adopted_CAP_whole.pdf

2-2 Con't

must exceed those targets so as to bring the citywide average per capita emissions to an acceptable level. The analysis currently does not demonstrate consistency with the CAP since the project demonstrates no VMT/capita reductions as compared to statewide numbers. The District recommends redoing the CalEEMod analysis consistent with District guidance, factoring in the mitigative effects of project density, diversity, design, destination accessibility and distance to transit inherent in the project and then compare the resulting VMT/capita to statewide averages.

Parking Ratios

A mitigation that could help the project demonstrate a reduction in VMT/capita, as well as reducing construction costs for the applicant, increasing green space, and reducing debt burdens on college students would be to have a comprehensive parking management plan for the project, which can reduce VMT up to 20 percent.[3] This plan could include:

2-3

- Unbundling the cost of vehicle parking from the cost of the apartment
- Car sharing
- Enhanced bicycle parking
- On-street market pricing
- Residential area parking permits
- Vehicle parking supply limits

The project is currently parked at a ratio of more than one parking space per bed. With tuition rising[4] and college debt at an all-time high,[5] not having the expense and burden of a vehicle is a way for students to minimize debt. Indeed, the project description states that "The project's residents would have easy access to the existing light rail station, transit center, and would be located in close proximity to CSUS." Despite these advantages, the project proponents are assuming that every resident will be bringing a car with them to Sacramento, despite the sustainable options available to the students. And if a student chooses not to bring a car, they still must pay for the construction and maintenance of a parking space in their rent, subsidizing the students wealthy enough to afford an automobile.

[3] Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures. California Air Pollution Control Officers Association. August 2010. Page 55. http://www.airquality.org/climatechange/CAPCOA_QGHGMM_Report_082510-FINAL.pdf

[4] Historic State University fee rates, 2012/13 supplemental documentation. The California State University. http://www.calstate.edu/budget/fybudget/2012-2013/documentation/13-historical-suf-rates.shtml

[5] Danielle Kurtzleben. Average Student Debt Reaches All-Time High. US News & World Report. November 3, 2011. http://www.usnews.com/news/articles/2011/11/03/average-student-debt-reaches-all-time-high

2-3 Con't

The solution is to create a project where students can live without an automobile, and those that do drive pay for the costs of its storage. The District proposes that the project unbundle the cost of parking from the cost of the apartment; residents sign a lease for their apartment and then they may choose whether or not to sign a lease for a parking space. A tangible reduction in rent may encourage some students to forgo owning a vehicle, and may decide to join a car sharing service, ride a bike, or utilize transit. Instead of pour asphalt, the project proponents can then either pocket the saved construction costs or reinvest them in other amenities, such as bicycle parking facilities or additional green space. An apartment complex with paid parking may also draw the interest of a local car sharing service, which would continue to reduce the need for parking spaces at the project, lower the costs of car ownership for the residents, and drive down the projected VMT/capita of the project.

2-4

The MND uses fear of parking spillover as justification for the vast amounts of parking proposed (492 spaces above the minimum parking requirement and 91 spaces above the Fehr & Peers parking study). The District firmly believes that there are methods of controlling spillover that are less impactful to the environment, more equitable to students, and meet the clean air goals of the CAP and region. The City could condition the project so that if spillover parking becomes a problem, the project funds a residential parking project (similar to the Cannery Business Park). The District believes that these measures, taken as a whole, would reduce traffic, parking and air quality impacts on the neighbors and region better than the project as proposed.

2-5

General Comments

All projects are subject to District rules in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling (916) 874-4800. The District thanks the City of Sacramento for the opportunity to comment on this project. If you have additional questions or require further assistance, please contact me at pphilley@airquality.org or (916) 874-4882.

Sincerely,

Paul Philley, AICP
Sacramento Metropolitan Air Quality Management District
777 12th Street, 3rd Floor
Sacramento, CA 95814

LETTER 2: PAUL PHILLEY, SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Response to Comment 2-1

The comment is an introductory comment and does not address the adequacy of the IS/MND.

Response to Comment 2-2

The comment is correct that the City's Climate Action Plan (CAP) requires a vehicle miles traveled (VMT)/capita reduction of 35 percent compared to the statewide average. At the time of preparation of the IS/MND, the City had prepared a draft checklist for compliance with the CAP. The CAP checklist was completed to assist in the preparation of the IS/MND (Attachment 2 to this Response to Comment document). Based upon the CAP checklist, the project has a 49 percent reduction below the 2009 statewide average VMT per capita, which exceeds the required 35 percent.

Response to Comment 2-3

The comment suggests alternative approaches to parking at the complex because of the nature of college students and to assist in reducing the VMT. As noted in Response to Comment 2-2 above, compliance with the VMT/capita reduction has been achieved. The comments regarding the approaches to parking do not question the adequacy of the IS/MND; however, will be forwarded to the decision-makers for their consideration.

Response to Comment 2-4

See Response to Comment 2-3.

Response to Comment 2-5

The comment notes that the project must comply with all District rules in effect at the time of construction. The City requires compliance with District rules.

UNION PACIFIC RAILROAD
1400 Douglas Street, Stop 1580
Omaha, Nebraska 68179

P 402 544 5761
F 402 997 3603
prmcgill@up.com

Patrick R. McGill/UPC Senior Counsel-Real Estate, Law Dept.

Letter 3

July 3, 2013

VIA EMAIL ONLY
dallen@cityofsacramento.org

City of Sacramento
Community Development Department
Attn. Dana Allen
300 Richards Boulevard
Sacramento, CA 95811

Re: Comments to Notice of Availability/Intent to Approve the Draft Mitigated Negative Declaration for the Campus Crest Housing Development at 3075 Redding Avenue, Sacramento, California, P12-038 ("Project")

To Whom It May Concern:

Union Pacific Railroad Company, a Delaware corporation ("UP"), is delivering this letter in response to the above notice. UP provided the attached letter to Ronald Simons of Campus Crest Development in March of 2013. The letter to Mr. Simons contained UP's comments regarding the Project. The Draft Mitigated Negative Declaration does not appear to acknowledge Union Pacific's comments or address its concerns. We are forwarding a copy of the letter to you so that the City will be aware of UP's concerns about the Project's potential effects on public safety. UP specifically asks the City to consider requiring the developer to construct barrier walls or fences in appropriate locations in the Project area to address potential safety issues. Please do not hesitate to contact the undersigned if you have any questions or concerns.

3-1

Sincerely,

Patrick R. McGill
Senior Counsel
Union Pacific Railroad Company

Enc.

cc: Austin Fearnow
Liisa Lawson Stark
Patrick McGrath
James Smith

UNION PACIFIC RAILROAD
1400 Douglas Street, Stop 1580
Omaha, Nebraska 68179

P 402 544 5761
F 402 997 3603
prmcgill@up.com

Patrick R. McGill/UPC Senior Counsel-Real Estate, Law Dept.

March 21, 2013

VIA EMAIL ONLY
simons.company@gmail.com

Campus Crest
Attn. Ronald Simons
2100 Rexford Road, Fourth Floor
Charlotte, NC 28211

Re: Comments to Notice of Community Discussion on Proposed Housing Development at 3075 Redding Avenue, Sacramento, California ("Project")

Dear Mr. Simons:

3-2 Union Pacific Railroad Company, a Delaware corporation ("UP"), is delivering this letter in response to the above notice. It appears that the proposed Project is located next to UP's main line rail corridor. Accordingly, UP wishes to raise the following issues.

Locating student housing and other school amenities near an active rail corridor will result in increased pedestrian and vehicular traffic crossing the railroad tracks. An increase of trespassing (especially by students attending the school) along the railroad right-of-way should be expected as well. Due to these issues and other safety concerns, UP asks that you examine and mitigate the safety risks associated with the Project.

3-3 We specifically request that a study be performed to examine the projected increase in pedestrian and vehicular traffic and the impacts on the nearby at-grade road crossings to see if any mitigation measures should be included in the Project. We further request that you examine the impacts associated with the increased likelihood of trespassing on the UP right-of-way and set forth appropriate mitigation measures. Due to the distance between the Project and the University, mitigation measures relating to trespassing and student safety will need to be explored along the entire length of UP's rail corridor between the two locations.

3-3 Con't

Mitigation measures should include barrier walls or fences, pavement markings, and/or "no trespassing" signs designed to prevent students and local residents from trespassing onto the right-of-way.

3-4

We ask that you keep in mind that any development near operating right-of-way can negatively impact freight rail service and create unintended consequences that are in neither the railroad's nor the public's best interests. In the event of train slowdowns or stoppages, train cars may be forced to block at-grade roadway intersections, causing traffic disruptions. Moreover, the interaction of people and trains may make people all the more aware of the natural and unavoidable features of rail service, including noise, mechanical odors and vibration.

UP appreciates you giving due consideration to the above concerns, as this Project may result in significant impacts to public safety, land use, traffic, and trespassing.

Please give notice to UP of all future hearings and other matters with respect to the Project as follows:

3-5

Austin Fearnow
Manager, Real Estate
Union Pacific Railroad Company
1400 Douglas Street - STOP 1690
Omaha, NE 68179

Please do not hesitate to contact the undersigned if you have any questions or concerns.

Sincerely,

Patrick R. McGill
Senior Counsel
Union Pacific Railroad Company

cc: Austin Fearnow
Liisa Lawson Stark
Patrick McGrath
James Smith

LETTER 3: PATRICK R. MCGILL, UNION PACIFIC RAILROAD COMPANY

Response to Comment 3-1

The comment states that a letter had previously been provided to the applicant and that the IS/MND did not address the comments. The previous letter is provided as an attachment to the comment letter, and responses are provided below.

Response to Comment 3-2

The comment is an introductory comment that notes the project is next to Union Pacific's main line rail corridor. The comment does not address the adequacy of the IS/MND.

Response to Comment 3-3

Union Pacific is concerned that the student housing near the rail corridor will result in increased pedestrian and vehicular traffic crossing the tracks, as well as trespassing and other safety concerns. The proposed project includes fences surrounding the site, including the eastern property line adjacent to the UPRR right-of-way, which would prevent direct pedestrian access from the site to the UPRR right-of-way. The proposed project is consistent with the type of land use analyzed in the 65th Street Station Area Plan EIR. The Plan includes many transportation system upgrades. Mitigation for the proposed project requires payment of fair-share to implement ITS improvements on major streets as well as designated pedestrian and bicycle improvements in the study area.

Response to Comment 3-4

The comment is a general comment related to the interactions between development and rail service and does not address the adequacy of the IS/MND.

Response to Comment 3-5

The comment is a concluding comment requesting notice of all future hearings and other matters related to the project. The City will ensure UP receives notice.

Letter 4

WALKSACRAMENTO
Walkable Communities = Communities of Walkers

7/3/2013 VIA EMAIL

Dana Allen, Associate Planner
City of Sacramento, Community Development Department
300 Richards Boulevard
Sacramento, CA 95811

RE: Draft Mitigated Negative Declaration for the Campus Crest Housing Project (P12-038)

Dear Ms. Allen:

WALKSacramento has reviewed the Draft Mitigated Negative Declaration for the Campus Crest Student Housing Project. We submit the following comments to encourage the City of Sacramento to provide a complete and meaningful analysis of the potential transportation impacts of the proposed project.

4-1 Development projects that lead to more walking and active travel are critical to our community's future. Human beings need moderate exercise for about 30 minutes a day, such as walking one and a half miles, in order to prevent the development of chronic disease and overweight. Only 38% of the population in the Sacramento region is active at this minimal level, often due to limitations placed by a built environment not suited to walking and other types of physically active travel. If the future residents of Campus Crest Housing could obtain regular exercise by walking and bicycling to their regular destinations, such as Sac State, it could yield significant health improvements for them. Reduced driving would also decrease vehicle emissions and the prevalence of asthma, cardiovascular disease, and other air pollution-related conditions.

4-2 Will the proposed Campus Crest project contribute to more walking and will the site design encourage students to walk? Perhaps not, since the abundance of automobile parking spaces and their close proximity to the apartment units will make it easy for students to opt to take the car rather than walk to school and nearby stores and restaurants.

4-3 The vehicle trip generation results included in the Initial Study may not present an accurate assessment of the number of auto trips the project will put on the streets of the local area. The reason for this is because the transportation behaviors of college-age students are different from the typical residents of apartments used as the basis for the ITE trip generation rate. We believe the Mitigated Negative Declaration should account for this and use a trip generation rate determined by a local study or from studies of comparable situations.

909 12th Street, Suite #203 • Sacramento, CA 95814 • 916-446-9255
www.walksacramento.org

4-4 Furthermore, the traffic study providing the basis for the Mitigated Negative Declaration was conducted for a different project and the assumptions made for that project aren't identified in the Campus Crest Initial Study. The discussion in the Initial Study also indicates that Mitigation Measures 11-1 through 11-3 will reduce the trip impacts to a less-than-significant level. However, we have been unable to find mitigation measures with such numbering in any associated EIR's.

4-5 Considering that the trip generation rate may be invalid, that the traffic study was from a different project, and that several traffic mitigation measures are not clearly stated, WALKSacramento requests that a new traffic study be conducted.

4-6 WALKSacramento is working to support increased physical activity such as walking and bicycling in local neighborhoods as well as helping to create community environments that support walking and bicycling. The benefits include improved physical fitness, less motor vehicle traffic congestion, better air quality, and a stronger sense of cohesion and safety in local neighborhoods.

Thank you for your consideration of these comments and recommendations. If you have questions or need additional information, please contact me at (916) 446-9255 or cholm@walksacramento.org.

Sincerely,

Chris Holm
Project Analyst

909 12th Street, Suite #203 • Sacramento, CA 95814 • 916-446-9255
www.walksacramento.org

LETTER 4: CHRIS HOLM, WALK SACRAMENTO

Response to Comment 4-1

The comment describes the benefits of walking and bicycling and does not address the adequacy of the IS/MND.

Response to Comment 4-2

The comments notes that the number of parking spaces provided does not encourage walking. The comment does not address the adequacy of the IS/MND.

Response to Comment 4-3

The comment questions the accuracy of the trip generation rates used in the analysis due to the nature of the college student residents. Please see Master Response 1 for further details. The City prepared a Traffic Study Assessment for the proposed project. Because ITE *Trip Generation, 9th Edition* does not list a land use specific for the student housing, the City used an estimated trip generation rate used for a similar project located across Redding Avenue.. Therefore, the rates used in the assessment are appropriate for the type of project.

Response to Comment 4-4

The numbering of the mitigation measures in the IS/MND are specific to the Campus Crest Student Housing Project. The referenced mitigation measures from the 65th Street Station Area Plan EIR are 4.3-1a, 4.3-1b, and 4.3-3, as noted on page 70 of the IS/MND.

Response to Comment 4-5

See Responses to Comments 4-3 and 4-4 above, as well as Master Responses 1 and 2. The project is consistent with the type and intensity of uses anticipated in the 65th Street Station Area Plan EIR as well as the City of Sacramento General Plan Master EIR. Additional analysis is not required.

Response to Comment 4-6

The comment is a conclusion and does not address the adequacy of the IS/MND.

Letter 5

Dana Allen, Associate Planner
City of Sacramento,
Community Development Department
300 Richards Boulevard
Sacramento, CA 95811

Re: Campus Crest Development Project Mitigated Negative Declaration (P12-038)

Dear Ms. Allen:

The following issues need to be addressed from the above-referenced report:

- The report references this development as a 224-unit multi-family apartment complex. The word "multi-family" contradicts this type of development in that college students are the primary market and the units are leased by the bed. In this case, 600 beds will be leased and 604 parking spaces will be provided to potentially accommodate every renter's automobile. This project will in fact create a significant impact on traffic and increase carbon emissions. The report does not provide any accurate data based on these facts.
- The report does not take into account the traffic impact on local residential streets Redding Avenue and San Joaquin blvds. There is not data nor mitigating measures for this potential impacts.

5-1

Your response to these issues will be appreciated. Thank you,

Chandra Y. Clady

LETTER 5: CHANDRA CLADY

Response to Comment 5-1

Please see Master Responses 1 and 2. The IS/MND included an analysis of traffic beginning on page 66 and on air quality beginning on page 11. Trip generation rates and air quality modeling data was provided in the IS/MND. The comment states that the document does not provide any accurate data, but does not provide specific concerns related to the inaccuracy of data in order to allow a detailed response. The comment also states that the traffic on Redding Avenue and San Joaquin Boulevard is not addressed. The proposed project is consistent with the type of land use analyzed in the 65th Street Station Area Plan EIR which analyzed the local roadways, including Redding Avenue and San Joaquin Boulevard. The 65th Street Station Area Plan includes many transportation system upgrades. Mitigation for the proposed project requires payment of fair-share to implement Intelligent Transportation System (ITS) improvements on major streets as well as designated pedestrian and bicycle improvements in the study area.

June 11, 2013 via email dallen@cityofsacramento.org

Dana Allen
Associated Planner
City of Sacramento
Community Development Department
300 Richards Blvd.
Sacramento, CA 95811

Letter 6

RE: Campus Crest Housing Project P12-038

Dear Ms. Allen:

6-1 As the property owner of the 5 acre complex at 3009 65th St. and a neighbor of the existing student housing apartments, I would like to express my concerns regarding the proposed Campus Crest Housing Project.

6-2 I realize that this project would be bringing in revenue to our city with the 600 plus students but I am concerned about the traffic these students would create with their vehicles. We already have a problem at the intersection in front of my office at 65th St. and Broadway with the traffic coming from Broadway onto 65th backed up all day long and then cars blocking the intersection even after the lights turn green. This problem has been ongoing for the past three years and does not seem to clear itself up.

6-3 I also hope that the city will place some guidelines to Campus Crest as when Jefferson Commons was built, they assured the city that they were renting to students but instead they rented to anyone who could pay the rent, creating a problem for myself and the police department.

6-4 When attending the last neighborhood meeting, the representatives from Campus Crest did express several key points that will help in controlling their residents with two on site managers, along with an apartment to a law enforcement officer. They also mentioned that they would be providing a shuttle to CSUS during the day but will the students take advantage to it if they own cars?

6-5 Please consider these comments when making your decision to allow them to move forward with their project. I don't want this project to create additional hardships to our neighborhood.

Sincerely,

K. Cotton

Karen Cotton
Managing Partner
KCMKC
3009 65th St.
Sacramento, CA 95820

LETTER 6: KAREN COTTON, KCMKC

Response to Comment 6-1

The comment is an introductory statement that does not address the adequacy of the IS/MND.

Response to Comment 6-2

Traffic is addressed beginning on page 66 of the IS/MND. In addition, the proposed project is consistent with the type of land use in analyzed in the 65th Street Station Area Plan EIR and the City of Sacramento General Plan Master EIR. The 65th Street Station Area Plan includes many transportation system upgrades. Mitigation for the proposed project requires payment of fair-share to implement ITS improvements on major streets as well as designated pedestrian and bicycle improvements in the study area.

Response to Comment 6-3

The comment expresses a concern regarding the rental of the proposed project to people other than students. The comment does not address the adequacy of the IS/MND, but will be forwarded to decision-makers for their consideration.

Response to Comment 6-4

The comment notes statements that the applicant made during a community meeting, but does not address the adequacy of the IS/MND. The comment will be forwarded to the decision-makers for their consideration.

Response to Comment 6-5

The comment is a conclusion and does not address the adequacy of the IS/MND.

Comments on Campus Crest Student Housing (P12-038), Initial Study/Mitigated Negative Declaration, prepared for the City of Sacramento, dated May 2013

Letter 7

7-1 It is inappropriate and incorrect to refer to this project as student housing. There is no affiliation with any school and by law residency cannot be restricted to students.

7-2 The report mentions that a similar project (Jefferson Lofts) was proposed for the same site in 2004 but was withdrawn by the developer prior to the Planning Commission meeting, reportedly because a city staff report prepared for the Planning Commission meeting recommended denial of approval. On 6/19/2013 city staff promised us a copy of this staff report, but to date we have not received it. What did the staff report say?

Transportation and Circulation

7-3 The report states on p. 71 that the City prepared a Traffic Study Assessment using an estimated trip generation rate for Jefferson Commons, a similar project on 4th Ave opened in 2004. What is the basis for the generation rate of 7.36 trips per dwelling unit with 0.37 AM peak hour trip generation rate and 0.61 PM peak hour trip generation rate? Was it based on typical multifamily housing? This is not typical multifamily housing since the tenancy is based on renting by the bed rather than by the unit. As each tenant is likely to have a motor vehicle the traffic generation should be based on the number of beds rather than the number of units. The city has had 9 years to check whether the model used for Jefferson commons accurately predicted trips generated by this type of housing. One should be conducted on Jefferson Commons to predict traffic for this project.

Standards of Significance
Roadway Segments and Intersections pg 68

7-4 Since a significant traffic impact would occur if the volume to capacity ratio (V/C ratio) were increased by 0.02 or more, where is the data to show that will not occur? Similarly, where is the data to show that the project won't increase the peak average vehicle delay by more than 5 seconds for the intersection element?

7-5 Second paragraph (Roadway Segments) states that "General Plan Policy M1.2.2 in the Mobility Element exempts six roadway elements from the Level of Service (LOS) standard E-F provided that the project will improve other parts of the system-wide roadway capacity, make intersection improvements, or enhance non-auto travel modes in furtherance of the 2030 General Plan Goals" How will this project accomplish these goals?

Pg. 69
Pedestrian Circulation;

7-6 The proposed project is in conflict with General Plan 2030 goal of development of complete streets (Goal M4.2) and the 65th Street Station Area Plan for smart growth. As noted in the General Plan and 65th Street Station Area Plan, the principles for complete streets and smart growth incorporate, that "The environment should include a well defined street wall of building facades, stoops and garden walls; front doors facing the streets:" These principles would also include secure bicycle parking in buildings; front doors and windows, rather than parking lots, facing public sidewalks. The proposed

Comments on Campus Crest Student Housing (P12-038), Initial Study/Mitigated Negative Declaration, prepared for the City of Sacramento, dated May 2013

project is in conflict with this policy by having the parking rather than the buildings facing the sidewalk.

7-6 Con't

The proposed project is also in conflict with Smart Growth principles adopted by the City Council (Resolution 2001-805) and with the specific reasons given for the Statement of Overriding Considerations (SOC) per City Council Resolution 2010-610. The reasons presented in the SOC and principles of Smart Growth provide in part for "a circulation system that provides greater connectivity and overcomes man-made barriers". This project as proposed would preclude this connectivity by blocking future connection of existing roads. This proposed project would also conflict with Smart Growth principles of short, pedestrian-friendly blocks.

7-7

Pursuant to CEQA guideline, the mitigation measures listed in the 65th Street Area Plan need to be feasible in that they can be accomplished in a successful manner in a reasonable period of time. Is there a finance plan in place for the designated improvements, so the fair share amount to be contributed by this project can be accurately determined? The fair share amount required per mitigation measure 4.3-1 b) is required at issuance of the building permit. It would appear that the cost to complete all the necessary designated pedestrian and bicycle improvements in mitigation measure 4.3-1 b) of the 65th Street Station Area Plan will be substantial. What is the estimated cost of all the pedestrian and bicycle improvements? How will that fair share amount be determined? What is the proposed timeline to complete these mitigation measures such that it would comply with the feasibility requirement, i.e., can be accomplished in a successful manner in a reasonable period of time? What evidence is there to show that these mitigation measures will be implemented in a timely manner? In order for the fair share arrangement to be an acceptable mitigation measure there needs to be substantial evidence that the revenue will be spent as stated. Is there a plan in place that identifies the cost and the schedule to implement each of these improvements?

Tom Harrington
Vice Chair
Reasonable Development For Tahoe Park
5709 8th Avenue
Sacramento, CA 95620
916-456-4789

Comments prepared on July 2, 2013

LETTER 7: TOM HARRINGTON, REASONABLE DEVELOPMENT FOR TAHOE PARK

Response to Comment 7-1

The comment raises concern regarding use of the term student housing. The comment does not address the adequacy of the IS/MND.

Response to Comment 7-2

The comment asks for a copy of a Staff Report, but does not address the adequacy of the IS/MND.

Response to Comment 7-3

The comment questions the trip generation rates used for the project's traffic analysis, particularly regarding the nature of the student residents. See Master Response 1. In addition, as discussed in Response to Comment 4-3, the City prepared a Traffic Study Assessment for the proposed project. Because ITE *Trip Generation, 9th Edition* does not list a land use specific for student housing, the City used an estimated trip generation rate used for a similar project located across Redding Avenue. The Jefferson Commons Project Traffic Study (March 10, 2003) developed a trip generation rate for a student housing based on surveys of the existing student apartment complexes in cities of Sacramento and Davis. Therefore, the rates used in the assessment are appropriate for the type of project.

Response to Comment 7-4

See Master Response 2. Traffic is addressed beginning on page 66 of the IS/MND. As discussed in Response to Comment 6-2, the proposed project is consistent with the type of land use analyzed in the 65th Street Station Area Plan EIR and the City of Sacramento General Plan Master EIR. The 65th Street Station Area Plan includes many transportation system upgrades. Mitigation for the proposed project requires payment of fair-share to implement ITS improvements on major streets as well as designated pedestrian and bicycle improvements in the study area. Additional analysis is not required.

Response to Comment 7-5

See Master Response 2 and Response to Comment 7-4.

Response to Comment 7-6

See Master Response 2 and Response to Comment 7-4.

Response to Comment 7-7

See Master Response 2.

From: vicepresident@tahoe-park.org [mailto:vicepresident@tahoe-park.org]
Sent: Wednesday, July 03, 2013 2:25 PM
To: Dana Allen
Subject: Campus Crest Project (P12-038) Draft Mitigated Negative Declaration

Letter 8

Following are comments on the above document and proposed project, in no particular order of significance:

8-1 The Mitigated Negative Declaration (MND) reference to the proposed project as "student" housing is misleading and confusing. Federal law prohibits renting housing to "students only." The proposed project should be more accurately described as an apartment complex for single resident occupancy.

8-2 The MND refers several times to the site as a golf driving range which closed in January 2004. Aerial photographs and/or Assessor's records should be able to identify activities/use of the site prior to 2004. It is quite possible the site was used for light industry or an agricultural purpose prior to 2004. More thorough research on that issue should be required.

Public Services

8-3 Subsection a discusses Fire Stations in the immediate area of the projected project. Due to recent and projected budget problems identified by the City, some fire stations have been closed for, at least, short periods of time. As we know, more than 95% of calls for services for firefighters are now related to injuries/sickness/assistance, and/or ambulance services, as opposed to extinguishing fires. To conclude, as the MND does, that there will be "less than significant" impact on service to the community as a whole when 600 plus unrelated adults and their friends and relatives visit is short sighted. At minimum, response times will be adversely impacted.

8-4 Subsection b discusses the Police Department and concludes there will be "less than significant" impact on the community. There exists empirical evidence that projects of this type cause increased problems and calls for service to the police department. In a letter to the President of College Park Communities dated September 19, 2006, Councilmember Kevin McCarty stated the following: "Recently, the Sacramento City Attorney's Office attorney's office filed four lawsuits in response to criminal or nuisance activity under a new program called Justice for Neighbors. The City Attorney's office is going after high-profile neighborhood problems and responding swiftly to complaints of severe nuisances or issues that threaten the health and safety of the public. I'm asking them to put the Verge on this list." The Verge, located directly across the street from this proposed project, also marketed themselves as "student housing" and assured the community they would be good neighbors.

Earlier, in a letter dated July 7, 2006, then Assemblymember Dave Jones, cautioned The Verge owners, "The resources of the Police Department should not be expended to assist you in running your business." His letter mentioned the late night parties and drug dealing in and around the complex.

In The State Hornet dated May 11, 2005, an article entitled, *The Verge inherits former Jefferson Commons issues,* the author discusses numerous problems related to the site, including a reference to "gunshots were fired in the apartment complex two consecutive nights in a row."

At one time, there were more calls for service to the Police Department at that complex *alone* than in any other area or neighborhood in the city.

8-4 Cont'd

To conclude there would be "less than significant" impact on the rest of the community is naive. In fairness to the current applicant, they, of course had nothing to do with the past owners or the negative behavior of the tenants. However, the past owners gave constant and repeated assurances to the city and neighbors that these type of problems would not occur. To the extent the problems did occur, it is foolish and short sighted to ignore the potential for future problems. In an MND which relies heavily on projections found in the 2030 General Plan, why would "lessons learned" a mere 6-7 years ago be ignored?

8-5

Will calls for service to Fire and Police go up? Of course they will. The applicant must provide specific measures to address both the cost to the community as a whole, and a proven method to avoid problems of this nature.

8-6

The methodology for Vehicle Trip calculations is baffling, to the extent it can understood. The projections made do not cite any real studies or explanation of how they were compiled. Further explanation is necessary.

8-7

Traffic gridlock, lack of safe pedestrian and bicycle pathways are not addressed at all. "Mitigation" measures are referred to vaguely after "fees" are extracted from the developer.

8-8

The MND is a cursory overview of a proposed project that will have serious ramifications to residents of the immediate neighborhood as well as other residents of Sacramento. As such, it should include more thoroughly researched information so that Planning Commissioners and the public know what kind of impact this proposed project will have now and in the future.

Thank you,
Bill Motmans

LETTER 8: BILL MOTMANS, TAHOE PARK NEIGHBORHOOD ASSOCIATION

Response to Comment 8-1

As noted in the first sentence under Question C on page 62 of the IS/MND, "Although the proposed project consists of constructing a 224-unit student housing complex, the apartments would not be restricted to students only."

Response to Comment 8-2

The commenter states that "it is quite possible the site was used for light industrial or an agricultural purpose prior to 2004" and that "more thorough research on that issue should be required." However, the commenter does not provide specific concerns related to such uses or an explanation of why such research should be required in order to allow a detailed response. It should be noted that under CEQA, a proposed project should be compared to the existing setting. The IS/MND included a comparison of the proposed project to the existing conditions at the project site, as well as background information of the project site, such as the previous golf driving range land use. Further historical descriptions were not warranted to provide an adequate environmental analysis. In addition, Mitigation Measure 5-1 on page 42 of the IS/MND requires that the on-site soils undergo soil and vapor analysis for contamination prior to construction of the project, which would ensure that any contamination on the project site would be remediated.

Response to Comment 8-3

As stated on page 61 of the IS/MND, " […] impacts to fire service from the proposed project have already been accounted for, and the project would comply with the requirements of the City Code, and General Plan policies regarding adequate fire protection services." As such, the project would not result in any additional impacts from what is already anticipated for the site under the 2030 General Plan and General Plan Master EIR. In addition, as with any development within the City, payment of development impact fees towards public services would be required for the proposed project, which would help to maintain acceptable service ratios and response times.

Response to Comment 8-4

Page 62 of the IS/MND states the following:

> The Department uses a variety of data that includes GIS based data, call and crime frequency information, and available personnel to rebalance the deployment of resources on an annual basis to meet the changing demands of the City. However, the project applicant would be required to pay fees for the provision of public services.

As stated, the SFD is aware of the changing demands of the City and uses a variety of data to meet such changes in demands. In addition, the project would be required to pay development impact fees towards public services, which would help to maintain acceptable service ratios and response times.

Response to Comment 8-5

See Responses to Comments 8-3 and 8-4.

Response to Comment 8-6

As discussed in Responses to Comments 4-3 and 5-1, the City prepared a Traffic Study Assessment for the proposed project. Because ITE *Trip Generation, 9th Edition* does not list a land use specific for student housing, the City used an estimated trip generation rate used for a similar project located across Redding Avenue. The Jefferson Commons Project Traffic Study (March 10, 2003) developed a trip generation rate for a student housing based on surveys of the existing student apartment complexes in cities of Sacramento and Davis. Consequently, a trip generation rate of 7.36 per dwelling unit was used to estimate the daily trip generation while a trip generation rate of 0.37 and 0.61 were used to estimate the AM and PM peak hours respectively. Therefore, the rates used in the assessment are accurate for the type of project. In addition, the proposed project is consistent with the type of land use analyzed in the 65th Street Station Area Plan EIR which analyzed the local roadways.

Response to Comment 8-7

As discussed in Response to Comment 5-1, the IS/MND included an analysis of traffic beginning on page 66. The proposed project is consistent with the type of land use analyzed in the 65th Street Station Area Plan EIR which analyzed the local roadways. The 65th Street Station Area Plan includes many transportation system upgrades. Mitigation for the proposed project requires payment of fair-share to implement ITS improvements on major streets as well as designated pedestrian and bicycle improvements in the study area.

Response to Comment 8-8

The commenter does not specify or provide supportive information regarding the “serious ramifications” mentioned in the comment or what “more thoroughly researched information” should be included. The IS/MND complies with the requirements of CEQA, and further research is not warranted to provide an adequate environmental analysis.

Attachment 1
Traffic Study Assessment

Interoffice

M E M O R A N D U M

To: Samar Hajeer, Senior Engineer
From: Alex Goloveshkin, Associate Engineer
Subject: Traffic Study Assessment for the proposed Campus Crest Project
Date: 10/30/2012

The proposed project site is a vacant former golf driving range located in the 65th Street Station Area of the City of Sacramento. The proposed 13.58 acres project site is bounded by Redding Avenue on the west, UPR tracks on the east. Properties bordering the north and south sides of the site include a building materials business and lumber yard, a school district corporation yard, a baseball field, a 911 dispatch and training facility, and a vacant lot. The proposed project consists of a 224-unit student apartment complex located within one mile to the California State University of Sacramento (CSUS) campus.

Sacramento Regional Transit District (RT) does not provide public service and facilities along Redding Avenue in the immediate vicinity of the project site. The nearest bus facility is located on 65th Street, 0.4 miles away. The University/65th Street light rail transit (LRT) station and bus transfer facility are 0.6 miles to the north of the project site.

Because ITE *Trip Generation, 9th Edition* does not list a land use specific for the student housing, an estimated trip generation rate used for a similar project located across the Redding Avenue is used. The Jefferson Commons Project Traffic Study (March 10, 2003) developed a trip generation rate for a student housing based on surveys of the existing student apartment complexes in cities of Sacramento and Davis. Consequently, a trip generation rate of 7.36 per dwelling unit was used to estimate the daily trip generation while a trip generation rate of 0.37 and 0.61 were used to estimate the AM and PM peak hours respectively.

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Table 1

	Daily and Peak Hour Trip Generation Summary									
	Daily		AM Peak Hour				PM Peak Hour			
				Trips				Trips		
Land Use	Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
224 Dwelling Units	7.36	1,649	0.37	17	66	83	0.61	89	48	137

As shown in Table 1, the proposed project will generate 83 new trips in the AM peak hour, 137 new trips in the PM peak hour, and 1,649 new daily trips. It is expected that the number of vehicle trips will be reduced further as students will be riding transit, bicycling, or walking to the school.

The proposed project site plans show two driveways. The primary access to the proposed project is via a gated driveway approximately 55 feet wide located in the middle of the site. Per the City of Sacramento municipal code the maximum width for two-way commercial driveways is 35 feet. The second driveway located in the northwest corner of the proposed project is not identified but appears to be used by emergency vehicles only.

The proposed project is located within the 65th Street Station Area Plan and is consistent with

this area plan; therefore, the project is anticipated to implement the applicable Mitigation Measures identified in the 65th Street Station Area Plan Environmental Impact Report (EIR), dated October 2009. The applicant shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis:

- cost of the City of Sacramento Traffic Operation Center to implement ITS improvements on major streets;
- cost of designated pedestrian and bicycle improvements;
- cost of widening the westbound US 50 off-ramp at 65th Street.

Taking into consideration the consistency of the proposed project with the 65th Street Station Area Plan EIR and relatively low numbers of new trips expected to be generated by the project during AM and PM peak hours, a Traffic Impact Analysis is not required for this project. It is recommended to reduce the driveway width to be in compliance with the City of Sacramento municipal code.

Attachment 2
CAP Consistency Checklist

Community Development Department
300 Richards Boulevard 3rd Floor Sacramento, CA 95811
Help Line: (916) 264-5011
www.cityofsacramento.org/dsd

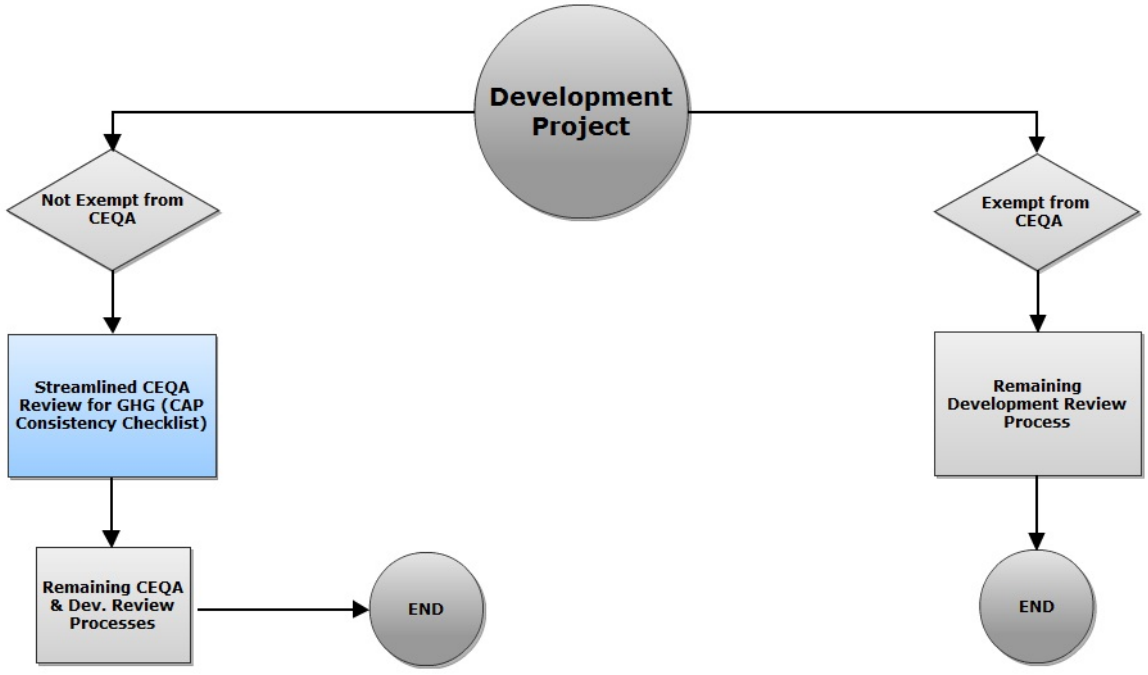
CLIMATE ACTION PLAN – CONSISTENCY REVIEW CHECKLIST

The purpose of the Climate Action Plan Consistency Review Checklist (CAP Consistency Review Checklist) is to provide a streamlined review process for proposed new development projects which are subject to environmental review pursuant to the California Environmental Quality Act (CEQA) for greenhouse gas emissions (GHGs).

CEQA Guidelines require the analysis of GHGs and potential climate change impacts from new development. The Sacramento Climate Action Plan qualifies under section 15183.5 of the CEQA Guidelines as a plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. This allows projects that demonstrate consistency with the CAP to be eligible for this streamlining procedure. Projects that demonstrate consistency with the CAP and the Sacramento 2030 General Plan may be able to answer "No additional significant environmental effect" in the City's initial study checklist.

The diagram below shows the context for the CAP Consistency Review Checklist within the planning review process framework.

Streamlined Review of GHG Emissions in Development Projects



Community Development Department
300 Richards Boulevard 3rd Floor Sacramento, CA 95811
Help Line: (916) 264-5011
www.cityofsacramento.org/dsd

CLIMATE ACTION PLAN – CONSISTENCY REVIEW CHECKLIST

Application Submittal Requirements

1. The CAP Consistency Review Checklist is required only for proposed new development projects which are subject to CEQA review.
2. If required, the CAP Consistency Review Checklist must be submitted in addition to the basic set of requirements set forth in the Universal Application and the Planning Application Submittal Matrix.
3. All items listed to show that proposed project meets the requirements of the Checklist should also be listed in project description and shown on the submitted plans.

Application Information

Name of Applicant: Campus Crest Development

Address: PO Box 58838, Webster, TX 77598-8838

Phone: 713-364-6310 E-mail: simons.company@gmail.com

Address of Property: 3075 Redding Avenue, Sacramento, CA 95817

APN of Property: 015-0101-021

Applicant is owner of subject property X Yes ☐ No. If no, complete following and the attached letter of agency.

Name of Owner: _____

Address: _____

Phone: _____ E-Mail: _____

Community Development Department
300 Richards Boulevard 3rd Floor Sacramento, CA 95811
Help Line: (916) 264-5011
www.cityofsacramento.org/dsd

CAP Consistency Checklist Form for Projects that are Not Exempt from CEQA

Checklist Item (Check the appropriate box, and provide explanation for your answer).	Yes	No	NA*
1. Is the proposed project consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's 2030 General Plan?	X		
Please explain how proposed project meets this requirement, or how it does not. If "not applicable", explain why this requirement does not apply. See attached.			
2. Would the project reduce average vehicle miles traveled (VMT) per capita of the proposed residents, employees, and/or visitors to the project by a minimum of 35% compared to the statewide average?	X		
Please explain how proposed project meets this requirement. If "not applicable", explain why this was not required If project does not meet this requirement, see Directions for filling out CAP Consistency Review Checklist for alternatives to meeting checklist requirements. See attached. (Attach a copy of the VMT model input and output. Record the model and version here __CalEEMod.2011.1.1___)			
3. Would the project incorporate traffic calming measures? *(Examples of traffic calming measures include, but are not limited to: curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers.)*			X
Please explain how the proposed project meets this requirement (list traffic calming measures). If project does not meet this requirement, explain why. If "not applicable", explain why traffic calming measures were not required. See attached.			

Checklist Item (Check the appropriate box, and provide explanation for your answer).	Yes	No	NA*
4. Would the project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan?	X		
Please explain how the proposed project meets this requirement. If "not applicable", explain why this was not required. If project does not meet Pedestrian Master Plan Requirements, explain why. See attached.			
5. Would the project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen?	X		
Please explain how the proposed project meets this requirement. If "not applicable", explain why this was not required. If project does not meet Bikeway Master Plan Requirements, explain why. See attached.			
6. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., photovoltaic systems) that would generate at least a minimum of 15% of the project's total energy demand on-site? (CAP Actions: 3.4.1 and 3.4.2)		X	
Please explain how the proposed project meets this requirement. If "not applicable", explain why this was not required. If project does not meet requirements, see DIRECTIONS FOR FILLING OUT CAP CONSISTENCY REVIEW CHECKLIST re: alternatives to meeting checklist requirements. See attached. Attach a copy of the CalEEMod input and output. Record the model and version here __CalEEMod.2011.1.1___. Do NOT select the "use historical" box in CalEEMod for energy demand analysis related to this requirement.			

Note: All of the above Checklist items should also be listed in project description and shown on the submitted plans.

Certification

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Signature: _____ Date: _____

DIRECTIONS FOR FILLING OUT CAP CONSISTENCY REVIEW CHECKLIST

General Plan Consistency

1. **Is the proposed project consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's 2030 General Plan?**

   Refer to the 2030 General Plan, Land Use and Urban Form Designations and Development Standards starting on page 2-29. If a project is not fully consistent with the General Plan, the project still may qualify for consistency with the CAP, but this determination will need to be closely coordinated with the City. The City will determine whether the proposed land uses under consideration could be found consistent with the growth projections and assumptions used to develop the GHG emissions inventory and projections in the CAP.

Sustainable Land Use

2. **Would the project reduce average vehicle miles traveled (VMT) per capita of the proposed residents, employees, and/or visitors to the project by a minimum of 35% compared to the statewide average? (Applicable CAP Action: 1.1.1)**

   The statewide VMT/capita in 2009 was 8,937 VMT/capita/year, which is approximately 24.5 VMT/capita/day[1,2]. A 35% reduction below the 2009 statewide average would be 5,809 VMT/capita/year, or about 15.9 VMT/capita/day.

   Steps to Determine if Proposed Project is Consistent with CAP Action 1.1.1:

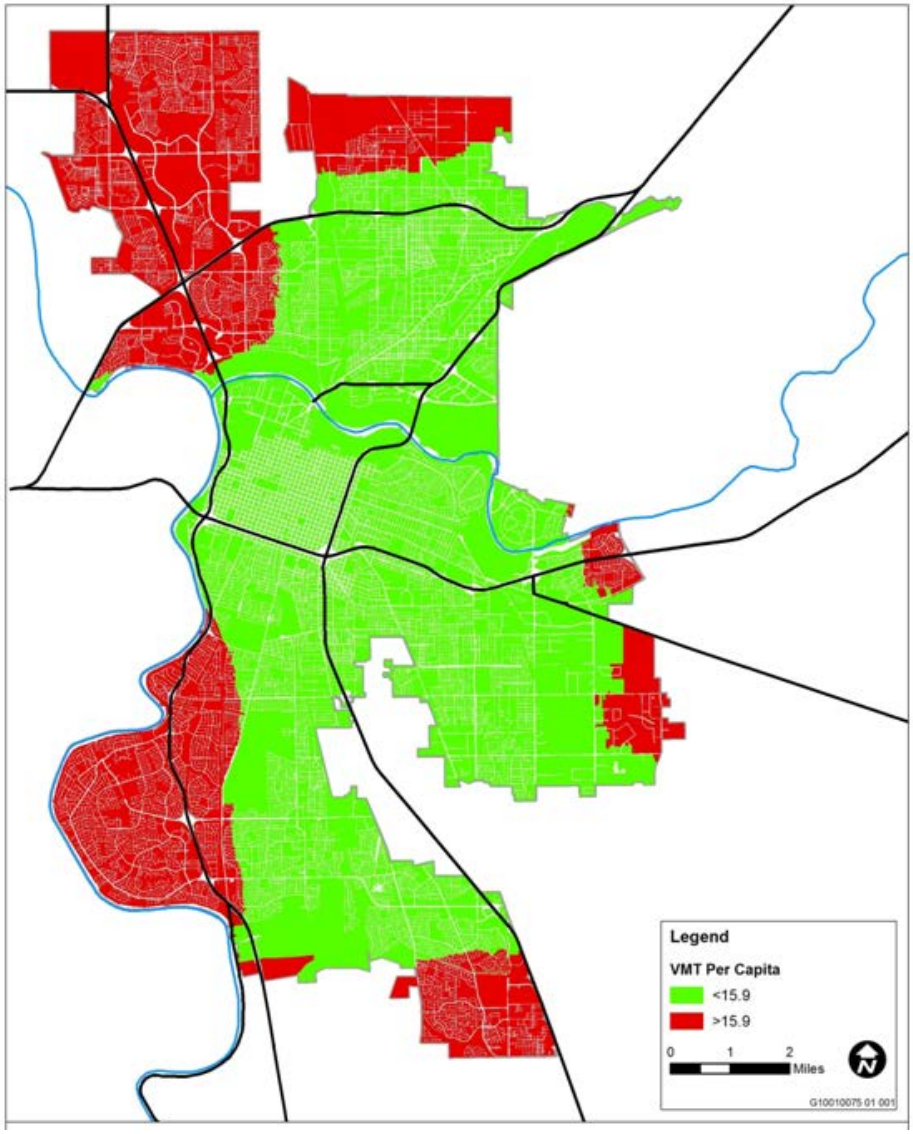
   Step 1: Consult VMT/Capita Screening Map:

   The map below can be used as a quick screening tool to determine whether or not a proposed project is likely to meet the 35% reduction standard based on its geographic location.

   If the proposed project is located in the green area of the map, it can be assumed to have a VMT/capita/day below 16, and no further action related to VMT is necessary. If the proposed project is located within one of the red areas, or in a white area adjacent to any red parcel, it cannot be assumed to achieve the standard, and further analysis is required to show that the project is below 16 VMT/capita/day. Proceed to Step 2, and estimate the project VMT using one of the computer modeling tools below.

[1] Federal Highway Administration. 2009. Table VM-2 - Highway Statistics 2009. http://www.fhwa.dot.gov/policyinformation/statistics/2009/vm2.cfm.
[2] U.S. Census Bureau, 2005-2009 American Community Survey. http://factfinder.census.gov/servlet/ACSSAFFFacts?_event=Search&_lang=en&_sse=on&geo_id=04000US06&_state=04000US06

Exhibit 1: City of Sacramento Residential Daily VMT/Capita, 2008 Base Year
Source: SACOG, SACSIM Model, 2012.



Step 2: VMT Modeling

Download one of computer modeling tools from the following links and follow the user guide for the tool that you have selected. Select the year 2020 as the year of project operation and compare the modeled VMT/capita/day with the City's standard of 15.9 VMT/capita/day. If the result of the computer modeling supports the project's consistency with the City's VMT/capita standard, then the project is considered to comply with CAP Action 1.1.1. If the project's estimated VMT/capita exceeds the City's standard of 15.9, proceed to Step 3.

California Emission Estimator Model (CalEEMod 2013.2 or most recent version)
CalEEMod is a statewide land use emissions computer model that provides a comprehensive estimate of development project criteria pollutants and GHG emissions associated with both construction and operations from a variety of land use project types.

Sketch 7 VMT Estimation Tool (Version 2.0 or most recent version)
The Sketch 7 model is a web-based, parcel-level, scenario planning tool that allows users to input land uses and project attributes such as demographic data, design, density, quality of public transit, mix of land uses, and other planning-related features. Sketch 7 estimates VMT/capita and other environmental indicators based on region-specific parameters, local land use plans and the SACSIM model. Sketch 7 also accounts for the interaction of the project's proposed land uses with the surrounding land uses.

Step 3: Additional Mitigation and Further Analysis

If the proposed project does not pass Steps 1 and 2, additional mitigation from another category (such as building energy efficiency) can be substituted as long as this GHG reduction does not "double count" GHG reductions already taken by the CAP. In other words, mitigation will be necessary to reduce GHG emissions from the project beyond what is already accounted for in the CAP (to avoid double-counting).

Step 3(a) - Determine the increment of total VMT by which the project exceeds the City's 15.9 VMT/capita/day standard. For example, if the project would result in 18 VMT/capita/day and proposes to accommodate 400 new residents, the increment that the project would exceed the City's standard would be 306,600 VMT, which equals: (18 – 15.9 VMT/capita/day) * 400 residents *365 days/year.

Step 3(b) - Convert VMT into metric tons carbon dioxide equivalent per year (MT CO_2e/year) by use of a vehicle emission factor. The City recommends using an emission factor of 0.000452 MT CO_2e/VMT, which was obtained from the California Air Resources Board's (ARB's) Mobile-Source Emission Factor Model (EMFAC) and was used to develop the City's GHG inventory in its CAP. In the above example, the project would be required to mitigate approximately 139 MT CO_2e/year through additional mitigation.

Additional mitigation may include individual measures or a combination of:

- Compliance with Tier 2 Energy Efficiency Standards per California Green Building Standards Code (CALGreen)
- Generation of greater than 15% of the project's energy on-site through installation of solar panels or other on-site renewable energy technology
- Other land use (e.g., additional amenities), transportation, bicycle, or pedestrian improvements that would reduce VMT not already accounted for in Sketch 7 modeling under Step 2.

The applicant should provide documentation (e.g., California Emissions Estimator Model [CalEEMod]) that the combination of mitigation selected would achieve the equivalent GHG emission reduction necessary to close the gap between the proposed project's VMT/capita/day and the City's standard of 15.9 VMT/capita/day. If the project applicant can present equivalent mitigation as defined by this section, the City would consider the project consistent with CAP Action 1.1.1. If the project applicant could not identify sufficient surplus mitigation to reduce equivalent project-generated GHG emissions, the project would not be consistent with CAP Action 1.1.1.

Mobility

3. Would the project incorporate traffic calming measures? (Applicable CAP Action: 2.1.1)

List the traffic calming measures that have been incorporated into the project. These may include, but are not limited to: curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers.

Traffic calming measures included as part of the project shall be listed in the project description and shown on the plans. The project proponent and City staff should consult with staff in the Department of Public Works-Transportation Division to verify that traffic calming measures in the project description are adequate and in compliance with the City's Street Design Standards.

If the proposed project does not include any roadway or facility improvements, traffic calming measures may not apply. For example, certain infill projects may not result in on-street or transportation facility improvements because sufficient infrastructure already exists

4. Would the project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan? (Applicable CAP Action: 2.2.1)

List the pedestrian facilities and connections to public transportation that have been included in the proposed project on the Checklist. These may include, but are not limited to: sidewalks on both sides of streets, marked crosswalks, count-down signal timers, curb extensions, median islands, transit shelters, street lighting.

Pedestrian facilities included as part of the project shall also be listed in the project description and shown on the plans.

The project proponent and City staff should consult with Department of Public Works-Transportation Division staff to verify that pedestrian facilities in the project description are consistent with the Pedestrian Master Plan. As in the previous example, if "not applicable", an explanation shall be documented in the Checklist. The "Pedestrian Review Process Guide" (Appendix A to the Master Plan) will be used to determine consistency, as follows:

- For typical infill development projects where existing streets will serve the site (no new streets are proposed): the level of pedestrian improvements necessary to determine Pedestrian Master Plan consistency will be measured according to the "Basic, Upgrade or Premium" categories defined in Appendix A to the Pedestrian Master Plan, which are based on project location, surrounding land uses, proximity to transit, etc. If the proposed project does not include the minimum level of improvements per the assigned category for the project's location, the project will be required as a condition of approval to include appropriate features, per the approval of the Department of Public Works-Transportation Division.

- For new "greenfield" projects and/or larger infill development projects where new streets are proposed as part of the project, the following will apply:
    - "Basic, Upgrade or Premium" levels of improvement will be required based on the proposed project's location and context, where applicable, consistent with the criteria defined in the Master Plan. If the proposed project does not include the minimum level of improvements per the assigned category, the

project will be required as a condition of approval to include appropriate features, per the approval of the Department of Public Works-Transportation Division.

- The "Pedestrian Smart Growth Scorecard" (Appendix A to the Master Plan) will be required to be completed for the project, and a minimum score of 3 or better will need to be achieved. If the proposed project cannot achieve the minimum score, changes to the proposed project may be required, and/or the project may be required as a condition of approval to include certain improvements such that the average score will meet 3 or better. (Note: an Excel version of the Pedestrian Smart Growth Scorecard is available, to assist in automating the rating & scoring process)

5. Would the project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen? (Applicable CAP Action: 2.3.1)

List the bicycle facilities that are incorporated into the proposed project on the Checklist. In addition, list bicycle facilities in the project description, and show on the plans. These include, but are not limited to: Class I bike trails and Class II bike lanes connecting the project site to an existing bike network and transit stations, bike parking [bike racks, indoor secure bike parking, bike lockers], end-of-trip facilities at non-residential land uses [showers, lockers]).

The project proponent and City staff should consult with staff in the Transportation Division of the Department of Public Works to verify that such facilities in the project description are consistent with the Bikeway Master Plan and meet or exceed Zoning Code and CALGreen standards. Generally, the following guidelines will be used:

- If existing on-street and off-street bikeways are already present and determined to be consistent with the Bikeway Master Plan, no additional on-street bikeways will be required. Check the "not applicable" box if appropriate. However, on-site facilities shall still be required to meet or exceed minimum Zoning and CALGreen requirements.
- If not applicable, fully document the reasons why using the Checklist.
- If on-street bicycle facilities are not present or are only partially consistent with the Master Plan, the project will be required as a condition of approval to construct or pay for its fair-share of on-street and/or off-street bikeways described in the Master Plan, in addition to meeting or exceeding minimum on-site facilities.
- In some cases, a combination of new or upgraded on-street and off-street bikeways may be used to determine consistency with the Master Plan, at the discretion of the Department of Public Works-Transportation Division staff.

Energy Efficiency and Renewable Energy

6. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., solar photovoltaic, solar water heating etc.) that would generate at least 15% of the project's total energy demand? (CAP Actions: 3.4.1 and 3.4.2)

For projects of the minimum size specified in this measure, a commitment in the project description or in a mitigation measure that the project shall generate a minimum of 15% of the project's energy demand on-site is sufficient to demonstrate consistency with this measure. However, the project description or mitigation measure should specify the

intended renewable energy technology to be used (e.g. solar photovoltaic, solar water heating, wind, etc.) and estimated size of the systems to meet project demand based on the project description.

"Total energy demand" refers to the energy (electricity and natural gas) consumed by the built environment (including HVAC systems, water heating systems, and lighting systems) as well as uses that are independent of the construction of buildings, such as office equipment and other plug-ins.

Applicants may estimate the total energy demand of their projects using California Emissions Estimator Model (CalEEMod 2013.2), the same software used to estimate greenhouse gas emissions. ***For CalEEMod estimates of energy demand to meet this specific requirement, the user should NOT select the "use historical" box, otherwise they will be "double-counting" emissions reductions that have already been counted***. CalEEMod outputs for electricity demand are provided in annual kWh, and natural gas demand is provided in annual kBTU.

The energy demand estimate by CalEEMod is based on two datasets:

- The California Commercial End Use Survey (CEUS);
- The Residential Appliance Saturation Survey (RASS

CalEEMod takes energy use intensity data (above) and forecasts energy demand based on climate zone, land use subtype (such as "hospital", "arena", or "apartments, mid rise"), building area, and the number of buildings or units. This is an appropriate level of analysis for use at the planning submittal stage, but it may not provide an accurate picture of actual project energy demand because it does not factor project specifics such as building design.

Therefore, the applicant is advised (but not required) to run a more comprehensive energy simulation once project-specific details are known: basic building design, square-footage, building envelope, lighting design (at least rudimentary), and the mechanical system (at least minimally zoned). Some of the energy simulation programs that are appropriate for this level of analysis include: DOE 2.2, Trace 700, and Energy Pro.

The U.S. DOE maintains a list of energy simulation programs that are available.
http://apps1.eere.energy.gov/buildings/tools_directory/subjects.cfm/pagename=subjects/pagename_menu=whole_building_analysis/pagename_submenu=energy_simulation

The applicant may then work with City staff to revise the estimate and make a final determination regarding the size of the PV system that is required.

Substitutions: Projects may substitute a quantity of energy efficiency for renewable energy, as long as the substituted GHG reduction does not "double count" GHG reductions already taken by the CAP. In other words, substitutions must reduce GHG emissions from the project beyond what is already accounted for in the CAP (to avoid double-counting).

Additional mitigation may include individual measures or a combination of:

- Compliance with Tier 2 Energy Efficiency Standards per California Green Building Standards Code (CALGreen)
- Other land use (e.g., additional amenities), transportation, bicycle, or pedestrian improvements that would reduce VMT not already accounted for in Sketch 7 modeling under Step 2.

The applicant should provide documentation (e.g., California Emissions Estimator Model [CalEEMod]) that the combination of mitigation selected would achieve the equivalent GHG emission reduction necessary to close the gap between the proposed project's VMT/capita/day and the City's standard of 15.9 VMT/capita/day. If the project applicant can present equivalent mitigation as defined by this section, the City would consider the project consistent with CAP Action 1.1.1. If the project applicant could not identify sufficient surplus mitigation to reduce equivalent project-generated GHG emissions, the project would not be consistent with CAP Action 1.1.1.

ATTACHMENT

Climate Action Plan – Consistency Review Checklist

CAP Consistency Checklist Form for Projects that are Not Exempt from CEQA

The following information is presented consistent with the City of Sacramento's CAP Consistency Checklist Form. Each checklist question is followed by a detailed discussion regarding the Campus Crest Student Housing project (proposed project)'s consistency. It should be noted that a full modeling analysis was conducted for the proposed project for consistency purposes with the CAP's greenhouse gas (GHG) emissions reduction targets. The analysis determined that the proposed project would exceed the CAP's GHG reduction targets; thus, the proposed project was determined to be consistent with the CAP.

Y	N	N/A	**Checklist Item (Check the appropriate box, and provide explanation for your answer)**
X			1. Is the proposed project consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's 2030 General Plan? Discussion: The project site is designated Urban Neighborhood Low Density in the General Plan and Residential Mixed Use (RMX) in the South 65th Street Area Plan. The proposed project consists of constructing a 224-unit student housing complex. The project would not modify the existing land uses of the site and does not involve any amendments to the existing land use or zoning designations. Therefore, the project is consistent with the City of Sacramento 2030 General Plan, 65th Street Station Area Study, and associated EIRs.
X			2. Would the project reduce average vehicle miles traveled (VMT) per capita of the proposed residents, employees, and/or visitors to the project by a minimum of 35% compared to the statewide average? Discussion: According to the *City of Sacramento Residential Daily VMT/Capita, 2008 Base Year* exhibit provided by SACOG, the project is located in an area with VMT Per Capita of less than 15.9. Thus, according to the City's CAP Consistency Checklist Guidance, the project is considered to comply with CAP Action 1.1.1, and no further analysis is required. Nonetheless, further analysis was performed using the CalEEMod results for the proposed project. According to the CalEEMod results for the project, the VMT per capita per year was estimated to be 4,555.312, which is below the 5,809 VMT/capita/year (or 15.9 VMT/capita/day) required to meet the 35% reduction below the 2009 State-wide average of 8,937. The project's estimated annual VMT/capita of 4,555.312 would be approximately a 49% reduction below the State-wide average. Thus, the project would reduce the State-wide average by over 35% and would comply with CAP Action 1.1.1, as anticipated.
		X	3. Would the project incorporate traffic calming measures? Discussion: The proposed project does not include any roadway improvements and would not result in any impacts associated with transportation or circulation. As such, the project would not require any traffic calming measures.
X			4. Would the project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan? Discussion: According to Appendix A to the Pedestrian Master Plan, the project is within the "Basic" category based on the project's location, surrounding land uses, proximity to transit, etc. The Basic category requires the following minimum pedestrian improvements:

			• Detached sidewalks; • Vertical curb/gutter; • Curb ramps; • Obstacles removed; • Pedestrian-scale street lighting; • Street trees and landscaping; and • Parking and/or bike lane buffer. The proposed project is an infill development where existing streets would serve the site, and the project does not include any roadway improvements. The project site would be accessed through Redding Avenue, which provides the minimum pedestrian improvements required. In addition, on-site improvements include adequate walkways, ramps, landscaping, and parking. Therefore, the project would be considered consistent with the City's Pedestrian Master Plan.
X			5. Would the project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen? <u>Discussion:</u> The proposed project is required to comply with City zoning and implement the residential mandatory measures of the CALGreen code. The CALGreen code does not have any mandatory measures associated with bicycle facilities for residential uses. The City Zoning Ordinance requires bicycle parking of one space per every 10 vehicle parking spaces, with which the project would comply. Furthermore, the proposed project is an infill development where existing streets would serve the site, and the project does not include any roadway improvements. However, the project site would be accessed through Redding Avenue, which provides a Class II bike lane. The University/65th Street light rail station is located on Q Street approximately 0.5 mile from the project site. The project would be considered consistent with the City's Bikeway Master Plan.
	X		6. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., photovoltaic systems) that would generate at least a minimum of 15% of the project's total energy demand on-site? (CAP Actions: 3.4.1 and 3.4.2) <u>Discussion:</u> The proposed project does not include use of an on-site renewable energy system. However, the proposed project would include a number of energy efficiency design measures including, but not limited to, improved insulation and windows, energy-efficient lighting, Energy Star appliances, and water efficient fixtures. Applying the proposed project's energy efficient design measures to the MIT Design Advisor model (available at: http://designadvisor.mit.edu/design/, accessed May 6, 2013), the project's features would result in a minimum of approximately a 16.60 percent reduction in energy, which was applied to the project's GHG modeling (results of the MIT Design Advisor model were included Appendix A of the Initial Study/Mitigated Negative Declaration [IS/MND] prepared for the proposed project). The overall reduction in GHG emissions of the proposed project is presented in the discussion of the IS/MND. As discussed in the IS/MND, the proposed project's resultant GHG emissions would more than meet the City CAP's GHG reduction targets.