

3.5.1 Introduction

This chapter evaluates project-related light and glare impacts. As part of that evaluation, this chapter identifies existing sources and levels of nighttime artificial illumination, sources of daytime and nighttime glare generation, the potential for project changes to those light and glare conditions, and the presence of sensitive receptors to the light and glare.

3.5.2 Setting

The two major causes of light pollution are glare and spill light. Glare occurs when one sees a bright object against a darker background, such as when a person experiences oncoming headlights while driving at night. Spill light is caused by misdirected light that illuminates areas outside the area intended.

Evaluation of nighttime lighting includes an assessment of ambient lighting conditions within the project area as well as the degree of exposure to light intensities that are experienced by surrounding land uses. Artificial lighting may be generated directly from point sources of unshielded light, and indirectly from reflected light.

Daytime glare is typically caused by the reflection of sunlight from highly reflective surfaces at or above eye level. Reflective surfaces are generally associated with buildings constructed with broad expanses of highly polished surfaces or broad, light-colored area of paving. Daytime glare is generally present during early morning and late afternoon hours when the sun is at a low angle and the potential exists for intense reflected light to interfere with vision and driving conditions. Daytime glare may also hinder outdoor activities conducted within surrounding land uses.

Nighttime glare includes direct, intense, focused, and reflected light. Glare caused by direct light generally comes from mobile sources such as automobiles. Less frequently, glare may come from an intense stationary source, such as

floodlights or cargo crane lights. As with daytime sun glare, intense nighttime light may cause undesirable interference with driving or other activities.

3.5.2.1 Existing Light and Glare Characteristics

Regional and Local Character

San Pedro and Wilmington development includes a dense mix of residential, commercial, industrial, and recreational uses. Lighting throughout these communities is consistent with typical urban development. Several areas in the area include more intensive lighting; these include the Vincent Thomas Bridge, the Harbor Freeway, terminals, and other uses on Terminal Island and throughout the Port.

Onsite Light and Glare Elements

The parking areas north of 22nd Street are currently lit with a total of 10 double-sided fixtures. Miner Street south of 22nd Street is currently lit with a total of 28 street light fixtures, three of which are double-sided. The 28 total fixtures include several that serve also to illuminate the area between the fruit warehouse and Miner Street, two fenced areas west of Miner Street, and the parking area for the marina. Some of these fixtures are inside these parcels as opposed to curbside. The light emitted from the fixtures along Miner Street is less than that of other surrounding street fixtures along roadways such as 22nd Street and Harbor Boulevard. With the exception of one pole-mounted floodlight, no street lighting is located at the end of Miner Street at the south end of the project site near the point. Other small fixtures are scattered around the existing marina buildings and gangways. There are approximately 10 lighting towers for the adjacent breakbulk terminal; however, during observations these were not in use, and it is unknown how often they are used. No glare elements were observed on the project site.

Offsite Light and Glare Elements

Light

The dominant sources of nighttime illumination immediately surrounding the project site are the bright lights above each door along the west side of the long warehouse (Berths 56–60) in the East Channel. Other sources of light include street lighting and the lights illuminating the water tower above Warehouse 1. Major roadways near the project site, such as Harbor Boulevard, exhibit relatively greater illumination levels than local streets in the residential neighborhoods north and west of the project site. Additional local sources of ambient nighttime lights are provided by the multi- and single family residential

uses to the north and west of the project site, and include building security lights, parking lot lights, and illumination from building interiors. Building security lights are also located on Warehouses 9 and 10 north of the project site. To the west, Cabrillo Marina Phase I includes illumination from hotel and restaurant building indoor and outdoor lights, parking lot lights, and decorative uplights beneath trees.

Ports O' Call Village and Fort MacArthur are also well lit at night. Additionally, the existing cargo terminals, cranes, and other industrial facilities throughout the Port have high-intensity nighttime lighting that produces a readily distinguishable glow in the night sky around the project vicinity. Cranes that operate along the western edge of Terminal Island are lit and operate as needed 24 hours a day.

The project site's location at the edge of the Port and in proximity to industrial facilities subjects it to relatively high and constant nighttime illumination levels. Major sources of nighttime illumination in the larger project area, several blocks or more from the site, include streetlights and illuminated signage associated with the Harbor Freeway, Ports O' Call Village, Los Angeles World Cruise Center, the Vincent Thomas Bridge, and Port operations east of the project site (cargo cranes, container yard lighting, parking lot lighting, ships, etc.). While these sources generally contribute to increased ambient light levels in the area, their distance from the project site reduces the magnitude of impacts on the closest neighborhood north of the site. Additionally, distant lights may be visible from the project site without contributing directly and measurably to its illumination.

Mobile sources of illumination in the project area include local traffic, trains that run along Harbor Boulevard down to the West and East Channels, and small boats moving through the West Channel.

Glare

Glare generation in the project is predominantly a nighttime event, since more buildings are residential, marine-, and tourist-related, and warehouses. There are no buildings with large glass or polished surfaces, such as office buildings, in the project area. Nighttime glare originates with both stationary and mobile sources. Stationary sources of glare could include the high intensity lighting along the warehouse at Berths 58–60. There are no cargo cranes in the nearby vicinity that could potentially produce glare. Mobile glare sources include local traffic headlights.

Sensitive Receptors

Project area receptors that are potentially sensitive to nighttime illumination or glare include the residents of the neighborhood north of the project site along

Crescent Avenue, Cabrillo Marina Phase I visitors and employees, and the boat occupants in the marina.

Shade and Shadow

Shade and shadow analysis evaluates the potential for the proposed project to reduce solar access to sensitive uses in the project area. Certain land uses, such as schools, parks and playgrounds, public open space, and private residences and yards, depend on or have a right to expect light and warmth from the sun; therefore, these are considered shade-sensitive uses.

Shade-sensitive uses in the project area include residences along the north side of Crescent Street, Cabrillo Marina Phase I visitors and employees, and the boat occupants in the West Channel marinas.

3.5.2.2 Regulatory Setting

Various plans and policy documents set forth regulations and guidelines for light and glare that relate to the development of the Port. Objectives, goals, and policies pertinent to the proposed project are listed below.

City of Los Angeles General Plan

Urban Form and Neighborhood Design Element

This element identifies patterns of development intensity, building height, and other structural elements that determine the City's physical character and visually differentiate centers of landscape elements, such as open space, transportation corridors, public facilities, activity centers and focal centers. This element identifies Port land uses primarily as industrial and secondarily as open space; the sole policy applicable to the project site recommends the potential re-designation of marginal industrial lands for alternative uses where feasible (City of Los Angeles 1996).

Infrastructure and Public Service Element

This element contains policies relating to street lighting on private streets and in pedestrian-oriented areas, ensuring minimization or elimination of potentially adverse light "spillover" onto offsite areas or conflicts with street tree planting. The following policies are applicable to development of the project site.

Policy 9.40.1 Require lighting on private street, pedestrian-oriented areas and pedestrian walks to meet minimum City standards for street and sidewalk lighting.

Policy 9.40.2 Require parking lot lighting and related pedestrian lighting to meet recognized national standards.

Policy 9.40.3 Develop regulation to ensure quality lighting to minimize or eliminate the adverse impact of lighting due to light pollution, light trespass, and glare for façade lighting, security lighting, and advertising lighting including billboards.

Policy 9.40.6 Placement of street trees shall be coordinated with the placement of streetlights.

The San Pedro Community Plan

The *San Pedro Community Plan* (City of Los Angeles 1999a) includes Community Design and Landscaping Guidelines that include recommended improvements for entryways, streetscape, street trees, street furniture, street lighting, sidewalks/paving, signage, public open space, and plazas.

3.5.3 Impacts and Mitigation

3.5.3.1 Methodology

Light and glare impacts are determined through a comparison of the existing light sources to the proposed project lighting plan.

The two major causes of significant adverse light impacts are glare and spill light. Evaluation of the severity of impacts from light and glare is based on the location and intensity of the light source and the sensitivity of potential viewers near the proposed project site. Light impacts are considered an annoyance, while impacts from glare can potentially present safety hazards. If substantial glare is directed toward surrounding streets or if project lighting would substantially exceed established lighting standards, a significant impact would occur. Variables affecting glare may include mounting heights, locations, and aiming of the luminaries.

The effects of proposed modifications of nighttime lighting conditions are contextual and depend on the existing light environment, light intensity, and proximity of sensitive receptors to light sources. Adverse lighting impact may occur when project-related lighting is visually prominent, decreases available views or alters the nature of community or neighborhood character, or illuminates a sensitive land use. Nighttime illumination of sensitive properties

may adversely affect certain land use functions, such as residential or institutional uses. These land uses are typically occupied during evening hours and are subject to disturbance by bright light sources.

Analysis of existing light and glare conditions consisted of observations during daytime and nighttime visits to the project site and surrounding areas. Potential sensitive receptors of high nighttime light levels or glare generation were identified, and distance from the project site was calculated using computer-aided design and drafting (CADD). For shade-shadow analysis, the height, orientation, and distance of proposed elements with respect to shade-sensitive residential and recreational uses to the north and west were evaluated to assess potential impacts.

3.5.3.2 Thresholds of Significance

The criteria used to determine the significance of impacts on aesthetics and visual resources are based on the *Draft Los Angeles CEQA Thresholds Guide* (City of Los Angeles 1998). Although the guide does not give specific thresholds to determine the significance of light and glare impacts, it does give factors to consider when determining impact significance. Project impacts on light, glare, shade, and shadow are based on the following factors:

- the change in ambient illumination levels as a result of project sources,
- the extent to which project lighting would spill off the project site and affect adjacent light-sensitive area, and
- the extent to which the project would cause shade-or shadow-sensitive uses to be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October).

Based on these factors, the following thresholds are used in this SEIR to determine whether a project would have a significant impact.

- L&G-1:** The project would result in a substantial perceptible change in ambient illumination levels at adjacent and nearby receptors.
- L&G-2:** The project would result in a substantial spill lighting to adjacent or nearby properties.
- L&G-3:** The project would produce shade and shadow to adjacent residential for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours

of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October).

3.5.3.3 Project Impacts

Direct and Indirect Impacts

Impact L&G-1: The Project Would Not Result in a Substantial Perceptible Change in Ambient Illumination Levels at Adjacent and Nearby Receptors

Project construction activities would take place during daylight hours, between 7:00 a.m. and 6:00 p.m., and would not be a source of increased nighttime lighting or glare generation in the project area.

Project operations would introduce new sources of nighttime lighting along Miner Street; security lighting throughout the project site with additional lighting at the entry point on 22nd Street; illuminated pathways, promenade and boat dock areas; and accent lights around trees and landscaping. Light sources would be focused and directed toward the interior of the project site and away from adjacent marina waters and boats.

Lighting associated with the proposed project would result in increased ambient nighttime light levels in the project area. Portions of the project site would be lit from dusk until dawn; these areas would include parking lots, dock areas, building exteriors, and walkways. Lighting would not include high intensity flood or spotlights. The proposed onsite lighting would be an extension of the existing lighting in the Cabrillo Marina Phase I development and would be consistent with surrounding developed areas. No sensitive receptors are located immediately adjacent to the project site; therefore, impacts from spill light would not occur. Cabrillo Marina Phase I visitors and employees are located across the West Channel and would not be impacted by the increased ambient light. Given the existing intense nighttime lighting from the warehouses to the east and other industrial facilities within the Port, lighting from the proposed project would be negligible within the overall visual context. The proposed project would result in less-than-significant impacts associated with increased ambient illumination levels in the project area.

Mitigation Measures

No mitigation is required.

Residual Impact

Impacts would be less than significant.

Impact L&G-2: The Project Would Not Result in Substantial Spill Lighting to Adjacent or Nearby Properties

As discussed under Impact L&G-1, project operation would result in the introduction of new sources of lighting; however, no sensitive land uses are located immediately adjacent to the project site. Additionally, new lighting would be directed inward or confined to the project site and would not substantially impact sensitive receptors in the residences to the north or visitors and employees to the west. The distance to sensitive receptors and intervening buildings or elements (e.g., boats or water) would reduce or eliminate impacts from glare, such as that from cars in the parking areas of along Miner Street. Based on the proposed type of lighting, the project is not anticipated to produce substantial sources of glare. The proposed project is anticipated to result in less-than-significant impacts associated with light spill and glare.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact L&G-3: The Project Would Not Cause Shade-or Shadow-Sensitive Uses to be Shaded by Project-Related Structures for More Than Three Hours Between the Hours Of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between Late October And Early April), or for More Than Four Hours Between the Hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between Early April and Late October)

The closest shade-or shadow-sensitive users in the project area include the residents to the north and west, the boat occupants in the new redesigned marina, and Cabrillo Marina Phase I visitors and employees that are located across the West Channel.

The tallest building included in the proposed project would be the dry stack building at 65 feet high. This structure would produce the largest shadow on the project site. Shadows are longest at 9 a.m. and 3 p.m. during the winter solstice. During this time, the dry stack building would cast a shadow that extends approximately 196 feet from the structure (City of Los Angeles 1998).

The nearest resident, on the corner of Beacon Street and Crescent Avenue, is located approximately 1,500 feet north of the proposed dry stack building, and the boats in the new marina would be approximately 435 feet from the building.

Visitors and employees at the Cabrillo Marina Phase I would be further west than the boat occupants; therefore, they would not be affected by the long winter shadows. Additionally, the new project retail buildings would not be affected by shadows from the dry stack building. The closest building would be approximately 280 feet away. The proposed project is anticipated to result in less-than-significant impacts associated with shade or shadow.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Cumulative Impacts

The proposed project would result in relatively minor contribution to nighttime lighting and glare in the project area. Related projects in the project area are predominantly Port-related and represent expansion of intensification of existing or preexisting uses. Such projects may contribute to a cumulative intensification of the nighttime illumination levels in the Port area; however, it is not anticipated to significantly impact neighboring community of San Pedro near the project site. Implementation of the proposed project would constitute a relatively minor addition to the ambient light levels in the area. Therefore, the project would not make a considerable contribution to cumulative light and glare impacts.

3.5.3.4 Mitigation Monitoring Plan Summary

No significant impacts would occur; therefore, no mitigation is required.