4.A.2 LIGHT AND GLARE

1. INTRODUCTION

This section evaluates potential light and glare impacts associated with the Project. This section is based in part on the Light and Glare Technical Report ("*Lighting Report*") prepared by Fisher Marantz Stone, Inc. (July 2014). The *Lighting Report* is included as Appendix C-2 of this Draft EIR.

Nighttime illumination of varying intensities is characteristic of most urban and suburban land uses, including those in the City of Los Angeles. New light sources have the potential to increase ambient nighttime illumination levels and result in spillover of light onto adjacent properties. These effects, referred to as "light trespass," have the potential to interfere with certain functions including vision, sleep, privacy, and general enjoyment of the natural nighttime condition. The significance of the impact depends on the type of use affected, proximity to the affected use, the intensity of the light source, and the existing ambient light environment. Certain land uses, such as residential uses, are recognized as light-sensitive receptors because they are typically occupied by persons who have expectations for privacy during evening hours and are sensitive to disturbance by bright light sources. Light trespass is measured as a function of illuminance, or light reaching the surface of a receptor from an external source. This analysis evaluates the potential for nighttime lighting sources introduced by the Project to impact light-sensitive receptors identified in the Project vicinity.

Glare can occur during both daytime and nighttime hours. Daytime glare is caused by the reflection of sunlight or artificial light from highly polished surfaces, such as window glass or reflective materials, and, to a lesser degree, from broad expanses of light-colored surfaces. Daytime glare generation occurs in urban areas and is typically associated with mid- to high-rise buildings with exterior facades largely or entirely comprised of highly reflective glass or mirror-like materials from which the sun can reflect. Daytime glare generation is typically related to sun angles, although glare resulting from reflected sunlight can occur at certain times of the year. Glare can also be produced during evening and nighttime hours when artificial light is directed at, or reflected toward, a sensitive receptor. The analysis of glare provided herein assesses the Project's potential impacts on glare-sensitive uses, which include light-sensitive residential receptors and motorists on adjacent roadways. Glare is measured in terms of luminance, or the apparent brightness of a built feature of the landscape, in relation to the brightness of other features in the same field of view.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Existing Light Sources at the Project Site

As described in the *Lighting Report*, the brightest existing illuminated features on the Project Site are the Original Building's Corner Tower, at the intersection of Wilshire Boulevard and Fairfax Avenue, and the northwest corner of the building, which is floodlit to illuminate the entrance on the building's North façade and the vehicular entrance off Fairfax Avenue to the on-site service road and gravel area. A continuous cantilevered awning along Wilshire Boulevard and Fairfax Avenue incorporates indirect cove lighting to illuminate the sidewalk. Temporary street-level signage within the May Company Building's display windows is internally illuminated with concealed fixtures. LACMA's Resnick North Lawn creates a substantial open space buffer immediately north of the May Company Building, which reduces visibility of

the building's lighting from the Park La Brea garden apartments on the north side of Sixth Street. The May Company Building is currently used predominantly during daytime hours, and the levels of activity and lighting on the Project Site in the evening, apart from the illuminated features described above, are generally low.

Illuminance[1] readings of existing conditions on the Project Site indicate that illuminance is highest along Wilshire Boulevard and lowest along Sixth Street. As shown in the **Figure 4.A.2-1**, *Existing Conditions – Luminance Levels at the Project Site Boundary* illuminance values at the Corner Tower are approximately 0.84 lux,[2] increasing to a high of 1.38 lux on Wilshire Boulevard just to the east of the Corner Tower due to the presence of an illuminated bus shelter on the sidewalk adjacent to the building. Illuminance values along Fairfax Avenue range from 0.69 lux near Wilshire Boulevard to 0.23 lux near the Project Site's northern boundary. Illuminance values along Sixth Street, north of the Project Site range from 1.11 lux near the Fairfax Avenue intersection to 0.36 lux north of LACMA's Levitated Mass, at the northern edge of the Resnick North Lawn. Illuminance values are therefore generally highest near intersections and light standards and drop to lows of 0.09 lux mid-block on Wilshire Boulevard and 0.07 lux mid-block on Fairfax Avenue and Sixth Street.

(2) Existing Light Sources in the Project Vicinity

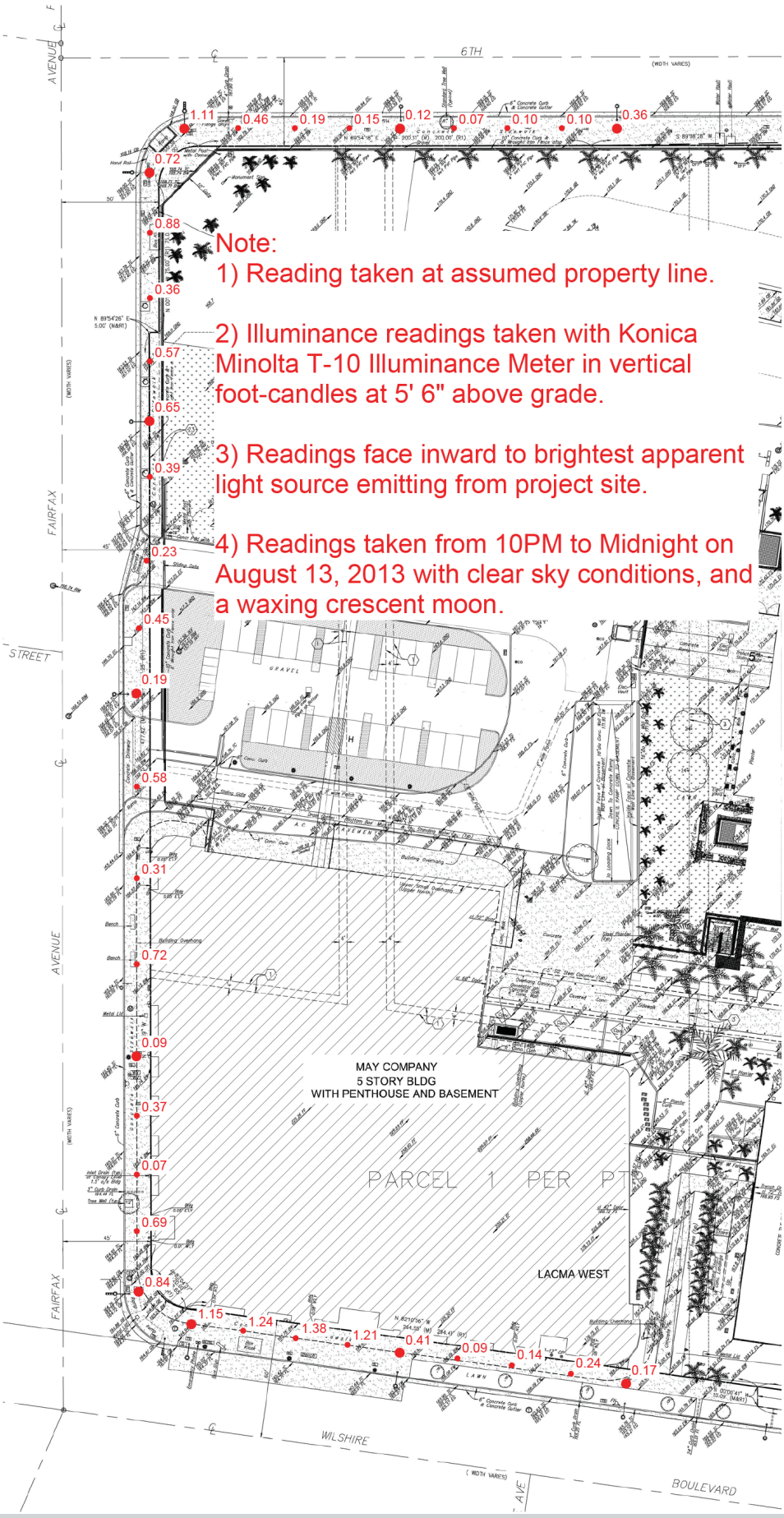
The portion of the LACMA Campus east of the Project Site exhibits high levels of illumination at night. The formal entrance to the LACMA Campus is marked by "Urban Light," a large installation of 202 lighted streetlamps installed at the LACMA BP Grand Entrance which illuminates all architectural surfaces adjacent to and across the street from Wilshire Boulevard at Ogden Drive. The BP Grand Entrance is fitted with fluorescent uplights under a large exterior canopy to provide general lighting. Adjacent to the Project Site, prominent illuminated signage on the Broad Contemporary Art Museum façade results in high light levels along the sidewalk and increases visibility for Wilshire Boulevard pedestrians and motorists. Northeast of the Project Site, interior lighting within the Resnick Exhibition Pavilion is visible through north-facing clerestory windows visible to pedestrians, motorists, and Park La Brea residences along Sixth Street.

The corner of Wilshire Boulevard and Fairfax Avenue, directly opposite the May Company Building, exhibits high nighttime light levels because of the presence of streetlights, and a lighted bus shelter; types of lighting used in these fixtures include High Pressure Sodium, light-emitting diode ("LED"), and Metal Halide lighting sources. High volumes of vehicular traffic at night and multi-lane traffic signals add glare to the static levels of the street lighting. Johnie's Coffee Shop, not currently in use, displays a brightly lit incandescent sign band with lamps animated in a random chase sequence. A large illuminated billboard facing southwest is pole-mounted along the west side of Johnie's and overhangs its roof. A 99 Cent Store, which has a brightly lit visible interior and large, internally illuminated roof sign, is located to the west of Johnie's Coffee Shop.

Along the west side of Fairfax Avenue, west of the Project Site, ambient nighttime light levels are generally lower than along Wilshire Boulevard, as the neighborhood is more mixed, with both residential and commercial uses. The 99 Cent Store surface parking lot, with lighted signage and parking lot light standards,

[1] *Illuminance is the amount of luminous flux falling on a given area. It can be measured at any point within a space and determined from the luminance or intensity of a light source. Luminance is the actual brightness of an illuminated surface.*

[2] *One lux equals slightly more than 1/10th footcandle (one footcandle equals 10.764 lux).*



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Existing Conditions – Luminance Levels at the Project Site Boundary

Academy Museum of Motion Pictures Project

Source: Fisher Marantz Stone, Inc., 2013.

FIGURE

4.A.2-1

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is located north of Johnie's Coffee Shop and fronts onto Fairfax Avenue. A six-story condominium building located to the north of the parking lot is the most brightly illuminated land use on this block of Fairfax Avenue. This building, which faces the western edge of the Project Site, has visible interior lighting of the central stairwells and individual units, and exterior building lighting over the Fairfax Avenue building entrance. A second 99 Cent Store is located north of the residential building at the southwest corner of Fairfax Avenue and Sixth Street. This store has a brightly lighted interior and signage, as well as a large, roof-mounted, illuminated billboard that faces the intersection. The one- and two-story commercial uses on Fairfax Avenue to the north of Sixth Street exhibit generally low to moderate nighttime light levels and a building in the middle of the block supports another roof-mounted, illuminated billboard. Along the north side of Sixth Street, north of the Project Site and Resnick North Lawn, low light levels within the Park La Brea development are typical of residential neighborhood conditions, with street lights, security or way finding and architectural lighting. Additional street lights line the south side of Sixth Street between Fairfax Avenue and Curson Avenue, along the landscaped northern boundaries of the LACMA Campus and Hancock Park.

In addition to these point source illuminated features, vehicle headlights, lighted signs and atmospheric conditions all contribute to the nighttime lighting environment in the Project area. Streetlights, building security lighting, and billboard floodlighting in several locations in proximity to the Project Site is unshielded and therefore at least partially directed upwards into the night sky, creating sky glow.

(3) Sensitive Receptor Locations

The *L.A. CEQA Thresholds Guide* identifies residential uses, natural areas, and some sensitive commercial and institutional uses as land uses that are typically considered sensitive to nighttime light. Six sensitive receptors were identified in Project vicinity and are summarized below; they include three light-sensitive residential land uses and three intersections in close proximity to the Project Site where motorists could be susceptible to potential glare. These receptors are described in detail in the *Lighting Report*.

- Receptor 1, Residential Condominium Building at 637 South Fairfax Ave
- Receptor 2, Park La Brea Multi-Family Residential Development Garden Apartments at 6043 West Sixth Street
- Receptor 3, Park La Brea Multi-Family Residential Development Towers at 500 South Curson Avenue
- Receptor 4, Wilshire Boulevard intersection at Fairfax Avenue
- Receptor 5, Wilshire Boulevard intersection at South Orange Grove Avenue
- Receptor 6, Fairfax Avenue intersection at Sixth Street

Of the residential receptors, Receptor 1, at the corner of Fairfax Avenue and Orange Street, is the closest to the Project Site, approximately 95 feet to the west. Residential units fronting on Fairfax Avenue, some of which have outdoor balconies, have unobstructed views of the Project Site. Units facing south toward the 99 Cent Store parking lot or north toward Orange Street have partial views of the Project Site. The brightest source of glare at this location is from off-street light poles. The average illuminance value at this location is 6.9 lux.

Receptor 2 represents Park La Brea garden apartments approximately 310 feet north of the Project Site. Apartments fronting Sixth Street between Fairfax Avenue and South Ogden Drive, due north of the Project

Site and Resnick North Lawn, have unobstructed views of the northern façade of the May Company Building and northern portion of the Project Site. However, because of its size and the inward-facing orientation of much of Park La Brea, the vast majority of garden apartment residences in this development does not have direct views of the Project Site, and therefore are not considered potentially affected sensitive receptors. Nighttime light levels on Sixth Street are dominated by street lighting and vehicular traffic. The existing average illuminance value at this location is 2.9 lux.

Receptor 3 represents the apartment tower within Park La Brea that is closest to the Project Site; it is located approximately 2,300 feet north of the Project Site and its location is representative of other high-rise towers in this development. All Park La Brea towers have partially obstructed views of the Project from the first six stories due to mature landscaping within the complex, but unobstructed views are available from the south- and west-facing façades above the sixth floors. Access to the towers was not available and illuminance values were not measured at the tower designated as Receptor 3, but are likely to be similar to those at Tower 2 (2.9 lux).

Receptors 4 through 6 are street intersections where motorists approaching the Project Site have unobstructed or partially unobstructed views of the Original Building or the northern Project Site. Measured average illuminance values at these locations range from 19.4 lux at Receptor 4, 23.2 lux at Receptor 5, and 7.8 lux at Receptor 6.

Atmospheric conditions have the capacity to increase or decrease ambient brightness at all of the sensitive receptor locations investigated. The nighttime measurements were taken with predominantly clear sky conditions. Low-level clouds in an overcast sky create a reflective surface that has the potential to increase measured illuminance levels.

b. Regulatory Framework Summary

The regulatory framework is summarized below and described in detail in Appendix B, Regulatory Framework, Section 4.A.2, of this Draft EIR.

Numerous state and local regulations, as well as internationally recognized guidelines, address artificial light. These regulations and guidelines include the standards adopted by the International Commission on Illumination ("CIE"); the Illuminating Engineering Society of North America ("IESNA") Handbook, 10th Edition; the California Building Code, Electrical Code, and Vehicle Code; California Green Building Standards Code; California Energy Commission Efficiency Standards, Title 24 (2008); and the Los Angeles Municipal Code ("Municipal Code").

The CIE establishes maximum permitted values of average surface luminance and intensity for luminaries according to orientation. Permitted values are relative to specific, existing environmental zones as defined by the CIE. The IESNA Handbook further defines nighttime outdoor lighting zones based on existing ambient conditions and provides standards for light trespass illuminance limits. The IESNA Handbook also provides standards related to surface reflectivity of exterior façade materials.

Chapter 10, Section 1006 of the California Building Code contains requirements for illuminated building egress, and the California Green Building Standards Code stipulates how outdoor lighting systems should be

designed and installed to reduce the amount of light and glare from both interior and exterior light sources. Title 24 of the Building Standards Code describes lighting control requirements for various lighting systems for the purpose of increasing energy efficiency. California Vehicle Code Section 21465.5 regulates light and glare conditions that have the potential to impair a driver's vision.

Applicable lighting regulations in the Municipal Code include Section 93.0117(b), which limits the maximum amount of illuminance from an exterior light source at the property line of the nearest residentially-zoned property. Section 14.4.4.E, limits the maximum contribution from illuminated signage at a residential property.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The following analysis compares the Project's potential light and glare conditions to existing ambient light levels at the defined sensitive receptor locations. The level of change is then evaluated in accordance with the City's thresholds, Municipal Code regulations, and other factors contained in professional guidelines to determine whether the Project would result in potentially adverse environmental effects.

Existing conditions described in this section (and further detailed and documented in the *Lighting Report*) were documented through field studies, including photographic documentation conducted in summer 2013. Measurements of existing light emissions at each of the six sensitive receptor locations were taken on June 26 and 27, 2013, under conditions considered typical of the existing maximum light emissions, as follows:

- Illuminance and luminance measurements and High Dynamic Range ("HDR") imagery were taken between 9:30 P.M. and 1:00 A.M. when LACMA Campus and off-site retail signage were fully illuminated.
- The sky was clear throughout the duration of measurements with a full moon emerging.
- HDR imagery documenting views of the Project Site were taken from the six sensitive receptor locations, with pertinent lighting or architectural measurements identified at each receptor.

The HDR imaging process, a composite of multiple low dynamic range images (LDRI), was used to photograph the Project Site as viewed from each sensitive receptor. In addition, selected measurements, expressed in candelas per square meter ("cd/m^2"), were taken with a calibrated luminance meter at various surface locations within each receptor view of the Project Site. The luminance measurements were used to calibrate the HDR image. After calibrating these images, the luminance was mapped with color to create a pseudo-color image to graphically demonstrate luminance variations within each receptor view. The HDR imagery was photographed and post-processed in accordance with the techniques and processes put forth in *High Dynamic Range Imaging: Acquisition, Display and Image Based Lighting authored by Reinhard, Ward, Pattanaik and Debevec, 2006.* Illuminance measurements, expressed in lux or footcandles, were taken in a manner consistent with IESNA recommendations for measuring light trespass to survey existing conditions at each receptor.

Future Project lighting conditions were simulated through the use of a computer model to determine the anticipated impacts of Project lighting (including illuminated signage) on sensitive receptors; the modeling

allowed quantitative analysis of the orientation, areal extent of coverage, visibility, and intensity of Project lighting in the Project vicinity. The *L.A. CEQA Thresholds Guide* (2006) and Municipal Code regulations were used as significance thresholds for evaluating impacts associated with light trespass. Thresholds of significance for assessing glare were developed based on the recommended CIE guidelines and regulatory criteria from the California Department of Motor Vehicles ("California DMV") Vehicle Code.

A 3D model was developed for the Project to simulate lighting impacts. The model was created with finishes similar to exterior materials for the New Wing and the existing limestone Cladding face of the May Company Building. The Project model was developed with modeling software (Revit), and lighting simulations were created with 3D Studio Max. In order to accurately predict the Project's illuminance contributions, the conceptual lighting and illuminated signage designs were developed with representative lighting fixtures and illuminated signage.

Preliminary maximum design assumptions for architectural and façade lighting are based on information furnished by the Project lighting engineer and contained in the conceptual lighting design plan and specifications contained in Appendices D and E of the *Lighting Report*.

Because illuminance meters measure visible light within a 180-degree field of view, off-site light sources in the vicinity contribute to existing light levels at sensitive receptor locations. Off-site light sources in the Project area include vehicle headlights, street lights, traffic signals, illuminated bus shelters, and illuminated signs, including billboards, all of which contribute to the cumulative light and glare conditions at sensitive receptors. These contributions cannot be isolated from those of the existing Project Site and their contributions are therefore represented in the surveyed measurements of existing conditions.

The *Lighting Report* summarizes the results of a daylighting model used to assess the architectural glare of the Sphere at sensitive receptor locations. Summer and winter solstice dates were used to encompass the highest and lowest sun-angles of study. The study includes an hourly survey of reflected sunlight on the Sphere for both summer and winter solstice days as viewed from the three defined residential receptors (Receptors 1, 2, and 3) and the intersection closest to the Sphere, where motorists with unobstructed views of the Sphere have the highest potential to be affected (Receptor 6, the intersection of Fairfax Avenue and Sixth Street). The survey includes a luminance calculation at the hour of most direct view of glare for that day and receptor. Where finishes may be subject to change or refinement, modeling was undertaken using materials that represent a worst-case scenario in terms of potential impacts. The model input assumed a matte aluminum finish for the entire Sphere, which would generate the greatest potential glare.

Light emissions from Project signage were simulated for normal operations and special events, assuming the signage locations, types, sizes, and luminance (brightness levels) set forth in Section 5.1, Proposed Project Light Sources, and Appendix H, Conceptual Signage Plans, of the *Lighting Report* provided in Appendix C-2 of this Draft EIR.

b. Thresholds of Significance

Appendix G of the State *CEQA Guidelines* provides a screening question that addresses impacts with regard to light and glare. This question is as follows:

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

The *L.A. CEQA Thresholds Guide* incorporates the screening questions contained in Appendix G. In accordance with the City's thresholds, the determination of significance with respect to light shall be made on a case-by-case basis, considering 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 areas.

The *L.A. CEQA Thresholds Guide* references illuminance levels established by Municipal Code Section 93.0117(b), which prohibits the following:

- Exterior light sources [other than signage] producing a light intensity exceeding 21.5 lux (2.0 footcandles [fc]) at the property line of a residence or other sensitive receptor (this value excludes contributions from illuminated signage).

Municipal Code Section 14.4.4.E also prohibits the following:

- Light emissions associated with an illuminated sign producing a light intensity exceeding 32.3 lux (3.0 footcandles) above ambient lighting at the property line of a residence or other sensitive receptor.

The City has not established a significance threshold for glare (i.e., façade luminance from daylight and sunlight at sensitive receptors). However, the CIE provides guidelines for the luminance levels for building façades. Based on the recommended CIE levels, the potential for glare would be significant if any of the following conditions occur:

- Building façade luminance (excluding contributions from illuminated signage) exceeds 10 cd/m^2 average.
- Signage luminance exceeds 800 cd/m^2 average.
- Luminous intensity exceeds 10,000 candelas (cd) when emitted by luminaires in directions where views of bright surfaces of luminaires are likely to be troublesome to residents, from positions where such views are likely to be maintained.

The California DMV has established criteria limiting the output of light sources within a motorist's field of view. Based on the Vehicle Code Section 21466.5, light emissions would impair driver visibility under the following conditions:

- The maximum measured brightness of a light source within 10 degrees from a driver's normal line of sight exceed 1,000 times the minimum measured brightness in the driver's field of view, except when minimum measured brightness in the field of view is 10 footlamberts ("fL") or less.
- When minimum values are less than 10 fL, the source brightness exceeds 500 fL plus 100 times the angle, in degrees, between the driver's line of sight and the light source.

Based on these factors, the Project would have a significant light or glare impact if:

LIGHT-1 The Project introduces a new source of light or glare which would substantially alter the character of off-site areas surrounding the Project Site or result in substantial spill light or glare onto adjacent light-sensitive receptors.

c. Project Characteristics and Project Design Features

The Project would add new exterior light sources including architectural and façade lighting on the Original Building; lighting of the Sphere and Piazza to the north of the Original Building (including the area beneath the elevated Sphere) during regular hours of operation as well as evening programs and special events; rehabilitation of the cove lighting within the Original Building's cantilevered awning that extends over the Wilshire Boulevard and Fairfax Avenue sidewalks; lighting of the ground floor display boxes (vitrines or windows that wrap around the Original Building's Wilshire Boulevard and Fairfax Avenue façades); and the introduction of illuminated signage. Project lighting is described in more detail below.

The Project would also implement a number of features and practices in order to qualify for USGBC LEED® Silver Certification or its equivalent, as further discussed in Section 4.B.2, Greenhouse Gas Emissions, of this Draft EIR. Among these features is the installation of energy-efficient appliances and a commitment to achieve reduced building energy usage by 10 percent compared to ASHRAE 90.1-2007, Appendix G, and the Title 24 Building Standards Code.

(1) Project Characteristics

(a) Construction

Temporary lighting would be installed on the Project Site during construction, as required for worker safety. Construction lighting may be visible to some extent beyond the Project boundary, although temporary light sources would be located, shielded, and directed toward the Project Site so that direct beam illumination or substantial spill light would not occur at the property lines of nearby sensitive receptors.

(b) Operation

(i) Original Building

The Original Building lighting concept would use existing light fixtures refurbished with CalGreen-compliant backlight, uplight, and glare-rated[3] fixtures for exterior use. The cantilevered awning along the Original Building's Wilshire Boulevard and Fairfax Avenue façades would retain the existing ambient cove lighting that illuminates the sidewalk for pedestrian circulation and the existing uplights that illuminate the original flag poles. The original Corner Tower lighting concept highlighting the gold mosaic tile at the corner of Wilshire Boulevard and Fairfax Avenue would also be refurbished to restore historic nighttime views of this feature. In the area along the North façade where the 1946 Addition would be removed, between the reconstructed northwest corner and the retained northeast corner of the Original Building, a wall would be constructed that is predominantly windows with bands of painted concrete. It would not be externally

[3] *Illuminating Engineering Society ratings*

illuminated, although interior lighting would be visible from the outside along Fairfax Avenue and portions of Sixth Street.

(ii) Sphere

The exterior surface of the Sphere would not be directly illuminated other than by uplighting to be installed within the Piazza. A portion of the Sphere may be transparent and illuminated from within. Similarly, the planned above-grade pedestrian bridges connecting the Original Building and Sphere may be transparent and illuminated.

(iii) Piazza

The Piazza would encompass hardscape beneath the elevated Sphere and extending north to the Project Site's northern boundary. Beneath the Sphere, lighting would be placed at grade and adjacent to the seating and planting areas to create a canopy uplight effect. Lighting of the open-air portion of the Piazza may be supplemented with landscape lighting to highlight plantings or architectural features as the design program is developed. Secondary lighting infrastructure consisting of electrical wiring and outlets for temporary use is planned within the Piazza for catered and special events, but is not part of the permanent architectural lighting program.

(iv) Sign District

As further described in Section 2.0, Project Description, of this Draft EIR, pursuant to the provisions of Section 13.11 of the Municipal Code, the Project would establish a Sign District that would encompass the Project Site and 0.8 acres of the Resnick North Lawn, immediately north of the Project Site, for a total area of three acres. As conceptually proposed, the Project may include signs illuminated by external light sources, digital displays, and projection signs. Externally illuminated signs would include banner signs that may be installed on the upper wall of the Original Building and on the Sphere and flag pole signs on each of the eight existing flag poles on the Original Building; and any other non-digital displays. Digital displays may be located in the ground-floor Original Building storefront windows (i.e., display boxes), on the upper wall of the Original Building, and along the south façade of the Sphere. Canopy signs may be placed on the canopy (i.e., cantilevered awning) fronting on Wilshire Boulevard and Fairfax Avenue. Projected image signs are proposed for use during no more than twelve Special Events per calendar year, and would be permitted on portions of the Original Building. Identification signs may be located throughout the Sign District, including an Oscar statuette proposed at the Corner Tower of the Original Building. Temporary and special event signs would also be permitted on the Original Building, Sphere, and the portion of the Resnick North Lawn contained within the Sign District. The types and locations of proposed signs are discussed in more detail in Section 5.1, Proposed Project Light Sources – Illuminated Signage, of the *Lighting Report*, and depicted in the Academy Museum Conceptual Signage Plans in Appendix H of the *Lighting Report*, included in Appendix C-2 of this Draft EIR.

Except during special events, the hours of operation for digital displays, projected image signs, and large-scale architectural lighting would be from dawn until 10:00 P.M. During special events, digital displays, projected image signs, and large-scale architectural lighting would be from dawn until 10:00 P.M. or one hour after the conclusion of the special event, whichever is later, but not later than 2:00 A.M. Non-digital signs would not be subject to restriction on hours of operation.

Signs would be integrated into the aesthetic character of the Original Building and are intended to be compatible in scale with other signs on-site, enhance the pedestrian environment, and contribute positively to the identities of Museum Row and the Miracle Mile. Signage would be dedicated to the advertising of Museum exhibits, events, programs, and where applicable, recognition of Museum event and program sponsors.

(2) Project Design Features

In order to control light trespass and restrict the potential for glare, the following Project Design Features would be implemented as part of the Project.

PDF-LIGHT-1, Operational Lighting: The following operational lighting features would be incorporated into the Project:

- Luminance Restriction: An area-weighted average of luminance measurements on the Original Building and New Wing façades would not exceed 10 candelas per square meter (cd/m^2).
- Illuminance Restriction: Illuminance from specified light sources would not exceed 21.5 lux (2.0 footcandles) at the property line of the nearest sensitive receptor.
- Façade Luminaire Restrictions: Luminaires illuminating the building façade, with intensities greater than 10,000 candela would be shielded from view beyond the Project Site boundary.
- Exterior Luminaire Restrictions: Luminaires not illuminating the building façade, with intensities greater than 10,000 candela, would be shielded or rated as cut-off per the IESNA.
- Piazza Lighting Limitation: Permanently installed architectural lighting shall be designed to not exceed 10 footcandles (average, horizontal maintained at the ground) under the Piazza and other outdoor plaza areas within the Project Site.
- Event Luminaire Restrictions: Luminaires installed for special event lighting on a temporary basis on the Project Site must be aimed or shielded such that the direct beam illuminance is directed at the activity or object within the Project boundary that requires illumination.
- Restrictions for Drivers' Visibility: Luminaires would be shielded, reduced in intensity, or otherwise protected from view such that the brightness of a light source within 10 degrees from a driver's normal line of sight shall not be more than 1,000 times the minimum measured brightness in the driver's field of view, except when minimum values are less than 10 fL. If minimum values are below 10 fL, the source brightness would not exceed 500 fL plus 100 times the angle, in degrees, between the driver's line of sight and the light source.
- Interior Luminaire Restrictions: Interior lighting would be designed, specified, and installed so that the maximum candela direct beam illuminance (from luminaires) would not be directed out of the building envelope. In doing so, the interior spill light from the Project is assumed to be negligible beyond the confines of the Project Site.

PDF-LIGHT-2, Special Event Lighting: HDTV broadcasts of events are assumed to be the brightest foreseeable condition within the Project. Other less brightly-lit events may occur on a periodic basis within the Sphere's View Deck or elsewhere on the Project Site. Special

event lighting for productions and other events, including but not limited to traveling shows, concerts, and performances, represents a wide variety of temporary installations of lighting equipment. Although the possible events, and the design of the type, intensity, aiming, and distribution of associated temporary lights, are not specifically known, the following Project Design Features are intended to limit the potential for glare or spill light at the identified sensitive receptors:

- Luminaires installed for special event lighting on a temporary basis on the Project Site must be aimed or shielded such that the direct beam illuminance is directed at the activity or object within the Project boundary that requires illumination.
- Aiming of luminaires would be regulated to prevent the high intensity beam from striking any Project or adjacent building facades. Specifically, special event search lights would not project light more than 25 degrees from zenith, and hand held video and press event lighting platforms shall have their lighting directed inward toward the Project Site and not out to the Project boundary.

PDF-LIGHT-3, Illuminated Signage: The following illuminated signage design standards, which also represent impact thresholds pursuant to CEQA, and include an illumination testing and compliance protocol, would be implemented to limit spill light and glare at sensitive and vehicular receptors, and to confirm compliance with applicable requirements:

- Illuminance Restriction: Illuminance from signage would not exceed 32.3 lux (3.0 footcandles) at the property line of the nearest residential property.
- Luminance Restriction: The measurable luminance of permitted signage would not exceed 500 cd/m^2 after sunset or before sunrise.
- Restriction for Drivers' Visibility: Self-illuminated signs and/or luminaires intended to illuminate signs would be shielded, or reduced in intensity, or otherwise protected from view such that the brightness of a light source within 10 degrees from a driver's normal line of sight would not be more than 1,000 times the minimum measured brightness in the driver's field of view, except when minimum values are less than 10 fL. If minimum values are below 10 fL, the source brightness would not exceed 500 fL plus 100 times the angle, in degrees, between the driver's line of sight and the light source.
- Illumination Testing and Compliance Protocol: The Applicant's lighting design expert shall implement the following protocol to confirm compliance with all City Code requirements and lighting regulations (including without limitation, LAMC Section 93.0117, the requirements of the Sign Ordinance) and Illuminated Signage Performance Standards 1 through 3, above. The results of the foregoing testing shall be provided to the Los Angeles Department of Building and Safety (and copied to the Department of City Planning) immediately prior to initial signage operation and immediately prior to initial Museum operation, with a follow-up compliance test to be performed 12 months after issuance of the Certificate of Occupancy.
    - A representative testing site shall be established on or next to those light-sensitive receptors which have the greatest exposure to signage and Museum lighting on the west façade of the Project.
    - A light meter mounted to a tripod at eye level, facing the Project buildings, shall be calibrated and measurements shall be taken to determine ambient light levels with the signage on, and when the Museum is open and operating.

- An opaque object (e.g., a board) shall also be used to block out the view of the sign, and the Museum, from the light meter, at a distance of at least 4 feet away from the tripod and blocking the light meter's view of the Project buildings. A reading shall be taken to determine the ambient light levels with the sign off.
- The difference between the ambient light levels with the signage being illuminated, and with the signage being off, would be the amount of light the signage casts onto the sensitive receptor.
- The difference between ambient light levels with the Museum lighting on and off would be the amount of light the Museum casts onto the sensitive receptor.
- An alternative method to measure light levels would be to use the same tripod and same light meter, but to turn on and off the signage, and to turn the Museum lighting on and off. This method takes more coordination, but is more accurate.
- In addition, if at any time, the Los Angeles Department of Building and Safety has good cause to believe the Project's signage lighting is not in compliance with the Los Angeles Municipal Code, regulations, or Performance Standards, the Los Angeles Department of Building and Safety may request the protocol be implemented to determine compliance, at the expense of the Applicant. If the testing determines that the signage, or the Museum lighting, is not in compliance with the Los Angeles Municipal Code, regulations, Project Performance Standards, or project design features, the Applicant shall adjust the signage and/or lighting to bring it into compliance immediately.
    - Enforcement Agency: Los Angeles Department of Building and Safety; Los Angeles Department of City Planning
    - Monitoring Agency: Los Angeles Department of Building and Safety; Los Angeles Department of City Planning
    - Monitoring Phase: Pre-operation; Operation
    - Monitoring Frequency: Once prior to signage operation; once prior to Museum operation; and once 12 months after issuance of Certificate of Occupancy
    - Actions Indicating Compliance with Testing and Compliance Protocol: Los Angeles Department of Building and Safety approval of lighting testing results

d. Project Impacts

Threshold LIGHT-1: The Project would result in a significant light or glare impact if it introduces a new source of light or glare which would substantially alter the character of off-site areas surrounding the Project Site or result in substantial spill light or glare onto adjacent light-sensitive receptors.

Impact Statement LIGHT-1: *New light sources associated primarily with the Project would not exceed Municipal Code or California Vehicle Code regulatory standards or recommended CIE guidelines for spill light or glare. Thus, the Project would not result in substantial spill light or glare onto the identified light-sensitive receptors. In addition, the Project would not substantially alter ambient light conditions*

or the character of off-site areas surrounding the Project Site. Therefore, potential impacts associated with light and glare would be less than significant.

(1) Construction

Construction activities would occur primarily during daylight hours and any construction-related lighting would be used for safety and security purposes only. Construction lighting is anticipated to be used as required for safe construction and potential repair of Project facilities. Temporary construction lighting sources would be located, shielded, and directed toward the Project Site so that no direct beam illumination is aimed outside the Project Site and no substantial spill light would occur at the property lines of nearby residential receptors. Although temporary construction lighting may be visible beyond the Project Site, the location, shielding, and orientation of light sources would comply with the Municipal Code such that spill light would not exceed 21.5 lux at the property lines of the identified residential receptors. Accordingly, light associated with temporary construction activities would not significantly impact sensitive receptors or substantially alter the character of off-site areas surrounding the Project Site. Therefore, light and glare impacts associated with construction would be less than significant.

(2) Operation

(a) Nighttime Architectural Glare and Spill Light

The Project would generate new sources of light that would be visible from the identified sensitive receptors, including residential uses and street intersections. **Figure 4.A.2-2**, *Computer Model of Light Trespass*, below, illustrates the intensity of light generated during Project operation. **Table 4.A.2-1**, *Spill Light at the Project Boundary*, below, summarizes the average and maximum levels of spill light that would occur at the edges of the Project Site.

Table 4.A.2-1

Spill Light at the Project Boundary

	North Boundary	South Boundary	West Boundary
Average Architectural Illuminance (Spill Light)	3.25 lux	40.6 lux	32.9 lux
Maximum Architectural Illuminance (Spill Light)	8.0 lux	78.3 lux	119.0 lux

Source: Fisher Marantz Stone, Inc., 2014.

The *Lighting Report* in Appendix C-2 provides a detailed evaluation of the levels of spill light and glare at the property lines of the identified sensitive receptors. The findings are summarized in **Tables 4.A.2-2** through **4.A.2-4**.

Table 4.A.2-2, *Glare and Spill Light Summary at Receptor 1,* summarizes average architectural glare levels (luminance) and maximum architectural spill light levels (illuminance) that would be experienced at Receptor 1. Average glare is compared to the recommended CIE guidelines to determine the level of impact, assuming a matte aluminum finish for the entire Sphere, which would generate the greatest potential glare.

Table 4.A.2-2

Glare and Spill Light Summary at Receptor 1

	Measurement at Project Site or Receptor	Regulatory Standard or Guideline	Significant Impact?
Average Architectural Luminance (Glare)			
Lower	2.0 cd/m^2	10 cd/m^2	No
Upper	1.8 cd/m^2		
Maximum Architectural Illuminance (Spill Light) at Receptor	3.20 lux	21.5 lux	No

Source: Fisher Marantz Stone, 2014

As shown in Table 4.A.2-2, the average architectural glare levels experienced at Receptor 1 would range from 1.8 cd/m^2 to 2.0 cd/m^2, below the recommended CIE guideline of 10 cd/m^2 average. Table 4.A.2-2 also compares Project spill light levels at the boundary of Receptor 1 to the Municipal Code regulatory standard of 21.5 lux or less. As shown in Table 4.A.2-2, maximum spill light at the boundary of Receptor 1 would be 3.20 lux, well below the Municipal Code standard.

Because the Project's architectural glare and spill light levels would not exceed the respective regulatory standards and guidelines at Receptor 1, impacts at this receptor would be less than significant.

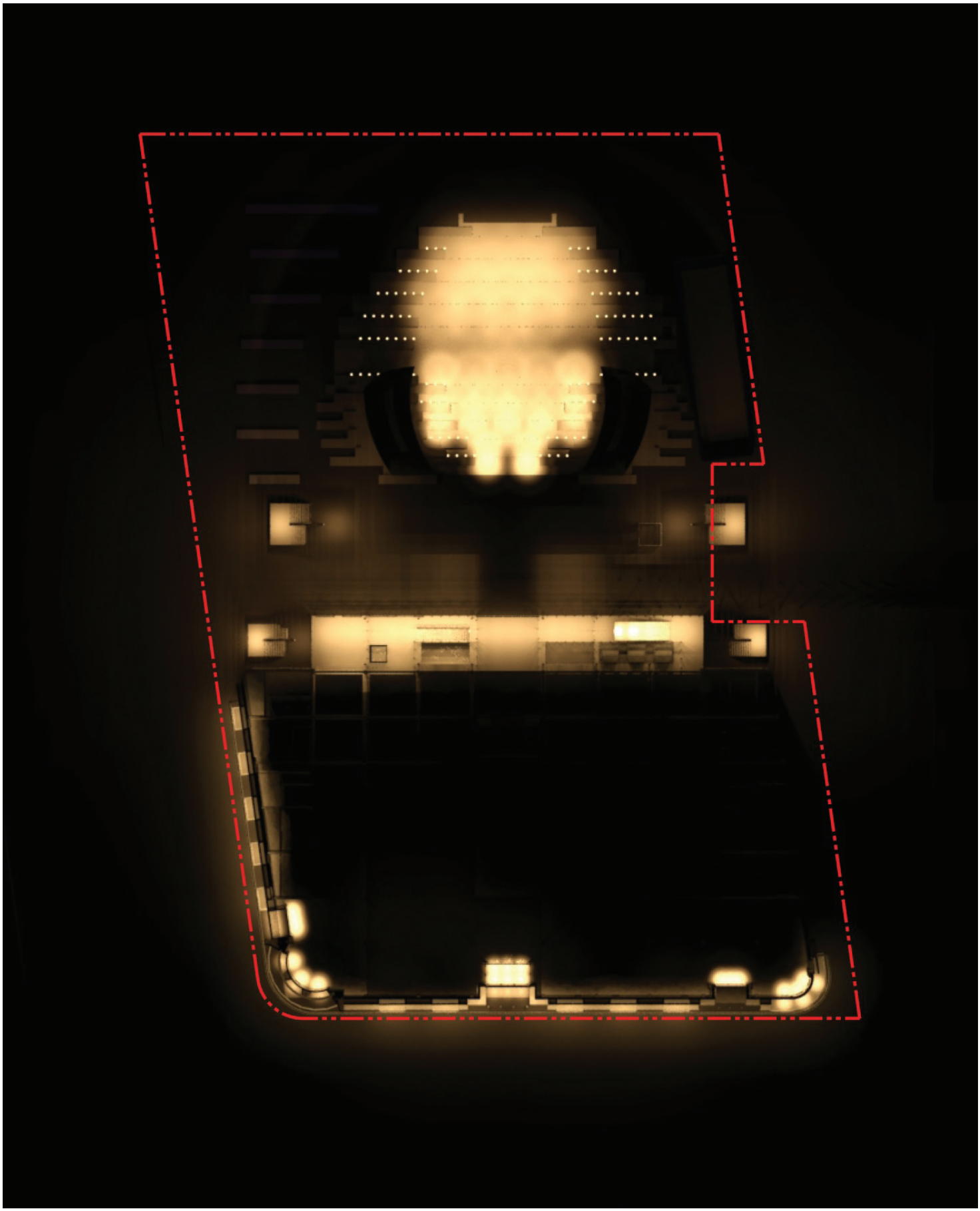
Table 4.A.2-3, *Glare and Spill Light Summary at Receptor 2,* summarizes average architectural glare levels (luminance) and maximum architectural spill light levels (illuminance) that would be experienced at Receptor 2. As shown in Table 4.A.2-3, the average architectural glare level experienced at Receptor 2 would be 1.5 cd/m^2, below the recommended CIE guideline of 10 cd/m^2 average. Table 4.A.2-3 also compares Project spill light levels at the boundary of Receptor 2 to the Municipal Code regulatory standard of 21.5 lux or less. As shown in Table 4.A.2-3, the maximum spill light level at the boundary of Receptor 2 would be 0.69 lux, well below the Municipal Code standard. Because the Project's architectural glare and spill light levels would not exceed the respective regulatory standards or guidelines at Receptor 2, impacts at this receptor would be less than significant.

Table 4.A.2-3

Glare and Spill Light Summary at Receptor 2

	Measurement at Project Site or Receptor	Regulatory Standard or Guideline	Significant Impact?
Average Architectural Luminance (Glare)	1.5 cd/m^2	10 cd/m^2	No
Maximum Architectural Illuminance (Spill Light) at Receptor	0.69 lux	21.5 lux	No

Source: Fisher Marantz Stone, 2014



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Computer Model of Light Trespass

Academy Museum of Motion Pictures Project
Source: Fisher Marantz Stone, Inc., 2013.

FIGURE
4.A.2-2

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Table 4.A.2-4, *Glare and Spill Light Summary at Receptor 3,* summarizes average architectural glare (luminance) and maximum spill light levels (illuminance) that would be experienced at Receptor 3. As shown in Table 4.A.2-4, the Project's average architectural glare level that would be experienced at Receptor 3 would be 0.9 cd/m^2, below the recommended CIE guideline of 10 cd/m^2 average. Table 4.A.2-3 also compares the Project spill light levels at the boundary of Receptor 3 to the Municipal Code regulatory standard of 21.5 lux or less. As shown in Table 4.A.2-3, the maximum spill light level at the boundary of Receptor 3 would be 0.0 lux. Because the Project's architectural glare and spill light levels would not exceed the respective regulatory standards or guidelines at Receptor 3, impacts at this receptor would be less than significant.

Table 4.A.2-4

Glare and Spill Light Summary at Receptor 3

	Measurement at Project Site or Receptor	Regulatory Standard or Guideline	Significant Impact?
Average Architectural Luminance (Glare)	0.9 cd/m^2	10 cd/m^2	No
Maximum Architectural Illuminance (Spill Light) at Receptor	0.0 lux	21.5 lux	No

Source: Fisher Marantz Stone, 2014

The findings of the *Lighting Report* pertaining to nighttime architectural glare impacts on the three intersections considered sensitive receptors are summarized in **Tables 4.A.2-5** and **4.A.2-6**. **Table 4.A.2-5**, *Glare Summary at Receptors 4 and 5,* summarizes average and vehicular architectural glare levels that could be experienced at Wilshire Boulevard at Fairfax Avenue (Receptor 4) and Wilshire Boulevard at Orange Grove Avenue (Receptor 5). Architectural glare effects in these two locations would be similar because both would have an unobstructed view of the entire south façade, and façade materials would be primarily diffuse in this location.

Table 4.A.2-5

Glare Summary at Receptors 4 and 5

	Measurement at Receptor	Regulatory Standard or Guideline	Significant Impact?
Average Architectural Luminance (Glare)	4.1 cd/m^2	10 cd/m^2	No
Vehicular Glare	70.0 cd/m^2	1,713 cd/m^2 (500 fL)	No

Source: Fisher Marantz Stone, 2014

As shown in Table 4.A.2-5, the average nighttime architectural glare experienced by Receptors 4 and 5 would be 4.1 cd/m^2, below the recommended CIE guideline of 10 cd/m^2 average. Table 4.A.2-5 also compares

nighttime architectural glare potentially experienced by vehicles at these locations to the regulatory standards of the California Vehicle Code. As shown in Table 4.A.2-5, architectural glare experienced along these street segments is projected to be 70.0 cd/m^2, less than the maximum 1,713 cd/m^2 (500 fL) allowed under the Vehicle Code. Because the Project would not exceed the respective regulatory standards or guidelines for motorists represented by Receptors 4 and 5, nighttime architectural glare impacts at these receptors would be less than significant.

Table 4.A.2-6, *Glare Summary at Receptor 6,* summarizes average and vehicular architectural glare levels that could be experienced at Fairfax Avenue at Sixth Street (Receptor 6). As shown in Table 4.A.2-2, the average nighttime architectural glare level at Receptor 6 would be 1.2 cd/m^2, well below the recommended CIE guideline of 10 cd/m^2 average. Table 4.A.2-6 also compares potential nighttime architectural glare potentially experienced by vehicles at this location to the regulatory standards of the California Vehicle Code. As shown in Table 4.A.2-6, nighttime vehicular glare (glare along the street segment) is estimated to be 14.5 cd/m^2, less than the maximum 1,713 cd/m^2 (500 fL) allowed under the Vehicle Code. Because the Project would not exceed the respective regulatory standards or guidelines for motorists represented by Receptor 6, nighttime architectural glare impacts at this receptor would be less than significant.

Table 4.A.2-6

Glare Summary at Receptor 6

	Measurement at Receptor	Regulatory Standard or Guideline	Significant Impact?
Average Architectural Luminance (Glare)	1.2 cd/m^2	10 cd/m^2	No
Vehicular Glare	14.5 cd/m^2	1,713 cd/m^2 (500 fL)	No

Source: Fisher Marantz Stone, 2014

(b) Temporary Event Lighting

Temporary lighting associated with special events would be a source of nighttime light. Temporary lighting for special events, including but not limited to Museum openings, premieres, and press events, would require a variety of temporary installations of lighting. The type, intensity, aiming, and distribution of temporary special event lighting cannot be clearly identified at this time for all types of events because of the unique nature of each event and the range of different lighting configurations that could be required. Project Design Features PDF-LIGHT-1 requires luminaires for special event lighting to be aimed or shielded so that the direct beam would be directed at the special event activity or object within the Project boundary, and PDF-LIGHT-2 requires illumination to be aimed to prevent any high-intensity beam from striking any Project or adjacent building facades and to prevent spill light and glare from exceeding Municipal Code or California Vehicle Code regulatory standards or recommended CIE guidelines at the identified sensitive receptors. Specifically, special event search lights would not project light more than 25 degrees from zenith and handheld video and press event lighting platforms would be directed inward toward the Project Site's interior, and not outward beyond the Project boundary.

Visitors to the Project may choose to park in LACMA's Pritzker Garage, which is accessed via LACMA Way from Sixth Street. The headlights of vehicles exiting LACMA Way may be visible to sensitive receptors on Sixth Street to the east and west of Ogden Drive. A potential increase in evening events associated with the Project would incrementally increase nighttime use of the Pritzker Garage. However, associated lighting effects on the identified sensitive receptors would be similar to existing conditions and would not exceed Municipal Code or California Vehicle Code regulatory standards and recommended CIE guidelines at those receptors.

In summary, because lighting associated with Project operation, including evening Theater Programming and special events, would not exceed Municipal Code or California Vehicle Code regulatory standards or recommended CIE guidelines, or substantially contrast with ambient urban conditions, nighttime lighting associated with architectural glare, signage, and spill light would be less than significant.

(c) Daytime Glare

The Sphere could potentially generate glare during daytime hours. Although the finish treatment for the Sphere is subject to further design and refinement, it will be predominantly constructed of structural metal and glass. The model input assumed a matte aluminum finish for the entire Sphere, which would generate the greatest potential glare. Potential glare effects at Receptors 1, 2, 3, and 6 are depicted in Figures 6.4.1 through 6.4.4 in the *Lighting Report* in Appendix C-2 of this Draft EIR. The convex (outwardly curved) shape of the Sphere would reduce glare generation by reflecting a smaller image of the sun than a planar or concave (inwardly curved or hollow) surface would, since convex reflectors such as those incorporated into vehicular side mirrors inherently demagnify reflected images. Because the Sphere's shape would demagnify the reflection of the sun and not focus reflected light, it would preclude glare and heat impacts on adjacent sensitive receptors. Façade brightness of the Sphere would be nominally equal to the brightness of the Original Building limestone façade, as shown in Appendix G, Figures G.1 through G.20, of the *Lighting Report* in Appendix C-2. The road segment at Fairfax Avenue and Sixth Street (Sensitive Receptor 6) would be in a direct line-of-sight of the Sphere. Figure 6.4.6 in the *Lighting Report* in Appendix C-2 illustrates the worst-case luminance (in this case, reflected light) scenario, at the time of day when the Sphere would receive the most direct sunlight and would be visible within ten degrees of a driver's normal line of sight. According to the maximum and minimum luminance values illustrated in Figure 6.4.6, the maximum:minimum luminance ratio would be 242:1, which is less than the maximum luminance ratio of 1,000:1 allowed under the Vehicle Code. Because the Project would not exceed the Vehicle Code standard, it would not result in excessive reflected glare at Receptor 6. In addition, the Project would not exceed regulatory standards that restrict direct glare at other sensitive receptors. Therefore, impacts with respect to daytime glare would be less than significant.

(d) Illuminated Signage

Project signage would introduce new sources of light that would be visible from the identified sensitive receptors, including residential uses and street intersections. The *Lighting Report* provided in Appendix C-2 provides a detailed evaluation of signage-related luminance as measured at the signage sources, and the associated potential for glare impacts on the identified sensitive receptors, and the potential for spill light as measured at the identified sensitive receptors.

Table 4.A.2-7, *Signage Glare and Spill Light at Receptor 1* (upper-floor residential dwelling units at 637 N. Fairfax Avenue), summarizes the maximum levels of luminance or brightness of proposed signs and the

Table 4.A.2-7

Signage Glare and Spill Light at Receptor 1

	Measurement	Signage Threshold	Significant Impact?
Highest Average Signage Luminance (Glare) on Project Site			
Regular Operations	500 cd/m^2	800 cd/m^2 average	No
Special Events	500 cd/m^2		
Maximum Signage Illuminance (Spill Light) at Receptor			
Regular Operations	31.9 lux	32.3 lux	No
Special Events	32.3 lux		

Source: Fisher Marantz Stone, 2014

maximum signage-related spill light increase over ambient light levels at Receptor 1, assuming the simultaneous operation (illumination) of all proposed signage on the Project Site, during regular operations and special events. For both scenarios, signage luminance or glare is compared to the recommended CIE guideline, which limits signage luminance to 800 cd/m^2. For residential receptors, signage illuminance or spill light is compared to the Municipal Code spill light limit of 34.3 lux (3.0 footcandles) above ambient lighting at the property line of a residence, and for vehicular receptors (motorists on surrounding roadways), illuminance is compared to the California Vehicle Code, Section 21466.5 light emissions threshold to determine the potential for driver impairment. As shown in Table 4.A.2-7, signage luminance levels would be 500 cd/m^2, below the 800 cd/m^2 threshold, under both operational scenarios, and glare impacts at Receptor 1 would therefore be less than significant. Illuminance or spill light at Receptor 1 would be 31.9 lux during regular operations and 32.3 lux during special events, which would not exceed the 32.3 lux threshold for spill light, and signage-related spill light impacts at Receptor 1 would therefore be less than significant.

Table 4.A.2-8, Signage Glare and Spill Light at Receptor 2 (lower-floor residential dwelling units at 637 N. Fairfax Avenue), summarizes the maximum levels of luminance or brightness of proposed signs and the maximum signage-related spill light increase over ambient light levels at Receptor 2, assuming the simultaneous operation (illumination) of all proposed signage on the Project Site, during regular operations and special events. As shown in Table 4.A.2-8, signage luminance levels would be 200 cd/m^2 during regular operations and 100 cd/m^2 during special events, both well below the 800 cd/m^2 threshold, and glare impacts at Receptor 2 would therefore be less than significant. Illuminance or spill light at Receptor 2 would be 0.87 lux during regular operations and 2.42 lux during special events, well below the 32.3 lux threshold for spill light, and signage-related spill light impacts at Receptor 2 would therefore be less than significant.

Table 4.A.2-9, Signage Glare and Spill Light at Receptor 3 (garden apartments at Park La Brea), summarizes the maximum levels of luminance or brightness of proposed signs and the maximum signage-related spill light increase over ambient light levels at Receptor 3, assuming the simultaneous operation (illumination) of all proposed signage on the Project Site, during regular operations and special events. As shown in Table 4.A.2-9, signage luminance levels would be 500 cd/m^2 during regular operations and 400 cd/m^2 during special events, both well below the 800 cd/m^2 threshold, and glare impacts at Receptor 3 would therefore be less than significant. Illuminance or spill light at Receptor 3 would be 0.0 lux (i.e., no increase over ambient

Table 4.A.2-8

Signage Glare and Spill Light at Receptor 2

	Measurement	Signage Threshold	Significant Impact?
Highest Average Signage Luminance (Glare) on Project Site			
Regular Operations	200 cd/m^2	800 cd/m^2 average	No
Special Events	100 cd/m^2		
Maximum Signage Illuminance (Spill Light) at Receptor			
Regular Operations	0.87 lux	32.3 lux	No
Special Events	2.42 lux		

Source: Fisher Marantz Stone, 2014

Table 4.A.2-9

Signage Glare and Spill Light at Receptor 3

	Measurement	Signage Threshold	Significant Impact?
Highest Average Signage Luminance (Glare) on Project Site			
Regular Operations	500 cd/m^2	800 cd/m^2 average	No
Special Events	400 cd/m^2		
Maximum Signage Illuminance (Spill Light) at Receptor			
Regular Operations	0.0 lux	32.3 lux	No
Special Events	0.0 lux		

Source: Fisher Marantz Stone, 2014

light levels) during both operational scenarios because of the intervening distance between the Project Site and signage sources and the receptor, and signage-related spill light impacts at Receptor 3 would therefore be less than significant.

Table 4.A.2-10, Signage Glare and Spill Light at Receptor 4-5-6, summarizes impacts for the three vehicular identified sensitive receptors. Receptor 4 is Wilshire Boulevard at Fairfax Avenue, representing motorists traveling east on Wilshire Boulevard, southwest of the Project Site; Receptor 5 is Wilshire Boulevard at Orange Grove Avenue, representing motorists traveling west on Wilshire Boulevard approaching the Project Site; and Receptor 6 is Fairfax Avenue at Sixth Street, representing motorists traveling south on Fairfax Avenue approaching the Project Site. Table 4.A.2-10 summarizes the (identical) maximum levels of luminance or brightness of proposed signs at all of these receptors, assuming the simultaneous operation (illumination) of all proposed signage on the Project Site, during regular operations and special events. (There is no spill light threshold for vehicular receptors.) As shown in Table 4.A.2-10, the highest average

Table 4.A.2-10

Signage Glare and Spill Light at Receptors 4-5-6

	Measurement	Signage Threshold	Significant Impact?
Highest Average Signage Luminance (Glare) on Project Site			
Regular Operations	500 cd/m^2	800 cd/m^2 average	No
Special Events	500 cd/m^2		
Maximum Signage Illuminance (Spill Light) at Receptor			
Regular Operations	500 cd/m^2	1,713 cd/m^2 (500fL)	No
Special Events	500 cd/m^2		

Source: Fisher Marantz Stone, 2014

signage luminance levels would be 500 cd/m^2 during both operational scenarios at all three receptors, below the 800 cd/m^2 threshold, and light emissions would be 500 cd/m^2 at all three receptors, well below the 1,713 cd/m^2 California Vehicle Code threshold at which driver impairment could be caused. Signage-related glare impacts on motorists represented by Receptors 4, 5, and 6 would therefore be less than significant.

(e) Alteration in Character of Off-Site Areas

The Project's operational and event lighting would change the character of the western portion of the LACMA Campus, which is generally unused or lightly used at night under existing conditions. Lighting along sidewalks, as well as increased nighttime activity at the Museum, New Wing, and Piazza would, respectively, increase activity and enliven the Project Site's Wilshire Boulevard and Fairfax Avenue frontages. In addition to operational lighting, the Project would rehabilitate the lighted cantilevered awning that extends over the Wilshire Boulevard and Fairfax Avenue sidewalks. More active sidewalks and improved lighting would provide a more secure pedestrian environment along these streets as well along as the Sixth Street edge of the LACMA Campus. Lighting associated with the operation of the Project would not strongly contrast with the existing urban setting, which is already characterized by street lights, illuminated signage, and relatively high levels of nighttime vehicle traffic.

Any incremental increases in ambient light would not exceed Municipal Code regulatory standards or recommended CIE guidelines with respect to the identified sensitive receptors. Sensitive receptor uses on Sixth Street would be buffered from new illumination associated with special events and operational activities at the Piazza and New Wing by the Resnick North Lawn. Incremental increases in existing ambient light, such as sky glow, would not adversely affect any uses that are sensitive to normal urban ambient light, such as observatories and designated wilderness areas. Because the Project would be consistent with existing urban ambient light conditions and with Municipal Code regulatory standards and recommended CIE guidelines, and would implement design features to shield light beams and prohibit light beams from being directed toward off-site properties, it would not substantially alter the character of the area. Therefore, impacts with respect to a substantial alteration in the character of off-site areas would be less than significant.

e. Cumulative Impacts

Chapter 3.0, General Description of Environmental Setting, of this Draft EIR provides a list of projects that are planned or are under construction in the Project area. Approximately 129 related projects are located in the Cities of Los Angeles, Beverly Hills, and West Hollywood within a four-mile radius of the Project Site. Of these, approximately 55 related projects are located within a three-mile radius of the Project Site and approximately 30 related projects are located within a two-mile radius. The majority of related projects include some level of new development or redevelopment that would increase nighttime traffic and generate new light emissions, such as illuminated signage, architectural lighting, security lighting, spill light from new residential units and other light sources.

Certain related projects, including Related Projects No. 12 (Wilshire and Crescent Heights Mixed Use), No. 27 (Museum Square), No. 28 (LACMA Redevelopment Plans), and No. 29, (Petersen Automotive Museum), would be near, or visible from, the sensitive receptors identified for the Project. Because these related projects would introduce new or changed point source lighting compared to existing conditions, they represent a potential increase in directly visible light from these receptors. However, because of the distance between the related projects and the identified sensitive receptors (ranging from across Wilshire Boulevard from the Project Site to several blocks west of LACMA) and the presence of intervening development, and the Project's low glare and spill light levels at these receptors, glare and spill light generated by related projects in combination with the Project is not expected to exceed Municipal Code or California Vehicle Code regulatory standards or recommended CIE guidelines at the identified sensitive receptors.

Most related projects would also contribute to increases in ambient light and sky glow. In the context of the urban setting, which already experiences high levels of ambient light associated with vehicle headlights, street lights, illuminated signage, security lighting, architectural lighting and other sources, incremental increases would not be distinctively different from existing conditions. Resulting increases in sky glow would not adversely affect non-urban uses that rely on dark skies. Because cumulative increases in light associated with related projects would not exceed Municipal Code or California Vehicle Code regulatory standards or recommended CIE guidelines combination with the Project, and would not substantially alter the existing light ambience of the area or region, cumulative light and glare impacts would be less than significant.

4. MITIGATION MEASURES

The Project would have less than significant light and glare impacts with implementation of Project Design Features provided in this section. No mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project impacts related to light and glare were determined to be less than significant and no mitigation measures are required.

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