5.13 Visual Resources

Visual resources are the natural and cultural features of the environment that can be seen and that contribute to the public's enjoyment of the environment. Visual resource or aesthetic impacts are generally defined in terms of a project's physical characteristics and potential visibility, and the extent that the project's presence would change the visual character and quality of the environment in which it would be located.

This section was prepared following California Energy Commission (CEC) guidelines for preparing visual impact assessments for Applications for Certification (AFC). Section 5.13.1 documents the visual conditions that currently exist in the Lodi Energy Center (LEC) area. Section 5.13.2 discusses the potential environmental effects as they relate to visual resources. Section 5.13.3 discusses the potential cumulative impacts of this and other projects in the area. Section 5.13.4 summarizes the mitigation measures proposed to reduce project impacts on visual resources. Section 5.13.5 describes the laws, ordinances, regulations, and standards (LORS) applicable to visual resources. Section 5.13.6 presents agencies involved and agency contacts and Section 5.13.7 lists permits required. Section 5.13.8 cites the references used in preparation of this section.

Figure 5.13-1 shows the location of the site and the locations of the Key Observation Points (KOPs) referenced in this section. The existing views and simulated views of the project from the KOPs follow as Figures 5.13-2, 5.13-3, and 5.13-4. Additional KOPs (Figures 5.13-5 and 5.13-6) are included at the request of CEC to provide further context in terms of the project area's existing landscape character. No simulations for these views were prepared.

5.13.1 Affected Environment

5.13.1.1 Regional Setting

The project site is adjacent to the City of Lodi's White Slough Water Pollution Control Facility (WPCF) to the east, treatment and holding ponds associated with the WPCF to the north, the existing 49-MW Northern California Power Agency (NCPA) Combustion Turbine Project #2 (STIG plant) to the west, and the San Joaquin County Mosquito and Vector Control facility to the south. The project site is on land owned and incorporated by the City of Lodi, and is approximately 6 miles west of the Lodi city center. The city of Stockton is approximately 2 miles to the south. The project site is currently undeveloped and is used for equipment storage during upgrades to the WPCF.

Interstate 5 (I-5) is approximately one-fifth of a mile to the east of the WPCF and the LEC site; land immediately surrounding the site is otherwise agricultural in character and includes uses such as grazing and row and field crops. The dominant feature in the land to the west of the LEC site is the network of waterways associated with White Slough, which provide water for the agricultural uses, as well as for recreation and wildlife conservation. The White Slough Wildlife Area (WSWA) is approximately one-half mile west of the LEC site.

Approximately 2 miles north of the project site, I-5 intersects with State Route 12 (SR-12). A commercial cluster, including gas stations, a truck stop, restaurants, and similar services is within the southeast segment of the intersection. A golf course (Reserve at Spanos Park) is

to the south of the project site. Eight Mile Road, which intersects with I-5 approximately 2 miles south of the project site, provides access to the golf course, and forms the northern urban edge of Stockton.

Population density near the project site is low, with fewer than ten residences within 1 mile of the proposed LEC site. A small number of homes are west of the project site, beyond the WSWA. Other residences near the site are concentrated in the land to the northeast, either in small clusters of four to five homes that border existing roads or in scattered ranch-style homes on larger parcels associated with agricultural uses. The nearest higher-density residential area is the series of subdivisions along the southern edge of Eight Mile Road, approximately 2 miles away from the project site and within the Stockton city limits.

There are no officially designated or eligible State Scenic Highways in the vicinity of the project site. The segments of I-5 and Eight Mile Road that pass through the project area are identified in the San Joaquin County General Plan as Scenic Routes.

5.13.1.2 Project Site and Linear Routes

The LEC site is a 4.4-acre parcel, set within a 1,040-acre parcel owned by and incorporated in the City of Lodi. The area immediately surrounding the LEC site is industrial in character. An existing NCPA power plant is immediately adjacent to the west of the LEC site and the WPCF is immediately adjacent to the east. The existing NCPA power plant is a 49 MW steam injected facility. The tallest element of the STIG plant is the exhaust stack, which is approximately 92 feet tall. Buildings, tanks, and other structures associated with the STIG plant are generally between 30 and 40 feet in height. The facility includes exposed pipelines and is surrounded by a fence, further contributing to its overall industrial appearance. The WPCF consists of a cluster of relatively low-lying structures, as well as treatment and holding ponds to the north of both the WPCF and LEC site. The project site is accessed via North Thornton Road, west of I-5. The driveway to the LEC site (North Cord Road) also provides access to the WPCF and STIG plant. West of the STIG plant, the North Cord Road is unpaved and serves as access to the middle section of the WSWA and, beyond, the main channel of White Slough.

With the exception of a small cooling tower, which would be moved as part of the proposed project, the LEC site is currently used for equipment storage by the WPCF. However, the facility will utilize nearby infrastructure and utility corridors for most of its linear route requirements. Specifically, the facility will tie in to the existing 230-kilovolt (kV) switchyard adjacent to the STIG plant. The facility will connect with the WPCF for supplies of recycled water for cooling through an existing utility corridor linking the power plant and wastewater treatment plant. The facility's sanitary sewer connection will also run in this existing utility corridor. Potable water for the facility will be provided by a new onsite well. A new gas pipeline will be constructed for the LEC, as the new facility will connect with the PG&E high-pressure natural gas pipeline #108, which is 2.5 miles to the east. The entire pipeline, which is the only linear appurtenance proposed to extend beyond the immediate vicinity of the project site, will be constructed below ground and will be adjacent to the existing natural gas pipeline for the STIG plant.

0 1,500 3,000
Feet

N

FIGURE 5.13-1
KEY OBSERVATION POINT LOCATIONS AND PROJECT VISIBILITY
LODI ENERGY CENTER
LODI, CALIFORNIA

CH2MHILL

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FIGURE 5.13-2A - View of project site from KOP 1 (from the southbound lane of I-5, north of the project site). The HRSG stack, tanks and buildings associated with the STIG facility are visible in the center of this view, beyond the WPCF treatment and holding ponds.

FIGURE 5.13-2B - Simulated view from KOP 1, with the proposed project.

FIGURE 5.13-2
KEY OBSERVATION POINT 1
LODI ENERGY CENTER
LODI, CALIFORNIA

FIGURE 5.13-3A - View of project site from KOP 2 (from within the White Slough Wildlife Area, at the northeast corner of Pond 11, northwest of the project site). The HRSG stack and other structures associated with the STIG facility – including the switchyard – are visible in the center of this view. Structures associated with the WPCF are visible to the east (left) of the STIG facility.

FIGURE 5.13-3B - Simulated view from KOP 2, with the proposed project.

FIGURE 5.13-3
KEY OBSERVATION POINT 2
LODI ENERGY CENTER
LODI, CALIFORNIA

FIGURE 5.13-4A - View of project site from KOP 3 (from the westbound shoulder of Eight Mile Road, south of the project site). The HRSG stack associated with the STIG facility is visible in the center of this view.

FIGURE 5.13-4B - Simulated view from KOP 3, with the proposed project.

FIGURE 5.13-4
KEY OBSERVATION POINT 3
LODI ENERGY CENTER
LODI, CALIFORNIA

View of project site from KOP 4 (from the northbound lane of I-5, east of the project site). The STIG facility is visible in the center of this view; its switchyard is to the west (left) of the HRSG unit.

FIGURE 5.13-5
KEY OBSERVATION POINT 4
LODI ENERGY CENTER
LODI, CALIFORNIA

View of project site from KOP 5 (from the driveway of Lima Ranch on North Thornton Road, north of the project site, on the east side of I-5). The HRSG stack, tanks and buildings associated with the STIG facility are visible in the center of this view, beyond I-5.

FIGURE 5.13-6
KEY OBSERVATION POINT 5
LODI ENERGY CENTER
LODI, CALIFORNIA

5.13.1.3 Construction Laydown Areas

There are four proposed construction laydown and worker parking areas for the project (see Figure 1.1-3). Two of the areas are adjacent the LEC site to the east (one on the north side of the access road, one on the south), and two are east of the WPCF, adjacent to I-5. These proposed laydown areas range from 1.6 to 3.1 acres.

5.13.1.4 Potential Project Visibility

The LEC site is visible from locations throughout the surrounding area, as evidenced by the general visibility of the existing STIG plant. However, few roadways allow for up close views of the site. Further, while the STIG plant and LEC site are most prominent in views from elevated segments of I-5 (both north and south of the site), views from the segment of I-5 directly east of the site are obscured by trees planted alongside the freeway. These trees, which include oak, eucalyptus, and varieties of evergreen, are part of an irrigated cluster of vegetation east of the WPCF, and were likely planted for the purpose of blocking views of an existing structure from the most proximate segment of I-5. The trees also serve to either partially or fully obscure the existing STIG plant in views from points east of I-5.

5.13.1.5 Sensitive Viewing Areas and Key Observation Points

To structure the analysis of the LEC's effects on visual resources, sensitive receptors[1] and the view areas that would be the most sensitive to the project's potential visual impacts were identified. Representative viewpoints from these sensitive receptor locations are referred to as key observation points (KOPs). The KOPs chosen for this analysis represent the best viewing conditions from the three major areas of viewer sensitivity: the view from the southbound lane of I-5 (KOP 1), east of the site; the view from a location near a trail within the WSWA; (KOP 2) and the view from the westbound shoulder of Eight Mile Road, north of a residential subdivision (KOP 3). The locations of the KOPs are indicated on Figure 5.13-1, along with the locations of the two additional viewpoints (KOP 4 and KOP 5), included per CEC request to provide further context in terms of the project area's existing landscape character. Existing views from all KOPs and simulated views from KOPs 1, 2, and 3 are shown in Figures 5.13-2 through 5.13-6.

Based on field work conducted in June and July 2008 by CH2M HILL, the existing visual conditions of the views from each of the KOPs were documented and evaluated. Assessments of existing levels of scenic quality were made based on professional judgment that took a broad spectrum of factors into consideration, including:

- Natural features, including topography, water courses, rock outcrops, and natural vegetation
- The positive and negative effects of cultural alterations and built structures on visual quality

[1] Typically, residents and recreationists are considered to be sensitive receptors to changes in the landscape. This is because of the potential for effects to their long-term views or their enjoyment of a particular landscape or activity.

- Visual composition, including an assessment of the vividness, intactness, and unity of patterns in the landscape[2]

The final scenic quality ratings assigned to each view fit within the rating scale summarized in Table 5.13-1. Development of this scale builds on a scale developed for use with an artificial intelligence system for evaluation of landscape visual quality (Buhyoff et al., 1994), and incorporates landscape assessment concepts applied by the U.S. Forest Service and the U.S. Department of Transportation.

TABLE 5.13-1
Landscape Scenic Quality Scale

Rating	Explanation
Outstanding Visual Quality	A rating reserved for landscapes with exceptionally high visual quality. These landscapes are significant nationally or regionally. They usually contain exceptional natural or cultural features that contribute to this rating. They are what we think of as “picture post card” landscapes. People are attracted to these landscapes to view them.
High Visual Quality	Landscapes that have high quality scenic value. This may be due to cultural or natural features contained in the landscape or to the arrangement of spaces contained in the landscape that causes the landscape to be visually interesting or a particularly comfortable place for people. These landscapes have high levels of vividness, unity, and intactness.
Moderately High Visual Quality	Landscapes that have above average scenic value but are not of high scenic value. The scenic value of these landscapes may be due to man-made or natural features contained within the landscape, to the arrangement of spaces, in the landscape or to the two-dimensional attributes of the landscape. Levels of vividness, unity, and intactness are moderate to high.
Moderate Visual Quality	Landscapes, that are common or typical landscapes that have, average scenic value. They usually lack significant cultural or natural features. Their scenic value is primarily a result of the arrangement of spaces contained in the landscape and the two-dimensional visual attributes of the landscape. Levels of vividness, unity, and intactness are average.
Moderately Low Visual Quality	Landscapes that have below average scenic value but not low scenic value. They may contain visually discordant man-made alterations, but these features do not dominate the landscape. They often lack spaces that people will perceive as inviting and provide little interest in terms of two-dimensional visual attributes of the landscape.
Low Visual Quality	Landscapes that have below average scenic value. They may contain visually discordant man-made alterations, and often provide little interest in terms of two-dimensional visual attributes of the landscape. Levels of vividness, unity, and intactness are below average.

Note: Rating scale based on Buhyoff et al., 1994; U.S. DOT Federal Highway Administration, 1988, and United States Department of Agriculture Forest Service. 1995.

5.13.1.5.1 KOP 1—View from Interstate 5 Southbound

Figure 5.13-2A depicts the view from KOP 1, approximately one-half mile north of the LEC site. This viewpoint was selected because I-5 is a major public roadway, with approximately 77,000 vehicles passing the project site on the freeway daily.[3] Interstate 5 is also designated

[2] Vividness is the memorability of the visual impression received from contrasting landscape elements as they combine to form a striking and distinctive visual pattern. Intactness is the integrity of visual order in the natural and man-built landscape, and the extent to which the landscape is free from visual encroachment. Unity is the degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern. Unity refers to the compositional harmony of intercompatibility between landscape elements. (US DOT FHWA 1988)

[3] See Section 5.12. California Department of Transportation data from 2006 reported an average daily traffic volume of 77,000 vehicles on I-5 near the interchange with State Route 12.

as a scenic route in the San Joaquin County General Plan.[4] An unobstructed view of the project site is available from KOP 1. This view is seen by drivers and passengers in automobiles traveling south on I-5. These viewers could be making local, regional, or long-distance trips.

The existing view in this location is industrial in character and is indicative of a highly engineered landscape. The foreground is characterized by the presence of agricultural land and the WPCF treatment and holding ponds. The middleground, which includes the project site, is dominated by the existing STIG plant and the 230-kV and 500-kV transmission lines that pass through the project site vicinity. The mountains that form a segment of the coast range are visible in the distance, but are partially obscured by existing structures and transmission lines. Applying the scale presented in Table 5.13-1, this view is rated as having a moderately low level of visual quality. While the ponds and farmland in the foreground provide a moderate level of vividness to the view, the prominence of the existing industrial uses and transmission lines, which occupy a majority of the horizon, contribute to a low level of visual intactness. All of the fore- and middleground consists of land that is under production; however, the uses are visually contrasting and thus result in a moderately low level of visual unity.

5.13.1.5.2 KOP 2—View from White Slough Wildlife Area

Figure 5.13-3A depicts the view from KOP 2, a viewpoint within the WSWA, approximately one mile northwest of the project site. This KOP was selected to represent views from the nearest recreation area; the 880-acre WSWA provides opportunities for hunting, fishing, hiking, and wildlife viewing, and typical viewers from this KOP are likely people participating in one or more of those activities. The WSWA includes a series of man-made ditches, canals (burrow ponds), freshwater marshes, grassland, riparian habitat and constructed ponds. From this location, near Pond 11, the STIG plant is visible, with the exhaust stack being most prominently visible. Some of the structures associated with the WPCF are also visible to the east of the STIG plant. Views of the project site like this one are available from throughout the eastern edge of the WSWA. There are very few locations in which topography or vegetation obstruct views of the STIG plant.

The foreground of this view includes land that has been only minimally developed. However, a short distance beyond the fence, in the middleground of this view, there is land currently under agricultural production that appears to extend almost completely from one side of this view to the other. Toward the background of this view are the already noted STIG plant and WPCF structures. The existing transmission lines pass through the middleground in the northern edge of this view, and extend into the horizon in the southern edge.

Applying the scale presented in Table 5.13-1, this view is rated as having a moderately low level of visual quality. There is no distinctive pattern evident in the landscape and thus

[4] The San Joaquin County General Plan identifies scenic routes and includes in its Open Spaces Element a policy on Scenic Route Enhancement. This policy states that the County shall: (a) initiate a program to enhance its scenic routes by litter removal programs, route identification signs, and provision of parking at desirable viewpoints; (b) require landscape plans for development along scenic routes; and (c) include in the Design Review Manual guidelines for development in the viewshed of the scenic route. Because the project site is not along any scenic routes, only the third point of this policy would apply to the proposed project, and it would be addressed during the project's design review, conducted by the San Joaquin County Community Development Department prior to construction.

there is a low level of vividness present in the view. The industrial facilities and transmission lines in the middle- and background contrast with the less developed—albeit still disturbed—land closer to the viewer. As such, there is a moderately low level of visual intactness. Further, despite the appearance throughout the fore- and middleground of land that is under production, the dominant uses themselves contrast visually and result in a moderately low level of visual unity.

Because this view represents the view from an area that provides opportunities for recreation, the level of visual sensitivity is moderate.

5.13.1.5.3 KOP 3—View from Eight Mile Road

Figure 5.13-4A depicts the view from KOP 3, approximately 2 miles south of the LEC site, along the westbound shoulder of Eight Mile Road, a County-designated scenic route. Typical viewers along this road are drivers and passengers in automobiles traveling along the northern urban edge of Stockton. West of the KOP is a levee providing access to the main channel of White Slough. East of the KOP along Eight Mile Road is Oak Grove Regional Park. Residential subdivisions line the southern side of the road both to the east and west of I-5. This view is intended to represent the residential view from the homes on the southern side of Eight Mile Road, part of the Spanos Park development, and west of the shopping center. This neighborhood is densely populated relative to the surrounding area. There are homes along an approximately quarter-mile-long segment of the roadway that will have a view toward the project site similar to this one.

In this view, the stack associated with the existing STIG plant is visible in the distance. It appears as almost in alignment with the two transmission lines that extend from the middleground in the south (right edge of the view) and recede into the horizon in the north (left portion of the view). The view is characterized by the presence of agricultural uses, however, and the middleground and foreground are dominated by the stalks of corn at mid-maturity. Applying the scale presented in Table 5.13-1, this view is rated as having a moderate level of visual quality. The prominence of a singular agricultural use in the foreground and middleground of the view provides a moderate degree of both vividness and unity. This would particularly apply during times when a crop has been planted and it is approaching maturity, as was the case at the time of the site visit. During other times of the year, such as when the fields are fallow, there would likely be a lower degree of vividness in this same view, and the industrial structures in the background would appear with slightly more prominence. Overall, this view of a landscape typical of land in the Central Valley has a moderately low to moderate level of intactness.

Because this view represents the views from residential neighborhoods, the level of visual sensitivity is high.

5.13.1.5.4 KOP 4—View from Interstate 5 Northbound

Figure 5.13-5 is the view from KOP 4, which is in the northbound lane of I-5, approximately a quarter-mile southeast of the project site. This viewpoint was added to the set of KOPs per request from the CEC to demonstrate existing visual conditions from a more proximate location along I-5. As previously noted, no simulation for this viewpoint was requested. As is the case with KOP 1, this view is seen mainly by drivers and passengers in automobiles traveling along I-5.

The existing view from this location is characterized by elements of transport and transmission, along with the industrial structures associated with the STIG plant. Interstate 5 occupies the entire foreground in this view, and the most prominent features beyond the roadway include the STIG plant and the transmission towers that pass through the project area. Mature vegetation is visible throughout the middleground, and some trees obscure elements of the STIG plant as well as the WPCF in the eastern edge (right side) of the view. Further north of this KOP, the cluster of irrigated trees adjacent to the freeway and directly east of the WPCF increasingly block views of the industrial structures to the west.

Applying the scale presented in Table 5.13-1, this view is rated as having a low level of visual quality. The vegetation visible in the middleground provides some vividness to the view, but it appears in most of the view as interwoven with—and subordinate to—the industrial and transmission facilities just beyond the trees. These more prominent industrial and energy-related structures contribute to a low level of visual intactness. The visually contrasting elements in the view result in a low level of visual unity.

5.13.1.5.5 KOP 5—View from North Thornton Road

Figure 5.13-6 is the view from KOP 5, which is along North Thornton Road, approximately one mile north of the LEC site. This viewpoint was also added, per request from the CEC, to demonstrate existing visual conditions from a location close to a nearby residence. The KOP is at the end of the Lima Ranch driveway, a complex including a dairy farm and associated residences. The residences here are among the closest to the project site. The view from this location is similar to the view from southbound I-5 (KOP 1), but typical viewers are more likely to include residents making local trips. North Thornton Road is a county road providing access to Highway 12 to the north, Eight Mile Road to the south, and to the homes and farms scattered throughout the land east of I-5. Because of the proximity to residences, there is a moderate level of viewer sensitivity from this KOP.

The existing view from this location is characterized by the linear forms of North Thornton Road, I-5, and the two large transmission lines beyond the roadways. The existing STIG plant, including associated tanks and structures, is visible in the center of the view. However, direct views of the facility are intermittent from this location, due to the high volume of passing traffic, including large trucks which obscure the project site completely when they pass in front of the viewer.

Applying the scale presented in Table 5.13-1, this view is rated as having a low level of visual quality. No elements within the view contribute any notable degree of vividness, and the primary source of intactness stems from the prominence of the linear roadways. The relationship between the roadways, which are sources of constant motion in the view, along with the edge of agricultural land in the foreground and industrial/transmission facilities in the view beyond I-5, results in a low level of visual unity.

5.13.2 Environmental Analysis

5.13.2.1 Analysis Procedure

This assessment of the proposed project's potential effects on visual resources was conducted by applying the systematic method for evaluating the potential aesthetic effects of proposed power plant projects that has been adopted by the staff of the CEC. This

methodology, which the CEC first applied in its evaluation of the impacts of the Roseville Energy Park Project, is summarized in Appendix 5.13A.

As an initial step in the evaluation process, planning documents (including City of Lodi and San Joaquin County documents) applicable to the project area were reviewed to gain insight as to the type of land uses intended for the area, and the guidelines given for the protection or preservation of visual resources. Consideration was then given to the existing visual setting within the project viewshed, which is defined as the geographical area in which the project can be seen. An assessment was then made of the visual changes that the project would cause to determine impact significance, following four California Environmental Quality Act (CEQA) Guidelines checklist questions. Appendix 5.13A provides a more complete description of the visual resources evaluation process that was followed.

Potential project impacts were evaluated using a KOP analysis, among other tools and information sources. Site reconnaissance was conducted by CH2M HILL to view the site and surrounding area, to identify potential key observation points, and to take representative photographs of existing visual conditions. A single-lens reflex 35-mm camera with a 50-mm lens (view angle 40 degrees) was used to shoot site photographs.

Photographs are presented to represent the "before" conditions from each of the first three KOPs. Visual simulations were produced to illustrate the "after" visual conditions from each of these KOPs, to provide the viewer with a clear image of the location, scale, and visual appearance of the proposed project. These simulation images represent the project's appearance in the period immediately after completion of construction and installation of the landscaping. The computer-generated simulations are the result of an objective analytical and computer modeling process described briefly below. The images are accurate within the constraints of the available site and project data. Simulations were not created for KOP 4 and KOP 5; they are included per direction by the CEC to provide additional context for the existing conditions surrounding the project site.

Computer modeling and rendering techniques were used to produce the simulated images of the views of the site as they would appear after development of the project. Existing topographic and site data provided the basis for developing an initial digital model. The project engineers provided site plans and digital data for the proposed generation facility, and site plans and elevations for the components of the transmission system. These were used to create three-dimensional (3-D) digital models of these facilities. These models were combined with the digital site model to produce a complete computer model of the generating facility and portions of the overhead transmission system.

For each viewpoint, viewer location was digitized from topographic maps and scaled aerial photos, using 5 feet as the assumed eye level. Computer "wire frame" perspective plots were then overlaid on the photographs of the views from the KOPs to verify scale and viewpoint location. Digital visual simulation images were produced as a next step, based on computer renderings of the 3-D model combined with high-resolution digital versions of base photographs. The final "hardcopy" visual simulation images that appear in this AFC document were produced from the digital image files using a color printer.

Once all potential impacts were examined, a determination was made as to whether any impacts would reach a level that would be significant under CEQA's standards, and thus

require mitigation beyond that proposed as a part of the initial project design. Under CEQA, any required mitigation must be specific to an identified impact, and must be feasible.

5.13.2.2 Impact Evaluation Criteria

The following criteria from the CEQA Guidelines were considered in determining whether a visual impact would be significant.

The CEQA Guidelines define a "significant effect" on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including… objects of historic or aesthetic significance" (CCR tit. 14, § 15382).

Appendix G of the CEQA Guidelines, under Aesthetics, lists the following four questions to be addressed regarding whether the potential impacts of a project are significant:

1. Would the project have a substantial adverse effect on a scenic vista?
2. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?
3. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?
4. Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

5.13.2.3 Project Appearance

5.13.2.3.1 Project Structures and Dimensions

The proposed project facilities are described in detail in Chapter 2.0, Project Description. Figure 2.1-1 shows the general arrangement and layout of the proposed project features on the site, and Figure 2.1-2 provides typical elevation views. Table 5.13-2 summarizes the dimensions, finishes, and materials of the generating facility's major features. The exteriors of all major project equipment will be matched to the existing STIG plant finish and is intended to optimize its visual integration with the surrounding environment. The project will be surrounded by a chain-link security fence, and access will be provided by a gated driveway on the southeastern corner of the site. The height of the LEC exhaust stack will be 150 feet. The City of Lodi zoning designation for the LEC site is "Public and Community Facilities." There are no height restrictions under this zoning designation.

5.13.2.3.2 Transmission Line

The LEC will tie in to an existing 230-kV switchyard west of the project site, which runs adjacent to the STIG plant. No new outgoing transmission lines will be required other than the short tie line from the new plant to the existing switchyard.

TABLE 5.13-2
Approximate Dimensions and Colors, Materials, and Finishes of the Major Project Features

Feature	Height (feet)	Length (feet)	Width (feet)	Diameter (feet)	Color	Materials	Finish
Exhaust Stack	150	NA	NA	20	Light Stone	Metal	Flat/Untextured
HRSG	105	150	30	NA	Light Stone	Metal	Flat/Untextured
CTG Inlet Air Housing	70	30	45	NA	Light Stone	Metal	Flat/Untextured
Cooling Tower	46	337	43	NA	Light Stone	Metal	Flat/Untextured
Water Treatment Building	40	67	160	NA	Light Stone	Metal	Flat/Untextured
Raw/Fire Water Storage Tank	40	NA	NA	50	Light Stone	Metal	Flat/Untextured
Demin. Storage Tank	40	NA	NA	30	Light Stone	Metal	Flat/Untextured
Steam Turbine	35	140	45	NA	Light Stone	Metal	Flat/Untextured
Combustion Turbine	35	100	35	NA	Light Stone	Metal	Flat/Untextured

HRSG = heat recovery steam generator

5.13.2.3.3 Pipelines

A new gas pipeline will be constructed to connect the LEC to PG&E's high-pressure natural gas pipeline #108, 2.5 miles east of the project site. Sanitary sewer and recycled water for cooling will be provided to the LEC via a utility corridor linking the power plant and the WPCF, adjacent to the east. Potable water will be provided via a new onsite well.

5.13.2.3.4 Construction Laydown Area

As detailed in Section 2.2, construction of the LEC is to take place during the 24-month period extending from second quarter 2010 to second quarter 2012. Four locations are proposed for parking and laydown during the construction period. Two of the areas are adjacent to the east of the LEC site (one on the north side of the access road, one on the south), and two are east of the WPCF, adjacent to I-5. These proposed laydown areas range from approximately 1.5 to 3 acres in size. During the construction phase of the project, construction materials, construction equipment, trucks, and parked vehicles will be visible on some or all of these sites.

5.13.2.3.5 Landscaping

No landscaping is proposed for the project site, once construction is complete. All construction debris will be removed from the laydown areas.

5.13.2.3.6 Lighting

The project's effects on visual conditions during hours of darkness will be limited. The existing STIG plant and WPCF already create an area in the view of the project site within which some night lighting is visible. Some additional night lighting will be required by the LEC for operational safety and security. There will be additional visible lighting associated with the project stack and open site areas. High illumination areas not occupied on a regular basis will be provided with switches or motion detectors to light these areas only when occupied. At times when lights are turned on, the lighting would not be highly visible offsite and would not produce offsite glare effects. The offsite visibility and potential glare of the lighting would be restricted by specification of non-glare fixtures and placement of lights to direct illumination into only those areas where it is needed. With construction of

the LEC, the overall change from the existing lighting conditions at the project site, as viewed from nearby locations and from vantage points, would not be substantial.

Project construction activities are planned to occur between 6:00 a.m. and 11:00 p.m. Lighting that may be required to facilitate nighttime construction activities would, to the extent feasible and consistent with worker safety codes, be directed toward the center of the construction site and shielded to prevent light from straying offsite. Task-specific construction lighting would be used to the extent practical while complying with worker safety regulations. In spite of these measures, there may be limited times during the 24-month construction period when the project site may appear as a brightly lit area as seen in views from surrounding areas. Because the duration of these effects will be limited, the impact will be less than significant.

5.13.2.3.7 Water Vapor Plumes

Plumes tend to form in the winter months, at night, and during early morning hours when the temperatures are very low and humidity is relatively high. If fog is present, plumes will not be discernible in the fog. The height and width of the visible water vapor plume from the exhaust stack will depend on meteorological conditions. The height of the plume (whether visible or not) will be a function of the buoyant rise of the air from the exhaust stack plume. The width of the HRSG visible water vapor plume will depend on the length of time it takes for the plume to be diluted with ambient air, such that the moisture content of the air drops below the dew point, and hence the plume becomes visible.

Plumes emanating from the proposed cooling tower will only occur during very cool weather with relatively high humidity, at night, or in the early morning hours. Cooling tower plumes will not be visible during warm weather. Similar to the HRSG plume, the height and width of the visible water vapor plume from the cooling tower will depend on the meteorological conditions.

As discussed above, nearby residential density is low and the view of most residents is at a distance of 1 to 2 miles. The existing STIG plant stack produces a visible vapor plume in the winter months, under low temperature and high humidity conditions.

5.13.2.4 Assessment of Visual Effects

5.13.2.4.1 KOP 1—View from Interstate 5 Southbound

Figure 5.13-2 presents a photo of the existing view toward the project site from the southbound lane of I-5, approximately one-half mile north of the LEC site (Photo A), a simulation of the view as it would appear during the project's operational period (Photo B), and a simulation of the view as it would appear with proposed landscaping after five years (Photo C). Comparison of the first two images indicates that when the proposed project is in place, the change to the view will be noticeable but not out of character with the existing setting. The exhaust stack would become the tallest structure visible from this viewpoint, as it would be taller than the STIG stack. The combustion turbine/generator would be the foremost major element of the new facility, appearing adjacent to one of the existing STIG plant buildings from this vantage point. The fire/raw water tank would be prominently visible along the eastern edge (left side) of the project site, and separate segments of the cooling tower would be visible beyond the tank, HRSG and combustion turbine/generator.

The LEC would expand the visible presence of industrial facilities in this view. However, the facility would be entirely within an already existing industrial envelope, adjacent to the STIG plant and near the large transmission towers that already appear as prominent vertical elements in the landscape. And although a segment of the coast range, visible in background views, would be obscured by the LEC, substantial portions of the distant mountains are already blocked in this view by existing structures. The majority of the LEC would be comparable in scale with the existing STIG plant structures, with only the new exhaust stack appearing as taller than the existing STIG stack. The WPCF ponds and agricultural land would remain prominent in foreground views. Because the new features would not remove any valued elements of the view, would not block views of valued features in the background, and would not substantially change the composition of this view, there will be essentially no change to the view's existing levels of vividness, unity, and intactness, and overall level of visual quality. As a consequence, the change in view from this KOP would not be substantial.

5.13.2.4.2 KOP 2—View from White Slough Wildlife Area

Figure 5.13-3 presents a photo of the existing view toward the project site from within the WSWA, approximately one mile northwest of the project site (Photo A), a simulation of the view as it would appear during the project's operational period (Photo B), and a simulation of the view as it would appear with proposed landscaping, after five years (Photo C). Comparison of the first two images indicates that when the proposed project is in place, the change to the view will not be substantial. The existing STIG plant stack and some of the buildings are visible from KOP 2, as are portions of the WPCF. The LEC would not expand the horizontal extent of the industrial area already apparent in current views. The exhaust stack would be noticeably taller than the STIG stack from this vantage point, but it would appear shorter than the nearest transmission tower. In addition, from this viewpoint, the new exhaust stack would appear to be within the corridor of the existing transmission alignment. Because no elements of the LEC would appear outside of the industrial envelope visible in the existing view, and because there would be no marked change in the existing levels of vividness, unity or intactness, changes to the overall visual quality in the existing view from this KOP would not be substantial.

5.13.2.4.3 KOP 3—View from Eight Mile Road

Figure 5.13-4 presents a photo of the existing view toward the project site from a viewpoint approximately 2 miles south of the LEC site, along the westbound shoulder of Eight Mile Road (Photo A), a simulation of the view as it would appear during the project's operational period (Photo B), and a simulation of the view as it would appear with proposed landscaping, after five years (Photo C). Comparison of the two images indicates that when the proposed project is in place, the change to the view will be relatively small. The cooling tower and, above it, the exhaust stack would be clearly visible in the distance, adjacent to the existing STIG plant. The LEC would be near the existing transmission lines in the area and therefore, while taller than other nearby structures, would appear as part of a corridor with other taller vertical elements in the landscape. As with the view from KOP 2, the horizontal area occupied by industrial facilities in the existing view would not expand with inclusion of the LEC. These changes would do little to alter the existing character of the view. The visual vividness and unity of the existing view is based on the dominance of agricultural land in the fore- and middleground, and construction of the LEC would not substantially alter the intactness of the view. Thus, there would be no substantial change to

the overall quality of the view from this location, as viewed by drivers and passengers along Eight Mile Road or residents from points further away.

5.13.2.4.4 Light and Glare

The project's effects on visual conditions during hours of darkness will be limited. As indicated in Section 5.13.2.3.6, some night lighting would be required for operational safety and security. There would be additional visible lighting associated with the project stack, and open site areas. High illumination areas not occupied on a regular basis would be provided with switches or motion detectors to light these areas only when occupied. At times when lights are turned on, the lighting would not be highly visible off site and would not produce offsite glare effects. The offsite visibility and potential glare of the lighting would be restricted by specification of non-glare fixtures and placement of lights to direct illumination into only those areas where it is needed. With construction of the LEC, the overall change in ambient lighting conditions at the project site, as viewed from nearby locations, would not be substantial.

Lighting that may be required to facilitate nighttime construction activities would, to the extent feasible and consistent with worker safety codes, be directed toward the center of the construction site and shielded to prevent light from straying offsite. Task-specific construction lighting would be used to the extent practical while complying with worker safety regulations. In spite of these measures, there may be limited times during the 24-month construction period when the project site may appear as a brightly lit area as seen in views from surrounding hillside residential areas.

5.13.2.4.5 Water Vapor Plumes

NCPA is providing the following information to allow the CEC staff to assess potential visible plume formation from the proposed cooling tower and exhaust stack at LEC.

Table 5.13-3 presents the plume conditions for the cooling tower, and Table 5.13-4 presents plume conditions for the CTG/HRSG exhaust stack

TABLE 5.13-3
Cooling Tower Physical and Operational Characteristics

Parameter	Value
Cooling Tower Length	336.7 ft (102.6 m)
Cooling Tower Width	42.7 ft (13 m)
Cooling Tower Exhaust Height	45.8 ft (13.9 m)
Design Inlet Air Flow	1,284,000 cfm per cell
Design Heat Rejection Rate	600.8 MMBtu/hr
Design Liquid/Gas Ratio	0.788
Design Exhaust Velocity	1652 ft/min per cell
Exhaust Flow Rate	1,297,000 cfm per cell
Design Exhaust Temperature	85 deg. F
Humidity Ratio Out	0.0264

Source: SPX Cooling Technologies, Inc.

TABLE 5.13-4
CTG/HRSG Exhaust Stack Exhaust Characteristics

Condition	Moisture Content (% wt)	Exhaust Flow Rate (lbs/hr)	Exhaust Temperature (°F)
Full Load with Duct Firing			
Hot ambient (107.7°F, 18.2% RH)	8.18%	3,488,558	181
Average ambient (61.2°F, 66.8% RH)	6.04%	3,621,670	178
Full Load without Duct Firing			
Cold ambient (23.7°F, 81% RH)	4.83%	3,777,613	183
Average ambient (61.2°F, 66.8% RH)	5.59%	3,555,531	187
Hot ambient (107.7°F, 18.2% RH)	7.68%	3,422,443	190

5.13.2.5 Impact Significance

A discussion regarding whether the visual effects of the project would be significant pursuant to CEQA is provided below. The assessment of these impacts has been structured by applying the criteria set forth in Appendix G of the CEQA Guidelines. The CEQA Guidelines define a "significant effect" on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including objects of historic or aesthetic significance." (14 CCR 15382) The four questions related to aesthetics that are posed for lead agencies and the answers to them are:

Would the project have a substantial adverse effect on a scenic vista?

No. There are no State-designated scenic roads or vista points in the nearby (2-mile radius) project viewshed.

Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No. This question does not apply to the proposed LEC because none of the project facilities fall within the boundaries of a state scenic highway.

Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

No. The site itself is set within an existing industrial area that is itself surrounded primarily by land dedicated to mechanized agriculture (large-scale crop production and grazing). The project area's existing visual character reflects several layers of human use. Along with the existing STIG plant, WPCF, and large-scale agricultural uses, two separate transmission lines of substantial size (230-kV and 500-kV) pass through the site vicinity. In addition, constructed ponds and waterways are the dominant landform in the area west of the project site. In short, this is a highly engineered landscape, put into a variety of production-oriented uses.

As indicated, the LEC will be visible in views from KOPs 1, 2, and 3. However, the project's facilities will not dominate these views, and will, to varying degrees, be visually absorbed into the overall setting. It will particularly be absorbed into its immediate surroundings, which are entirely industrial in character at present. While adding a relatively tall structure (the exhaust stack), the presence of the LEC will not substantially degrade the visual character of the views from I-5, the WSWA, or Eight Mile Road.

Because of the character of the area and the presence of other plumes from other nearby sources, including the existing facility, plumes that will occur at the LEC plant will not result in a significant impact on the visual character of the area. Plumes emitted from the proposed plant will not significantly detract from views of the area.

Would the project create a new source of substantial light and glare that would adversely affect day or nighttime views in the area?

No. As described in Section 5.13.2.4.4, project light fixtures will be restricted to areas required for safety, security, and operations. Lighting will be directed on site; it will be shielded from public view, and non-glare fixtures and use of switches, sensors, and timers to minimize the time that lights not needed for safety and security are on will be specified. These measures will substantially reduce the offsite visibility of project lighting.

Because the generation facility now on the site has nighttime illumination, the lighting associated with the proposed project is not likely to create a substantial change in nighttime lighting at the site. Given the limited level of lighting proposed for the project, the measures that will be taken to minimize offsite effects, and the minimal level of change from existing conditions, the LEC's night lighting impacts will be less than significant.

Because none of the major project features will have surfaces that are highly reflective, the project will not be a source of daytime glare.

Any lighting that will be installed to facilitate nighttime construction activities will, to the extent feasible and consistent with worker safety codes, be directed toward the center of the construction site and shielded to prevent light from straying offsite. Task-specific construction lighting will be used to the extent practical while complying with worker safety regulations. Because of these impact attenuation, lighting during the 24-month construction period will not create a significant impact.

5.13.3 Cumulative Effects

A cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Public Resources Code § 21083; California Code of Regulations, title 14, § 15064(h), 15065(c), 15130, and 15355).

In July 2008, 21 projects were in various stages of progress with the City of Lodi. Most of these projects are zoned residential, with a few office, mixed use, institutional, commercial, and industrial projects proposed. All of these projects are more than 4 miles from the

proposed project, except for the improvements at the White Slough WPCF (Draft EIR issued March 28, 2008), which is adjacent to the project site (Bereket, 2008; City of Lodi, 2008).

In July 2008, 72 projects[5] were being processed with the San Joaquin County Building Department. These projects were in Acampo, Escalon, Farmington, French Camp, Linden, Lodi, Lockeford, Manteca, Ripon, Stockton, and Tracy. The types of projects included residential projects such as new residences, additions and remodels to existing residences, mobile home renovations, and pool construction; commercial projects such as administration buildings, barns, and a riding arena; light industrial projects such as storage buildings, spray booths, and warehouses; office projects such as building conversions and tenant improvements; and institutional projects such as classroom relocation and facilities to house animals (Raborn, 2008).

Because the LEC is a permitted use at the proposed site and would not result in significant adverse impacts that cannot be mitigated, and because the LEC's location is removed from the city limits (i.e., the LEC site is located on land owned and incorporated by the City of Lodi), impacts from the LEC would not likely combine with those from the projects being processed in the city limits to result in significant cumulative impacts. Any new development in either the area surrounding the LEC or the lands near the KOPs may provide additional screening of the LEC, thus further reducing its visibility within the surrounding area. There are no known projects that would remove surrounding structures and make the project more visible. Therefore, the LEC would not contribute to cumulative impacts.

5.13.4 Mitigation Measures

This analysis has documented the fact that no significant visual impacts will result from implementation of the proposed project. Therefore, no mitigation measures are proposed. However, project implementation will be subject to City planning regulations. Specifically, a site plan will be prepared and submitted to the City for review and comment and to CEC Compliance Project Manager for review and approval before construction begins. The site plan will comply with all applicable provisions of the City of Lodi Municipal Code, including any provisions related to project appearance as set forward in the City's project review process (see Table 5.13-6). A landscaping plan will be submitted along with the site plan.

5.13.5 Laws, Ordinances, Regulations, and Standards

This subsection describes the LORS relevant to the visual resource issues associated with the LEC. The project site is on land that has been incorporated into the City of Lodi; as such, the project is subject to all visual resources-related LORS contained within the City of Lodi General Plan and City of Lodi Municipal Code. In addition, because the project site is surrounded by San Joaquin County, and because of the proximity of two County-designated scenic routes, San Joaquin County General Plan policies related to scenic routes also apply to the project. No federal or state visual resource LORS apply to the proposed project.

The CEC has exclusive jurisdiction of the project. Nevertheless, the CEC will address the issues typically reviewed by a local agency.

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[5] For the purposes of this discussion, San Joaquin County sorted its projects by project cost, and provided a list of the projects costing $25,000 or more.

Table 5.13-5 lists the City plans and ordinances that are pertinent to the project elements. The specific provisions of each plan or ordinance that have potential relevance to the project are identified in Sections 5.13.5.1, 5.13.5.2 and 5.13.5.3.

TABLE 5.13-5
Laws, Ordinances, Regulations, and Standards for Visual Resources

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
City of Lodi General Plan (1991)	Comprehensive long-range plan to serve as the guide for the physical development of the City.	City of Lodi Community Development Department, Planning Division	Section 5.13.5.1
City of Lodi Development Code—Municipal Code Title 17 (2003)	Establishes zoning districts governing land use and the placement of buildings and district improvements.	City of Lodi Community Development Department, Planning Division	Section 5.13.5.2
San Joaquin County General Plan (1992)	Comprehensive long-range plan to serve as the guide for the physical development of the County.	San Joaquin County	Section 5.13.5.3

5.13.5.1 City of Lodi General Plan Urban Design and Cultural Resources Section

The LEC site is on land incorporated into the City of Lodi and is therefore subject to the provisions of the City of Lodi General Plan. As described in Section 5.6, Land Use, the project site is designated Public/Quasi Public, which allows some industrial uses. The provisions of the City's General Plan that are therefore applicable to the visual resources-related facets of the project are summarized and evaluated in Table 5.13-6.

TABLE 5.13-6
Conformity with the City of Lodi General Plan Urban Design and Cultural Resources Section

Provision	Conformity?
Goal I: To upgrade and enhance the aesthetic quality of industrial areas. **Policy 1:** The City shall formulate and adopt guidelines, incentives, and design standards as part of the City's Urban Design Plan, for upgrading and enhancing the visual quality of existing industrial areas, including screening of industrial operations visible from public streets, site landscaping, and screening of parking lots. **Policy 2:** The City shall require that all new industrial development receive the approval of the Site Plan and Architectural Review Committee (SPAARC).	Yes. NCPA met with the City of Lodi Community Development Department, Planning Division, Rad Bartlam/Interim Community Development Director on August 28, 2008. Per Mr. Bartlam, the City will not require or impose development standards for the LEC facility, therefore landscaping and landscaping plans will not be required for the site (see Section 5.13.5.2 below).

Source: City of Lodi, 1991.

5.13.5.2 City of Lodi Development Code—Municipal Code Title 17

The City of Lodi Development Code—Municipal Code Title 17 ("Municipal Code") implements the policies of the General Plan by classifying and regulating the uses of land and structures within the City of Lodi in a manner consistent with the General Plan. The Public and Community Facilities (PF) Zoning District is consistent with the Public/Quasi Public and the Detention Basins and Parks land use designations of the General Plan. The provisions of the Municipal Code that are applicable to the project are discussed in detail in Section 5.6, Land Use, and those that are related to visual resources are summarized in Table 5.13-7.

TABLE 5.13-7
Conformity with the City of Lodi Municipal Code

Provision	Conformity?
Lodi Municipal Code 17.26.040 Public and Community Facilities District Development Standards: Standards for development within the PF zoning district will be determined by the City through the project review process.	Yes. The Applicant has consulted with the City of Lodi Community Development Department, Planning Division, Rad Bartlam/Interim Community Development Director on August 28, 2008. Per Mr. Bartlam, the City will not require or impose development standards on the LEC facility.

Source: City of Lodi, 2003.

5.13.5.3 County of San Joaquin General Plan

The County of San Joaquin General Plan includes policies related to visual resources in the Open Space and Community Development Elements, as presented in Table 5.13-8.

TABLE 5.13-8
Conformity with the San Joaquin County General Plan 2010

Provision	Conformity?
Open Space Policy 10: Views of waterways, hilltops, and oak groves from public land and public roadways shall be protected.	Yes. The LEC project would not eliminate views of any waterways or oak groves. In views from I-5, the proposed structures would obstruct views of some segments of the hills that are currently visible in the background. However, existing structures already obstruct substantial portions of the hills from viewpoints along I-5. In addition, these views are from vehicles typically moving at high speeds and are therefore intermittent and limited in duration.
Open Space Policy 13: Development proposals along scenic routes shall not detract from the visual and recreational experience.	Yes. There are no vista points or other important scenic viewpoints in the project vicinity. Interstate 5 County-designated scenic road. However, the effect of the proposed project on the view from I-5 is less than significant; the LEC project, as documented in Section 5.13.2.4.1, would not substantially alter the visual character or visual quality of views from this roadway.

TABLE 5.13-8
Conformity with the San Joaquin County General Plan 2010

Provision	Conformity?
Open Space Implementation Policy 7. Scenic Route Enhancement. The County shall: b) require landscape plans for development along scenic routes; and c) include in the Design Review Manual guidelines for development in the viewshed of the scenic route.	Yes. While the LEC will not be located directly along any County-designated scenic route, it would be visible from both I-5 and Eight Mile Road. The project will adhere to the City's site review guidelines. A landscape plan will be developed for the project. The project will also adhere to the County's Design Review Manual Guidelines.
Community Development Policy 11: Development should complement and blend in with its setting.	Yes. The LEC project would be constructed almost entirely within an existing envelope of industrial development. The project's lone offsite component, a 2.5-mile natural gas line, will be constructed underground.
Community Development Policy 12: Aesthetics should be considered when reviewing development proposals.	Yes. Aesthetics have been considered by identifying materials and finishes, addressing light and glare to reduce visual impacts.

Source: County of San Joaquin, 1992.

5.13.5.4 Summary of Project's Conformity with Applicable LORS

The project complies with applicable laws, ordinances, regulations, and standards related to visual resource issues.

5.13.6 Agencies and Agency Contacts

The agency responsible for the design review is the City of Lodi (Table 5.13-9).

TABLE 5.13-9
Agency Contacts for Visual Resources

Issue	Agency	Contact
Design review	City of Lodi Community Development Department, Planning Division	Kari Chadwick Planning Secretary 221 West Pine Street P.O. Box 3006 Lodi, California 95241-1910 (209) 333-6711

5.13.7 Permits and Permit Schedule

The required permit that is of the most direct relevance to visual resource issues is the Design Review, which includes site plan, architectural, and landscape elements.

TABLE 5.13-10
Permits and Permit Schedule for Visual Resources

Permit or Approval	Agency Contact	Schedule
Design Review including Site Plan and Landscape Plan review	Kari Chadwick Planning Secretary City of Lodi Community Development Department, Planning Division 221 West Pine Street P.O. Box 3006 Lodi, California 95241-1910 (209) 333-6711	Prior to construction
Design Review including Site Plan review	Chandler Martin, Deputy Director Planning Division 1810 East Hazelton Avenue Stockton, CA 95205-6232 (209) 468-3144 cmartin@sjgov.org	Prior to construction

5.13.8 References

Bartlam, Rad/City of Lodi Community Development Department, Interim Community Development Director. 2008. Personal communication with Sarah Madams/CH2M HILL, Andrea Grenier/Grenier & Associates, Inc., Susan Strachan/Grenier & Associates, Inc., and Ed Warner/NCPA on August 28, 2008.

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