INITIAL STUDY/PROPOSED MITIGATED NEGATIVE DECLARATION

CALIFORNIA STATE UNIVERSITY STANISLAUS PHOTOVOLTAIC PROJECT

May 20, 2009

Prepared For:
The Board of Trustees of the California State University
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Long Beach, California 90802-4275

Locally Represented By:
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1.0 ENVIRONMENTAL CHECKLIST/INITIAL STUDY

Project Title:	California State University Stanislaus Photovoltaic Project
Lead Agency:	The Board of Trustees of the California State University
Location:	One University Circle Turlock, California 95382
Applicant:	California State University, Stanislaus One University Circle Turlock, California 95382
Existing General Plan Land Use Designation:	Public/Institutional (PUB)[1]
Existing Zoning:	Public & Semipublic (P-S) District
Existing On-site Land Uses:	Institutional, including academic, library, student services, administrative, residential, support services, and parking.
Surrounding Land Uses	The project site is surrounded by residential uses to the north, retail/commercial and residential uses to the west, and cultural/institutional/educational uses to the south and east.
Description of Project:	Development of four roof-mounted and two parking canopy photovoltaic systems to generate electricity to be used by the campus.
Interested and Responsible Agencies:	San Joaquin Valley Air Pollution Control District California Department of Fish and Game

1 California State University campuses are not subject to local land use regulations; the Stanislaus County General Plan land use designation and zoning are provided here for reporting purposes only.

2.0 INTRODUCTION

2.1 Initial Study

Pursuant to Section 15063 of the California Environmental Quality Act (CEQA) Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.), an Initial Study is a preliminary environmental analysis that is used by the lead agency as a basis for determining whether an EIR, a Mitigated Negative Declaration, or a Negative Declaration is required for a project. The *State CEQA Guidelines* require that an Initial Study contain a project description; a description of the environmental setting; an identification of environmental effects by checklist or other similar form; an explanation of environmental effects; a discussion of mitigation for significant environmental effects; an evaluation of the project's consistency with existing, applicable land use controls; and the names of persons who prepared the study. Additionally, a separate section, **Section 6.17,** provided in this Initial Study, evaluates climate change as it may affect the project, and as it may be affected by the project.

Public Resources Code Section 21080(a) states that analysis of a project's environmental impact is required for any "discretionary projects proposed to be carried out or approved by public agencies, including, but not limited to, the enactment and amendment of zoning ordinances." In this case, and pursuant to Public Resources Code Section 21080, the California State University system (CSU) has determined that an Initial Study is required to determine whether there is substantial evidence that implementation of the photovoltaic project would result in environmental impacts.

State CEQA Guidelines Section 15064 requires that when an Initial Study identifies significant environmental impacts, the Lead Agency must prepare an EIR. However, *State CEQA Guidelines* Section 15070 provides that if all of the impacts can be mitigated to a less-than-significant level, the Lead Agency may instead prepare a Mitigated Negative Declaration (MND) whereby mitigation measures are incorporated into the project. Based on the analysis presented in this Initial Study, all impacts can be mitigated to a less-than-significant level with the incorporation of mitigation measures. It has been determined on the basis of this Initial Study that a MND will be prepared.

2.2 Project Approvals

As a public agency principally responsible for approving or carrying out the proposed project, the CSU Board of Trustees (The Trustees) is the Lead Agency under CEQA and is responsible for determining the adequacy of the environmental document and approving the proposed project. It is anticipated that the The Trustees will consider action on the proposed project following preparation and circulation of the Initial Study in mid 2009.

3.0 PROJECT DESCRIPTION

3.1 Project Background

CSU Stanislaus (CSUS) proposes to install photovoltaic (PV) systems on the roof tops of four existing campus buildings and parking canopy PV systems on two existing parking lots on the campus. The systems will be installed, operated, and maintained by SunEdison on behalf of CSU Stanislaus under a 20-year power purchase agreement. The project is proposed by the CSU Stanislaus under Phase II of the Statewide Photovoltaic Initiative (CSI) and in anticipation of Phase III of CSI. The CSI is an initiative proposed by the CSU in partnership with the State Department of General Services to develop renewable energy projects at state facilities.

3.2 Project Location

The proposed photovoltaic project is located on the CSU Stanislaus campus in Turlock, California (see **Figure 1, Project Location**). The campus is located approximately 1.5 miles north of the city of Turlock and is approximately 228 acres (see **Figure 2, Campus Map**). Specific locations where PV systems would be installed on the campus include Parking Lot 4, Parking Lot 5, Vasche Library, Bizzini Hall, the Gymnasium, and the Science I building .

3.2 Project Characteristics

The PV systems would be installed in two phases. Four PV systems would be installed under Phase II of the CSI; two of these systems would be installed on the roofs of the Vasche Library and Bizzini Hall in the central portions of the campus, and two parking canopy systems would be installed in Parking Lots 4 and 5 in the northwestern portion of the campus (see **Figure 3, Phase II and Phase III Systems)**. Vasche Library is approximately 35 feet high and has a roof area of 38,000 square feet. Bizzini Hall is approximately 30 feet high and has a roof area of 39,000 square feet. Parking Lots 4 and 5 have a total area of about 89,000 square feet. The Phase II systems would generate 832 kilowatts (kW) DC of electricity which would be used on the campus.

Two systems would be installed later under Phase III of the CSI on the roof of the Gymnasium in the eastern portion of the campus and on the roof of the Science I building in the central southern portion of the campus. The Gymnasium is approximately 25 feet high and has a roof area of 22,000 square feet. The Science I building has a roof area of 30,000 square feet and is approximately 30 feet high.

The PV systems that would be installed on Vasche Library, Bizzini Hall, Science I building, and the Gymnasium[2] would consist of an array of crystalline solar panels or modules installed on custom-built racking. The fixed-tilt solar panels would be oriented to the south to maximize energy production. The roof-mounted systems would be designed to anchor to the roof of the buildings as either penetrating rack systems or ballasted rack systems. The anchor points would be sealed using industry accepted materials and flashing techniques and would not affect any existing equipment on the roof. Wiring from the panels would be routed through rooftop conduits to an inverter located either on the rooftop, inside an existing electrical room of the building, or adjacent to the building. If the inverter pad must be mounted at ground level, it would be protected from the elements by a shade structure. The inverter would convert DC power to alternating current (AC) power.

The PV systems that would be installed on Parking Lots 4 and 5 would be similar to the systems described above except that the panels would be installed using parking canopies. The parking canopies would consist of steel support posts in concrete piers driven into the existing parking lot surface. PV panels would be installed on top of the canopies and would be almost flat with a slight tilt to allow storm water to drain from the surface. An inverter pad would be constructed and a shade structure would be installed to protect the inverter from the elements.

All systems would adhere to California Building Codes and Standards, as well as California Public Utilities Commission's California Solar Initiative requirements, and all California Energy Commission's technical and installation specifications and guidelines. Adequate clearance will be provided on the rooftop for access by the fire department. Examples of roof-mounted and parking canopy PV systems are shown in **Figure 4, Roof-Mounted and Parking Canopy Systems**.

The project could necessitate the removal of a small number of trees located in or around Parking Lots 4 and 5 to avoid shading of the panels and the potential damage hazards to the panels from tree breakage. If tree removal is necessary during the installation of the parking canopy PV systems, trees would be replanted on the CSUS campus at a 1:1 ratio, consistent with CSUS policy.

If it is determined that any of the proposed buildings is not suitable for the installation of the proposed PV systems for structural or other reasons, the Campus and SunEdison will utilize another building or a parking lot on the campus and will implement the same mitigation measures as proposed for the current set of Phase II and Phase III systems in this Initial Study to avoid or minimize significant environmental

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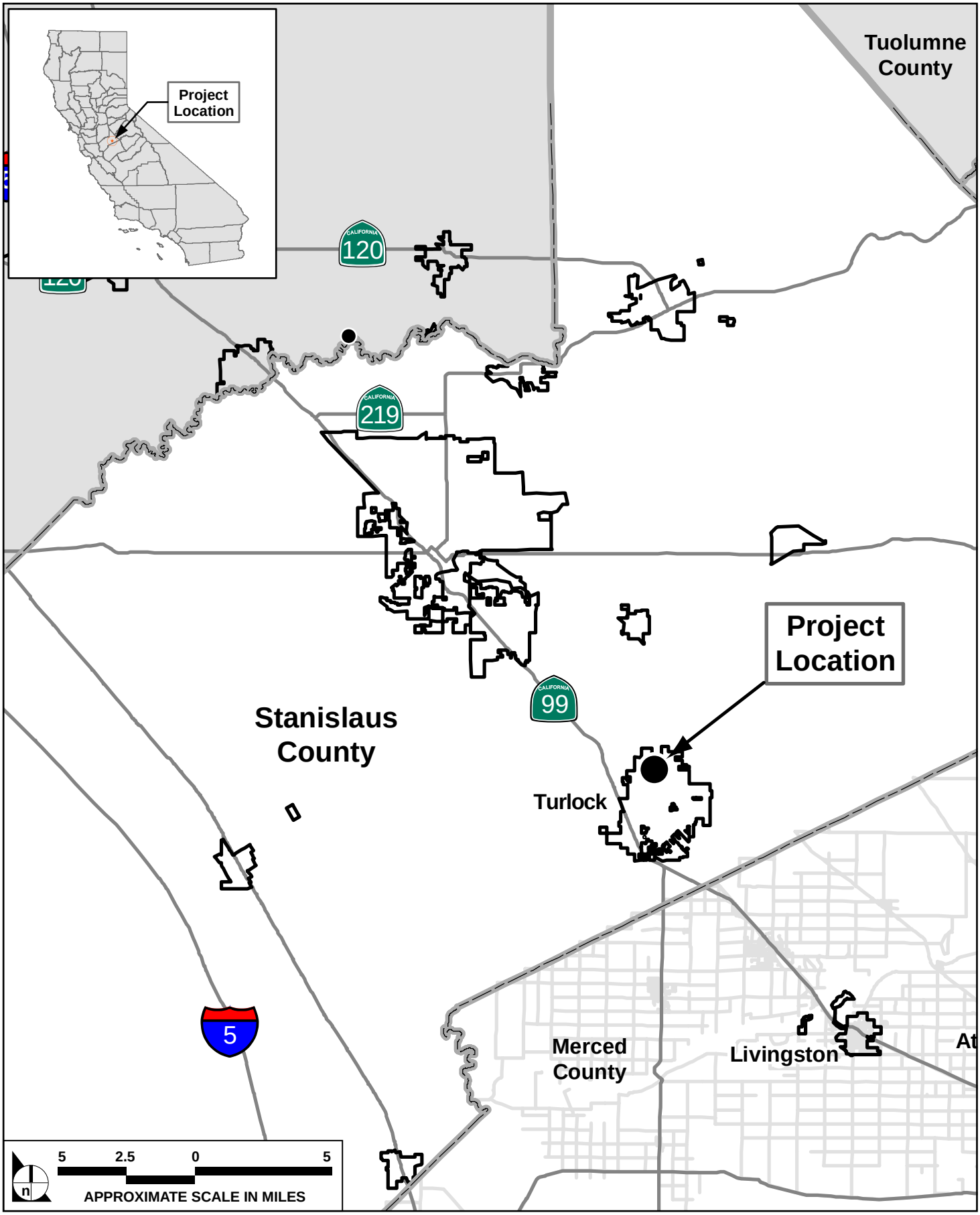
2 The details of the two systems that would be installed under Phase III are not fully developed at this time. However, it is anticipated that those systems would be very similar to the roof-mounted system proposed for the Vasche Library and Bizzini Hall. In the event that the design of any of those systems, as and when fully developed, is substantially different from that proposed for the Vasche Library or Bizzini Hall, the Campus would conduct additional environmental review as appropriate.

impacts. Such buildings or parking lots would be characterized by large flat roofs or surfaces that are not shaded by trees or other structures and do not require significant tree trimming or tree removal.

Staging for the project will occur on nearby parking lots. Materials would be moved to the rooftops using a crane. Project construction would be completed in 8 to 14 weeks.

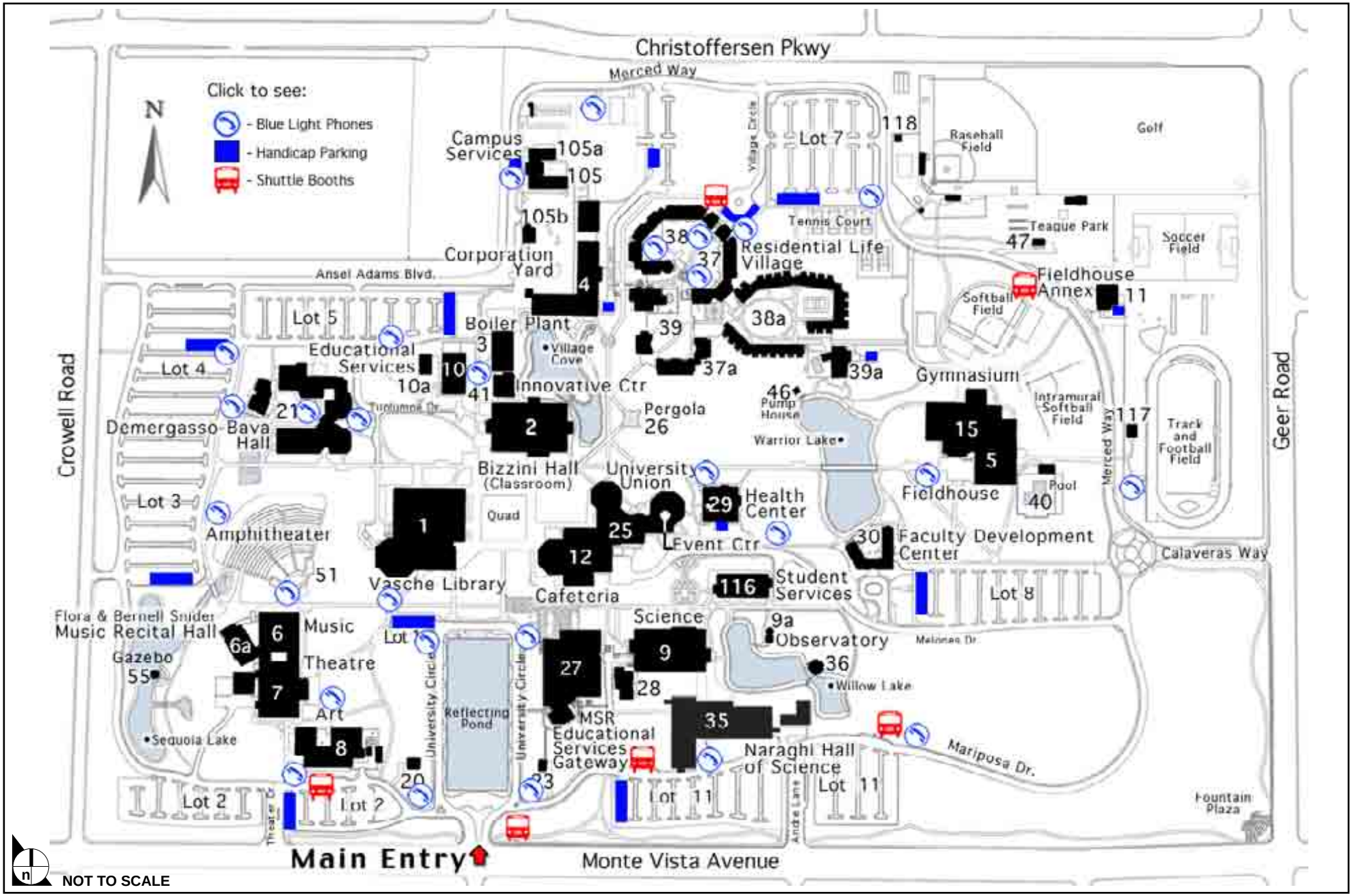


SOURCE: Impact Sciences, Inc. – December 2008

FIGURE **1**

Project Location

997-001•12/08



SOURCE: CSU Stanislaus - November 2008

FIGURE **2**

Campus Map

997-001•12/08

SOURCE: CSU Stanislaus - November 2008

FIGURE **3**

Phase II and Phase III Systems

997-001•04/09

Roof-Mounted

Parking Canopy

SOURCE: SunEdison - 2008

FIGURE **4**

Roof-Mounted and Parking Canopy Systems

4.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project involving at least one impact that is potentially significant, but is "Less than Significant with Mitigation Incorporated," as indicated by the checklist on the following pages.

____	Aesthetics	____	Agricultural Resources
____	Air Quality	**X**	Biological Resources
____	Cultural Resources	____	Geology and Soils
____	Hazards	____	Hydrology and Water Quality
____	Land Use and Planning	____	Mineral Resources
____	Noise	____	Population and Housing
____	Public Services	____	Recreation
____	Transportation and Circulation	____	Utilities and Service Systems
____	Mandatory Findings of Significance		

5.0 DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

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

Signature: _____ Date: May 20, 2009

Robert Gallegos, Associate Vice President Capital Planning & Facilities Management

6.0 EVALUATION OF ENVIRONMENTAL IMPACTS

Introduction

The following Environmental Checklist form is based on Appendix G of the *State CEQA Guidelines*.

Project Impacts

The Environmental Checklist identifies potential project effects as corresponding to the following categories of impacts:

- **Potentially Significant Impact.** An effect that may be significant based on substantial evidence and the significance criteria for the proposed project. If the project may result in one or more Potentially Significant Impacts, an EIR is required.
- **Less than Significant with Mitigation Incorporated.** An effect that with the implementation of project-specific mitigation measures is reduced from potentially significant to a less than significant level.
- **Less than Significant Impact.** An effect for which no significant impacts, or only less than significant impacts, would result.
- **No Impact.** The project would not create an impact.

6.1 Aesthetics

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
AESTHETICS - Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

DISCUSSION:

a. **No Impact.** The proposed project includes construction of PV parking canopies on existing parking lots, specifically Lots 4 and 5 on the CSU Stanislaus campus. These systems would be visible from Crowell Road and Ansel Adams Road. Additional PV systems would be installed on the roofs of multi-story buildings, including Vasche Library, Bizzini Hall, Science I, and the Gymnasium. These PV systems would be low in profile and would therefore not obstruct views from other buildings nearby. There are no defined scenic vistas that are visible across the CSU Stanislaus campus (Borchard 2008). Therefore, development of the proposed PV systems would not have a substantial effect on a scenic vista. No further analysis is required. No mitigation is required.

b. **No Impact.** The CSU Stanislaus campus is not situated adjacent to nor within view from a state scenic highway (Borchard 2008). Therefore, the proposed PV systems would not substantially damage scenic resources within a state scenic highway. No further analysis is required. No mitigation is required.

c. **Less than Significant Impact.** The parking canopy PV systems would be constructed on existing parking lots in the northwest corner of the campus. Parking Lot 4 is partially screened from

Crowell Road due to mature trees that are located on a narrow landscaped area of open space that separates these lots from that roadway. Parking Lot 5 is visible from Ansel Adams Road, and there are some existing landscaped trees planted along the edge of the lot. The parking lots are paved with asphalt and contain signage and landscaped planters. The project would necessitate removal of some of the landscaped trees that are present within the parking lots due to shading of the panels and the potential damage hazards to the panels from tree breakage. The parking canopies would be 10-14 feet in height, and would be of similar design as shown in **Figure 4**.

The PV systems that would be installed on the roofs of multi-story buildings would be low in profile and would therefore not obstruct views from other buildings nearby. While the roof-mounted PV systems could be visible from other taller buildings nearby, they would not be obtrusive as rooftop equipment such as HVAC equipment is common on rooftops of buildings on the campus. **Figure 4** shows a roof-mounted design that would be similar to the systems installed on the CSU Stanislaus campus.

The proposed PV systems would alter the existing character of the parking lots and rooftops, but the magnitude of change within the context of degradation of the existing visual character or quality of the site and its surroundings is less than significant. No further analysis is required. No mitigation is required.

d. **Less than Significant Impact.** The existing parking lots that would have PV parking canopies installed are a source of daytime glare as the sun reflects off of parked vehicles. The proposed project includes photovoltaic panels that would be designed to absorb and capture sunlight rather than reflect it. The project does not involve the installation of additional lights. Therefore, the proposed PV systems would not create a substantial source of light or glare, and the impact is considered less than significant. No mitigation is required.

6.2 Agricultural Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
AGRICULTURAL RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

DISCUSSION:

a. **No Impact.** There are no agricultural resources present on the site. The existing CSU Stanislaus campus is classified as "Developed" according to the Farmland Mapping and Monitoring Program maps (Borchard 2008). Therefore, development of the proposed PV systems would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. No further analysis is required. No mitigation is required.

b. **No Impact.** The project site is not zoned for agriculture, nor is the immediate surrounding area under Williamson Act contracts (Borchard 2008). Therefore, the proposed project would not conflict with existing zoning for agricultural use, nor conflict with a Williamson Act contract. No further analysis is required. No mitigation is required.

c. **No Impact.** The proposed PV system projects would be located on developed sites, such as existing parking lots and existing buildings. There are no agricultural resources in the project area. Implementation of the proposed project would not include any activities or uses during construction or operation that would lead to the conversion of Farmland to non-agricultural use. Therefore, the proposed PV system projects would not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use. No further analysis is required. No mitigation is required.

6.3 Air Quality

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

The CSU Stanislaus campus is within the San Joaquin Valley Air Basin (SJVAB), which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD has adopted an Air Quality Attainment Plan that provides a strategy for the attainment of state and federal air quality standards.

DISCUSSION:

a. **No Impact.** The proposed project involves the construction of PV parking canopies within existing parking lots and roof-mounted photovoltaic systems on existing buildings on the CSU Stanislaus campus. The project would not result in population growth or result in increased emissions. Therefore, the project would not conflict with or prevent attainment of the local air quality management plan. No further analysis is required. No mitigation is required.

b. **No Impact.** Construction of the proposed PV systems would result in temporary emissions as a result of trenching and drilling activities for the parking canopy systems. (The roof-mounted PV systems would not require any trenching or drilling activities). It is assumed that most of the soil involved in trenching would go back into the trenches for compaction, and that the majority of the soil removed for drilling would be transported offsite. Although the construction of the PV parking canopy systems would result in a small amount of construction emissions, the emissions would be minor and would not result in an air quality impact. The operation of the PV systems would not generate any emissions and would in fact create an emissions credit. This credit can be thought of as a net reduction in pollutants that contribute to the formation of ozone as well as fine particulate matters from the generation of electricity. Therefore, operation of the proposed PV projects would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. No further analysis is required. No mitigation is required.

c. **No Impact.** As discussed above, the SJVAB is in non-attainment of state and federal standards for ozone and for PM_{10}. Since the operation of the proposed PV systems would not generate any emissions, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality. No further analysis is required. No further mitigation is required

d. **No Impact.** The proposed PV systems would be constructed on existing parking lots and roofs of existing buildings. The project would not expose sensitive receptors to substantial pollutant concentrations because construction emissions would be minor and there would be no operational emissions. No further analysis is required. No further mitigation is required.

e. **No Impact.** The proposed PV systems would be constructed on existing parking lots and roofs of existing buildings. The systems would not create objectionable odors. No further analysis is required. No further mitigation is required.

6.4 Biological Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
BIOLOGICAL RESOURCES - Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

DISCUSSION:

a. Less Than Significant with Mitigation. The proposed project involves the construction of PV panels in existing parking lots and may necessitate the removal of a small number of trees within the Parking Lots 4 and 5. These trees were planted as part of landscaping plan for the CSU

Stanislaus campus. Any trees removed during the parking canopy PV system installation on Lots 4 and 5 would be replanted at a 1:1 ratio, consistent with campus policy. Replacement trees would be planted on the CSUS campus. According to the CSUS Master Plan Update Program EIR, mature trees on the campus may serve as nesting sites for area raptor including Swainson's hawk. Mature trees are also located to the west of Parking Lot 4, adjacent to Crowell Road. It is not anticipated that any of these mature trees would need to be removed during construction of the PV systems.

Proposed construction activities and tree removal may potentially impact nesting birds. Implementation of **Mitigation Measure BIO-1** would ensure that the proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or US Fish and Wildlife Service.

Mitigation Measure BIO-1: Preconstruction nesting bird surveys shall be conducted by a qualified wildlife biologist within two weeks of construction activities scheduled to take place between February 1 and August 31 (breeding season). (Preconstruction surveys for nesting Swainson's hawks should be conducted for construction activities between March 1 and September 15 pursuant to CDFG). All trees within the project area shall be surveyed. If active raptor or passerine nests are detected during the pre-construction surveys, a no-disturbance buffer zone shall be designated and maintained around the nest until a qualified biologist has determined that the young have fledged from the nest. The size of the no-disturbance zone shall be determined in consultation with the CDFG.

b. **No Impact.** The proposed PV systems would be installed on existing parking lots or roofs of existing buildings on the CSU Stanislaus campus. These sites do not have native riparian vegetation. Therefore, the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or US Fish and Wildlife Service. No further analysis is required. No mitigation is required.

c. **No Impact.** There are no wetlands on the existing parking lots of the proposed project. Bizzini Hall, Science I, and the Gymnasium are buildings that would have roof-mounted PV systems that would not affect any wetlands. Therefore, the proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act

through direct removal, filling, hydrological interruption, or other means. No further analysis is required. No mitigation is required.

d. **Less Than Significant with Mitigation.** The project site is an existing urban area of the City of Turlock. As stated in the CSUS Master Plan Update Program EIR, it is not likely that use of the Campus site for educational purposes, or development of new Campus facilities, will interfere any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors (Borchard 2008). Implementation of **Mitigation Measure BIO-1** would ensure that the proposed project would not impede the use of native wildlife nursery sites. No further analysis is required. No further mitigation is required.

e. **No Impact.** According to the CSUS Master Plan Update Program EIR, the use and development of the CSU Stanislaus campus does not conflict with any local policies or ordinances, by the City of Turlock or the County of Stanislaus (Borchard 2008). Therefore, the proposed PV project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No further analysis is required. No mitigation is required.

f. **No Impact.** There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that affect the project sites or the rest of the campus and its vicinity (Borchard 2008). Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No further analysis is required. No mitigation is required.

6.5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
CULTURAL RESOURCES - Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries	☐	☐	☐	☒

DISCUSSION:

a. **No Impact.** The proposed PV systems would either be mounted on roof-tops of four existing buildings or would be mounted on canopies within two parking lots on the campus. There are no historical resources located on the CSU Stanislaus campus (Borchard 2008). No further analysis is required. No mitigation is required.

b. **No Impact.** The construction of the proposed PV systems on the roofs of Vasche Library, Bizzini Hall, Science I, and the Gymnasium would have no impact to archaeological resources since the installation of the panels would not involve any major ground disturbance activities. Parking Lots 4 and 5 are existing paved surfaces. These locations have already been substantially disturbed during previous parking lot development. Prior construction activities would have resulted in the discovery and either curation or destruction of near-surface archaeological resources, if any were present. The proposed project does not require grading and a relatively small area would be disturbed in Parking Lots 4 and 5 due to trenching and drilling during construction. Due to previous disturbance at the parking lot sites, the likelihood of encountering archaeological resources is low. Therefore, the proposed PV systems would have no impact on archaeological resources. No further analysis is required. No mitigation is required.

c. **No Impact.** As discussed above, the proposed PV systems that would be roof-mounted on four buildings on the campus would not require any major ground disturbance activities. Parking Lots 4 and 5 would require some trenching and drilling during construction of the parking canopies, but the sites have been previously disturbed. There are no known paleontological resources or unique geologic features that have been identified on the campus (Borchard 2008). There is a low possibility of finding significant fossil records in the project soils. Therefore, the proposed PV systems would have no impact on paleontological resources. No further analysis is required. No mitigation is required.

d. **No Impact.** Parking Lots 4 and 5 are existing paved surfaces. These locations have already been substantially disturbed during previous parking lot development. Although unknown burial sites could exist on the project site, it is unlikely that the proposed project would cause a disturbance to such as site because trenching and drilling activities for the project would be limited and would not result in further excavation than that done during previous construction or agricultural cultivation. No further analysis is required. No mitigation is required.

6.6 Geology and Soils

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

DISCUSSION:

a. *i-iv*. No Impact.

i. **No Impact.** The CSU Stanislaus campus is not identified on an Alquist-Priolo Earthquake Fault Zoning Map, but lies within the Melones Fault system zone of influence (Borchard 2008). On account of the scale and nature of the proposed project, the proposed PV systems that would be

installed on rooftops of existing buildings and on parking canopies to be constructed in existing parking lots on the campus would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. No further analysis is required. No mitigation is required.

ii. **No Impact.** For reasons presented in the CSUS Master Plan Update Program EIR, development on the CSU Stanislaus campus, would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking (Borchard 2008). The proposed PV project as part of the campus development, would also not expose people or structures to adverse effect of ground shaking. No further analysis is required. No mitigation is required.

iii. **No Impact.** For reasons presented above, development on the CSU Stanislaus campus, including the proposed PV systems, would not expose people or structures to potential substantial adverse effects from seismic-related ground failure, including liquefaction. No further analysis is required. No mitigation is required.

iv. **No Impact.** The CSU Stanislaus campus is flat, and the proposed location of the parking canopy PV systems is already paved with existing parking lots. Development of the roof-mounted and parking canopy PV systems would not result in an increased landslide hazard. No further analysis is required. No mitigation is required.

b. **No Impact.** The project site is flat and the proposed locations for PV systems are developed with paved parking lots and existing buildings. Therefore, development of the proposed project would not result in substantial soil erosion or loss of topsoil. No further analysis is required. No mitigation is required.

c. **No Impact.** There are no known areas, geologic or soils units on the CSU Stanislaus campus that are unstable. Due to the flat terrain and soil types on, around the campus, there is no possibility of landslide, lateral spreading, subsidence, liquefaction or collapse (Borchard 2008). Soils on the project site are considered relatively stable and would not become unstable as a result of the construction of the proposed PV systems. No further analysis is required. No further mitigation is required.

d. **No Impact.** Concentrations of expansive soils are not known to exist on the CSU Stanislaus campus (Borchard 2008). The proposed PV projects would be constructed on rooftops of existing buildings and existing paved parking lots. Therefore, there would be no risk to life or property

due to expansive soils from implementation of the proposed project. No further analysis is required. No mitigation is required.

e. **No Impact.** The proposed project involves installation of rooftop PV systems and parking canopies PV systems. Impacts related to septic tanks and sewer systems do not apply. No further analysis is required. No mitigation is required.

6.7 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such 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?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands?	☐	☐	☐	☒

DISCUSSION:

a. **No Impact.** The proposed project involves construction of PV systems on parking canopies in existing lots and on existing rooftops. The project would not involve the routine transport, use, and storage of hazardous materials, both during construction and during the operational phases of the proposed project. No further analysis is required. No mitigation is required.

b. **No Impact.** As discussed above, the project would not involve transport, use, or storage of hazardous materials during construction and operation. Therefore, the project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. No further analysis is required. No mitigation is required.

c. **No Impact.** The CSU Stanislaus campus is not located within 0.25 mile of a school. Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. No further analysis is required. No mitigation is required.

d. **No Impact.** No identified hazardous sites exist on or near the CSU Stanislaus campus (Borchard 2008). Therefore, the proposed project would not 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 not create a significant hazard to the public or the environment. No further analysis is required. No mitigation is required.

e. **No Impact.** The project site is located within the City of Turlock, and there are no airports located near the City or the area surrounding the City. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area. No further analysis is required. No mitigation is required.

f. **No Impact.** The City of Turlock and the surrounding area are not located in the vicinity of a private airstrip. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area. No further analysis is required. No mitigation is required.

g. **No Impact.** The proposed project involves the construction of PV parking canopies on existing parking lots and PV systems on rooftops of existing buildings on the CSU Stanislaus campus. The proposed project would not impair implementation of or physically interfere with an

adopted emergency response plan or emergency evacuation plan. No further analysis is required. No mitigation is required.

h. **No Impact**. The project site that is located on the CSU Stanislaus campus is surrounded by urban areas and is not adjacent to or in the vicinity of areas that could be characterized as wildlands (Borchard 2008). Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. No further analysis is required. No mitigation is required.

6.8 Hydrology and Water Quality

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

DISCUSSION:

a. **Less than Significant.** The proposed project involves the construction of PV systems on parking canopies in existing parking lots and on rooftops of existing buildings on campus. Installation of the parking canopy PV systems would require trenching for placement of conduits and excavation of pier holes. It is estimated that less than 1 acre of land would be disturbed during construction within parking lots. Because the ground disturbance would be limited to trenching and drilling, there is little potential for erosion at the site. During construction, loose soil stockpiled at the site would be covered to prevent wind and water erosion, both of which could carry loose soil from the project area to adjacent streets where it could find its way to storm drains. Although the area of disturbance would be less than 1 acre, and the project is not likely to contribute substantial amounts of sediment to storm drain systems, implementation of the following mitigation measure would reduce potential adverse effects to water quality:

Mitigation Measure HYDRO-1: The contractor shall cover and secure stockpiled soil with tarps when not in use to prevent dispersal by wind and water and the contractor shall protect storm drains within Lots 4 and 5 with sandbag/silt fence barriers to prevent transport of sediment to the storm drains.

b. **No Impact.** The proposed project consists of installing PV systems on parking canopies in existing parking lots and on rooftops of existing buildings on campus, and would not affect groundwater supplies. No further analysis is required. No mitigation is required.

c. **No Impact.** The proposed project would not change the grade or drainage patterns in Parking Lots 4 or 5. No further analysis is required. No further mitigation is required.

d. **No Impact.** As discussed above, the proposed project would not change the grade or drainage patterns in Parking Lots 4 or 5. Construction of the PV systems would not change runoff conditions. No further analysis is required. No further mitigation is required.

e. **No Impact.** As discussed above, the proposed project would not change runoff conditions in Parking Lots 4 and 5. Implementation of the PV systems would not create or contribute to runoff in the existing parking lots. No further analysis is required. No further mitigation is required.

f. **No Impact.** The proposed project would not include improvements or design features that would otherwise substantially degrade water quality in a manner not addressed above. No further analysis is required. No further mitigation is required.

g. **No Impact.** The proposed project does not include housing. There are no flood-hazard areas within several miles of the CSU Stanislaus campus (Borchard 2008). The proposed project would not 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. No further analysis is required. No mitigation is required.

h. **No Impact.** As discussed above, there are no flood hazard areas within several miles of the CSU Stanislaus campus site. Construction of the PV systems is not proposed within a designated flood hazard area. No further analysis is required. No mitigation is required.

i. **No Impact.** The campus is not in the direct path of flood flows from a dam or reservoir of sufficient volume to represent any significant potential hazard from dam or levee failure (Borchard 2008). Therefore, the proposed project would not expose 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. No further analysis is required. No mitigation is required.

j. **No Impact.** The CSU Stanislaus campus is not located adjacent to the ocean or any large body of water that would create the potential for inundation by seiche or tsunami. The terrain and soils found on the campus are not likely to result in a mudflow (Borchard 2008). No further analysis is required. No mitigation is required.

6.9 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a. **No Impact.** The proposed project would not physically divide an established community. No further analysis is required. No mitigation is required.

b. **No Impact.** CSU Stanislaus is governed by the Physical Master Plan Update (2009). The proposed PV systems are consistent with this plan. No further analysis is required. No mitigation is required.

c. **No Impact.** There are no habitat conservation plans that are applicable to the campus area (Borchard 2008). Therefore, the proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan. No further analysis is required. No mitigation is required.

6.10 Mineral Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
MINERAL RESOURCES - Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

DISCUSSION:

a., b. **No Impact.** The campus is not located on a Mineral Resource Zone identified by the California Department of Conservation-Division of Mines and Geology Mineral Land Classification Surveys (Borchard 2008). Therefore, the proposed project would not result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State nor result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. No further analysis is required. No mitigation is required.

6.11 Noise

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

DISCUSSION:

a. **No Impact.** Operation of the PV systems would not generate any audible noise. There would be no impact. No further analysis is required. No mitigation is required.

b. **No Impact.** Operation of the PV systems would not generate any ground borne noise or vibration at levels that would expose people or structures to risk of harm. No further analysis is required. No mitigation is required.

c. **No Impact.** As discussed above, the proposed project would not generate any audible noise. No further analysis is required. No mitigation is required.

d. **Less Than Significant.** Construction activities associated with implementation of the parking canopy PV systems would include removal of asphalt, trenching, drilling, installing the canopies, and asphalt replacement. These activities are anticipated to cause a temporary increase in noise and possibly in groundborne vibration. Similarly construction noise would result from the installation of PV systems on the rooftops of four campus buildings. Construction activities would result in a temporary increase in ambient noise levels. The construction of this project would take place during the summer months when most of the campus is on summer break, and would occur over a period of approximately 8 to 14 weeks. Construction would take place during daytime hours and noise generated during construction is not anticipated to go beyond the accept range for daytime noise levels. Therefore, this impact is considered less than significant and no mitigation is required.

e. **No Impact.** The CSU Stanislaus campus is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels of a public airport. No further analysis is required. No mitigation is required.

f. **No Impact.** The project site is not located within the vicinity of a private airstrip. Therefore, implementation of the project would neither impact nor be impacted by a private airstrip. The proposed project would not expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip. No further analysis is required. No mitigation is required.

6.12 Population and Housing

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION:

a.,b.,c. No Impact. Implementation of the proposed project would not result in an increase in population nor would it displace any housing or people. Therefore, there would be no impacts related to population and housing. No further analysis is required. No mitigation is required.

6.13 Public Services

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
PUBLIC SERVICES				
a) 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:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other governmental services?	☐	☐	☐	☒

DISCUSSION:

ai-v. **No Impact.** Implementation of the proposed project would not result in an increase in the campus population or the regional population. Therefore, there would be no increase in demand for public services. No further analysis is required. No mitigation is required.

6.14 Recreation

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
RECREATION – Would the project:				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

DISCUSSION:

a., b. **No Impact.** Implementation of the proposed project would not increase the population of the region. Therefore, there would be no increase in 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. The project does not require the construction or expansion of any recreational facilities, and there would be no impact on recreational facilities. No further analysis is required. No mitigation is required.

6.15 Transportation and Traffic

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
TRANSPORTATION/TRAFFIC - 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)?	☐	☐	☐	☒
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

DISCUSSION:

a., b **No Impact.** Except for a small increase in vehicles accessing the site for 8 to 14 weeks during construction, there would be no increase in traffic as a result of the proposed project. Furthermore, the project would be constructed during the summer when fewer students are present on the campus and the campus-related traffic volumes are lower. Therefore, the proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. No further analysis is required. No mitigation is required.

c. **No Impact.** The project site is not located within an airport land use plan. Implementation of the project would have no impact on air traffic patterns. Therefore, the proposed project would not 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. No further analysis is required. No mitigation is required.

d. **No Impact.** The proposed project does not include any design features near roadways that would increase roadway hazards. No impact would occur.

e. **No Impact.** Emergency access to the project sites would be provided by existing roadways on the campus. Adequate emergency access is available on the campus (Borchard 2008). Therefore, the proposed project would not result in inadequate emergency access. No further analysis is required. No mitigation is required.

f. **Less Than Significant Impact.** During construction of the proposed roof-mounted PV systems, the equipment and materials would be stored on the nearest parking lot on the campus. This would result in a temporary loss of some parking spaces during the 8- to 14-week construction period. Implementation of the parking canopy PV systems would also result in a temporary loss in parking during construction. Each lot would be temporarily closed to parking during the construction period, while the other lots would remain open for use. However, the construction period for these projects is 8 to 14 weeks, and would take place during the summer months when fewer students, faculty, and staff would be commuting to the campus. Therefore, the proposed project would not result in inadequate parking capacity. No further analysis is required. No mitigation is required.

g. **No Impact.** The project would not conflict with any adopted policies, plans, or programs that support alternative transportation. No further analysis is required. No further mitigation is required.

6.16 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new and expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statues and regulations related to solid waste?	☐	☐	☐	☒

DISCUSSION:

a. **No Impact.** The proposed project would not require the expansion of any of the site utilities. No further analysis is required. No mitigation is required.

6.17 Global Climate Change

Climate change refers to any substantial change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer) (US EPA 2008b). Climate change may result from

- natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun;
- natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions); and
- human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

There is international scientific consensus that human-caused increases in certain gases collectively known as greenhouse gases[3] (GHGs) have and will continue to contribute to global warming. However, there is uncertainty concerning the magnitude and rate of the direct and indirect effects of warming on local, regional and global environments. Some of the potential impacts in California from global warming may include loss of snow pack (for instance, in the Sierras), sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years[4]. Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures, precipitation patterns and ocean and atmospheric circulation. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include but would not be limited to the following changes to the global climate system and ecosystems and to California:

- the loss of sea ice and mountain snowpack resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures; (IPCC 2007) [5]

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3 Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs). The principal GHGs are carbon dioxide (CO_2), methane, nitrous oxide (N_2O), ozone (O_3), and water vapor. Carbon dioxide is the "reference gas" for climate change, meaning that emissions of GHGs are typically reported in "carbon dioxide-equivalent" measures. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs – with much greater heat-absorption potential than carbon dioxide – include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and these are generated in certain industrial processes.

4 California Air Resources Board (CARB), 2006a. Climate Change website (http://www.arb.ca.gov/cc/120106workshop/intropres12106.pdf) accessed March 24, 2007.

5 The IPCC was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to assess scientific, technical and socio- economic information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation.

- a rise in global average sea level primarily due to thermal expansion and melting of glaciers and ice caps, and the Greenland and Antarctic ice sheets; (IPCC 2007)

- changes in weather that include widespread changes in precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones; (IPCC 2007)

- the decline of Sierra snowpack, which accounts for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years; (Cal/EPA 2006)

- an increase in the number of days conducive to ozone formation by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas of Los Angeles and the San Joaquin Valley by the end of the 21st century; (Cal/EPA 2006) and

- high potential for erosion of California's coastlines and sea water intrusion into the Sacramento–San Joaquin Delta and associated levee systems due to the rise in sea level. (Cal/EPA 2006)

6.17.1 Project's Impact on Global Warming

The project would result in one-time emissions of GHGs during project construction. These emissions, primarily carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), are the result of fuel combustion from construction equipment and motor vehicles. The other primary GHGs (perfluorocarbons and sulfur hexafluoride) are associated with specific industrial sources and are not expected to be emitted during project construction.

It is generally the case that an individual project is of insufficient magnitude by itself to influence climate change. Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008).

The project does not pose any apparent conflict with the California Air Resources Board (CARB) Draft Scoping Plan measures. In fact, the proposed project supports the Draft Scoping Plan and Assembly Bill 32 goals by enabling CSU Stanislaus to generate electricity from a non-polluting source and reducing the campus's use of electricity from the grid. Therefore, the project will have a beneficial impact with respect to cumulative global warming.

6.17.2 Global Warming Impacts on the Project

There is much uncertainty concerning the magnitude and rate of the direct and indirect effects of warming on local, regional and global environments. Some of the potential impacts in California from global warming may include loss of snow pack (for instance, in the Sierras), sea level rise, more extreme

heat days per year, more high ozone days, more large forest fires, and more drought years[6]. Because of the nature of the proposed project and its location in Turlock, none of the global warming effects would be a concern for the project.

6 California Air Resources Board (CARB), 2006a. Climate Change website (http://www.arb.ca.gov/cc/120106workshop/intropres12106.pdf) accessed March 24, 2007.

6.18 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
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 pre-history?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

DISCUSSION:

a. **Less than Significant Impact.** Based on evidence presented in this Initial Study, the proposed project does not 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. No further analysis is required. No mitigation is required.

b. **Less than Significant Impact.** Based on evidence presented in this Initial Study, the proposed project would result in the generation of impacts, all of which can be mitigated to less than significant levels. There is no evidence that would suggest that those impacts following

implementation of mitigation would combine with impacts from other past, present, and reasonably foreseeable projects to produce a significant cumulative effect. No further analysis is required. No mitigation is required.

c. **Less than Significant Impact.** The proposed project would result in the generation of some impacts; however, with implementation of mitigation measures outlined in this Initial Study, those impacts would be reduced to a less than significant level and would not cause substantial adverse effects on humans. No further analysis is required. No mitigation is required.

7.0 SOURCES OF INFORMATION USED IN PREPARING INITIAL STUDY

Borchard, Robert, AICP. 2008. California State University Stanislaus, Physical Master Plan Update, Public Review Draft Program Environmental Impact Report. October.

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California Environmental Protection Agency (Cal/EPA). 2006. Final 2006 Climate Action Team Report to the Governor and Legislature. April.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis; Summary for Policymakers. http://www.ipcc.ch/SPM2feb07.pdf. February 5.

Thieler, E. Robert, and Hammar-Klose, Erika S. 2000. National Assessment of Coastal Vulnerability to Sea-Level Rise: Preliminary Results for the U.S. Pacific Coast, U.S. Geological Survey Open-File Report 00-178. http://pubs.usgs.gov/of/2000/of00-178/.

Titus, James G. and Richman, Charlie. 2001. Maps of Lands Vulnerable to Sea Level Rise: Modeled Elevations along the U.S. Atlantic and Gulf Coasts, Climate Research, CR 18:205-228.

US Environmental Protection Agency. 1971. Noise from Construction Equipment and Operations, Building Equipment and Home Appliances. NTID 300-1. Prepared by Bolt, et al., Bolt, Beranek & Newman.

8.0 REPORT PREPARERS

CSU Stanislaus

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APPENDIX A

THE BOARD OF TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY
PROPOSED MITIGATED NEGATIVE DECLARATION
California State University Stanislaus Photovoltaic Project

PROJECT TITLE: California State University Stanislaus Photovoltaic Project

LEAD AGENCY: The Board of Trustees of the California State University

APPLICANT: California State University Stanislaus
One University Circle
Turlock, CA 95382

PROJECT DESCRIPTION:

CSU Stanislaus (CSUS) proposes to install photovoltaic (PV) systems on the roof tops of four existing campus buildings and parking canopy PV systems on two existing parking lots on the campus. The systems will be installed, operated, and maintained by SunEdison on behalf of CSU Stanislaus under a 20-year power purchase agreement. The project is proposed by CSU Stanislaus under Phase II of the Statewide Photovoltaic Initiative (CSI) and in anticipation of Phase III of CSI. The CSI is an initiative proposed by the CSU in partnership with the State Department of General Services to develop renewable energy projects at state facilities.

The PV systems would be installed in two phases. Four PV systems would be installed under Phase II of the CSI; two of these systems would be installed on the roofs of the Vasche Library and Bizzini Hall in the central portions of the campus, and two parking canopy systems would be installed in Parking Lots 4 and 5 in the northwestern portion of the campus. Vasche Library is approximately 35 feet high and has a roof area of 38,000 square feet. Bizzini Hall is approximately 30 feet high and has a roof area of 39,000 square feet. Parking Lots 4 and 5 have a total area of about 89,000 square feet. The Phase II systems would generate 832 kilowatts (kW) DC of electricity which would be used on the campus.

Two systems would be installed later under Phase III of the CSI on the roof of the Gymnasium in the eastern portion of the campus and on the roof of the Science I building in the central southern portion of the campus. The Gymnasium is approximately 25 feet high and has a roof area of 22,000 square feet. The Science I building has a roof area of 30,000 square feet and is approximately 30 feet high.

The PV systems that would be installed on Vasche Library, Bizzini Hall, Science I building, and the Gymnasium would consist of an array of crystalline solar panels or modules installed on custom-built racking. The fixed-tilt solar panels would be oriented to the south to maximize energy production. The roof-mounted systems would be designed to anchor to the roof of the buildings as either penetrating rack systems or ballasted rack systems. The anchor points would be sealed using industry accepted materials and flashing techniques and would not affect any existing equipment on the roof. Wiring from the panels would be routed through rooftop conduits to an inverter located either on the rooftop, inside an existing electrical room of the building, or adjacent to the building. If the inverter pad must be mounted at ground level, it would be protected from the elements by a shade structure. The inverter would convert DC power to alternating current (AC) power.

The PV systems that would be installed on the Parking Lots 4 and 5 would be similar to the systems described above except that the panels would be installed using parking canopies. The parking canopies

would consist of steel support posts in concrete piers driven into the existing parking lot surface. PV panels would be installed on top of the canopies and would be almost flat with a slight tilt to allow storm water to drain from the surface. An inverter pad would be constructed and a shade structure would be installed to protect the inverter from the elements.

All systems would adhere to California Building Codes and Standards, as well as California Public Utilities Commission's California Solar Initiative requirements, and all California Energy Commission's technical and installation specifications and guidelines. Adequate clearance will be provided on the rooftop for access by the fire department.

The project could necessitate the removal of a small number of trees located in or around Parking Lots 4 and 5 to avoid shading of the panels and the potential damage hazards to the panels from tree breakage. If tree removal is necessary during the installation of the parking canopy PV systems, trees would be replanted on the CSUS campus at a 1:1 ratio, consistent with CSUS policy.

If it is determined that any of the proposed buildings is not suitable for the installation of the proposed PV systems for structural or other reasons, the Campus and SunEdison will utilize another building or a parking lot on the campus and will implement the same mitigation measures as proposed for the current set of Phase II and Phase III systems in this Initial Study to avoid or minimize significant environmental impacts. Such buildings or parking lots would be characterized by large flat roofs or surfaces that are not shaded by trees or other structures and do not require significant tree trimming or tree removal.

Staging for the project will occur on nearby parking lots. Materials would be moved to the rooftops using a crane. Project construction would be completed in 8 to 14 weeks.

PROJECT LOCATION:

The proposed photovoltaic project sites are located on the CSU Stanislaus campus in Turlock, California. The campus is approximately 228 acres. The first PV systems would be installed on the roofs of the Vasche Library and Bizzini Hall in the central portions of the campus, and two parking canopy systems would be installed in Parking Lots 4 and 5 in the northwestern portion of the campus. The second PV systems would be installed on the roof of the Gymnasium in the eastern portion of the campus and on the roof of the Science I building in the central southern portion of the campus.

MITIGATION MEASURES:

This subsection includes the full text of project-specific mitigation measures identified in the Initial Study/Proposed Mitigated Negative Declaration. CSU Stanislaus may modify the means by which a mitigation measure will be implemented, as long as the alternative means ensure compliance during project implementation.

Biological Resources

BIO-1: Preconstruction nesting bird surveys shall be conducted by a qualified wildlife biologist within two weeks of construction activities scheduled to take place between February 1 and August 31 (breeding season). (Preconstruction surveys for nesting Swainson's hawks should be conducted for construction activities between March 1 and September 15 pursuant to CDFG). All trees within the project area shall

surveyed. If active raptor or passerine nests are detected during the pre-construction surveys, a no-disturbance buffer zone shall be designated and maintained around the nest until a qualified biologist has determined that the young have fledged from the nest. The size of the no disturbance zone shall be determined in consultation with the CDFG.

Hydrology and Water Quality

HYDRO-1: The contractor shall cover and secure stockpiled soil with tarps when not in use to prevent dispersal by wind and water and the contractor shall protect storm drains within Lots 4 and 5 with sandbag/silt fence barriers to prevent transport of sediment to the storm drains.

FINDINGS:

Based on the Initial Study prepared for the project, it has been determined that potential project impacts would be mitigated to a less than significant level through incorporation of mitigation measures. A copy of the Initial Study is attached. Other materials which constitute the bases upon which the decision to adopt this proposed Mitigated Negative Declaration are available for review at California State University, Stanislaus Library, One University Circle, Turlock, CA 95382. This document constitutes a proposed Mitigated Negative Declaration.

Signature: _____ Date: May 20, 2009

Robert Gallegos, Associate Vice President Capital Planning & Facilities Management