

Appendix K



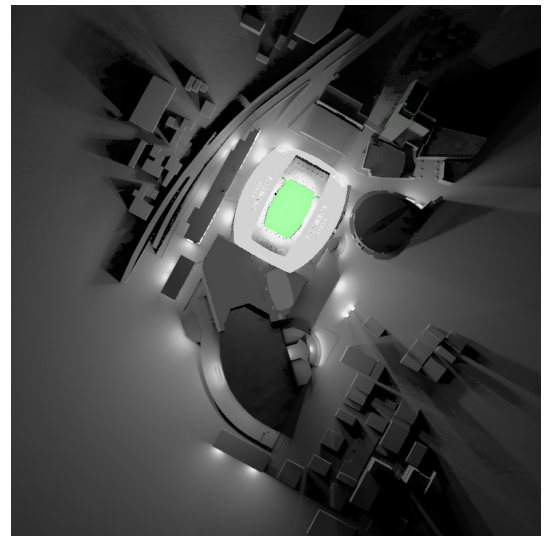
AEG Convention and Event Center Project EIR Lighting Technical Report

AEG

Convention and Event Center Project EIR

Lighting Technical Report

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1. Introduction

1.1 Purpose of Report

This technical report, prepared by Arup North America, Ltd. (Arup), documents both existing and predicted light emissions resulting from the proposed Convention and Event Center Projects, their auxiliary buildings, and associated signage.

1.1.1 Existing Site Context

Figure 1.1.1.1 shows an aerial photograph of a portion of the existing Project Site and the existing surrounding development, which establishes the existing site context for the Proposed Project.



Figure 1.1.1.1 - Photograph provided courtesy of Magnus Manske

The Project vicinity experiences high activity levels at night and during the day. Within the Project Site, visitors regularly attend events and performances at the Staples Center, as well as conventions, conferences and meetings at the Convention Center. The Staples Center plays host to two National Basketball Association (NBA) teams, one WNBA team, one NHL team, and regular performances by traveling artists and shows. The Convention Center is a world class facility that hosts a wide range of events annually. On-site parking, as well as exterior plaza and gathering areas are also part of the existing site.

Visitors also are attracted to the events and establishments at the existing LA Live development, located adjacent to the Project Site. The adjacent LA Live site consists of the Nokia Theatre, Club Nokia, the Grammy Museum, ESPN's Broadcasting studios and the ESPN Zone, a multi-screen movie theater com-

plex and an array of restaurants. The LA Live site is also home to the Ritz-Carlton Hotel and the JW Marriott Hotel. Floors 27 through 52 of the 52 story Ritz Carlton Hotel are condominium residences.

The Project Site is generally bounded by the following major roadways: the I-110 Harbor Freeway to the west; Chick Hearn Court to the north; Figueroa Street to the east; and Venice Boulevard to the south. LA Live is located to the north of the Project Site. The Pico Union neighborhood, located opposite I-110 to the west, consists of low rise residential, manufacturing and related industrial, as well as commercial uses. To the east of the Project Site across Figueroa Street are parking lots, automobile related uses, and multi-family housing. To the south of the Project Site is the I-110 Harbor Freeway and I-10 Santa Monica Freeway interchange.

1.1.2 Existing Site Lighting Context

The existing lighting at the Project Site creates higher illuminance areas near the entrances of the Convention Center, as well as the Staples Center facility. These illuminated areas direct visitors to lit gathering areas, and serve as a means of wayfinding. The Staples Center includes facade lighting to illuminate the architecture. The Convention Center has minimal facade lighting, but significant lighting for plazas, loading areas, pedestrian ways, and entrances. Temporary signage, permanent billboard signage, luminous channel letter signage, and LED message board/changing screen signage are also used on the site.

The existing exterior lighting at the LA Live site creates a bright ambient exterior environment at night, consistent with its use as a large scale public gathering area and event center. The events occurring are high-profile in nature, garnering frequent print publication and televised broadcasts showing the exterior buildings. The LA Live site includes prominent illuminated signage that is visible from pedestrians on and off site. The bright ambient conditions at night designate this as a destination location within the city, and the context is well established.

In the Pico Union neighborhood and other adjacent neighborhoods, the existing lighting is typical of suburban conditions, despite being in an urban area. Architectural exterior lighting for low-rise and mid-rise mixed use, commercial and residential properties provide low to medium brightness, consistent with the property use. Signage associated with businesses and billboard signage are also used in these areas.

1.1.3 Proposed Project Description

The Convention and Event Center Project (hereafter referred to as the “Proposed Project”) is located within an approximately 68-acre site that includes all of the existing Convention Center property, including the Bond Street Parking Lot, the Cherry Street Parking Garage, and the Staples Center (hereafter referred to as the “Project Site”).

The Proposed Project consists of the following three components: (1) modernization of the Los Angeles Convention Center (hereafter referred to as the “Convention Center”), (2) the construction of a new multi-use entertainment and sports stadium facility (hereafter referred to as the “Event Center”), and (3) related parking and support facilities.

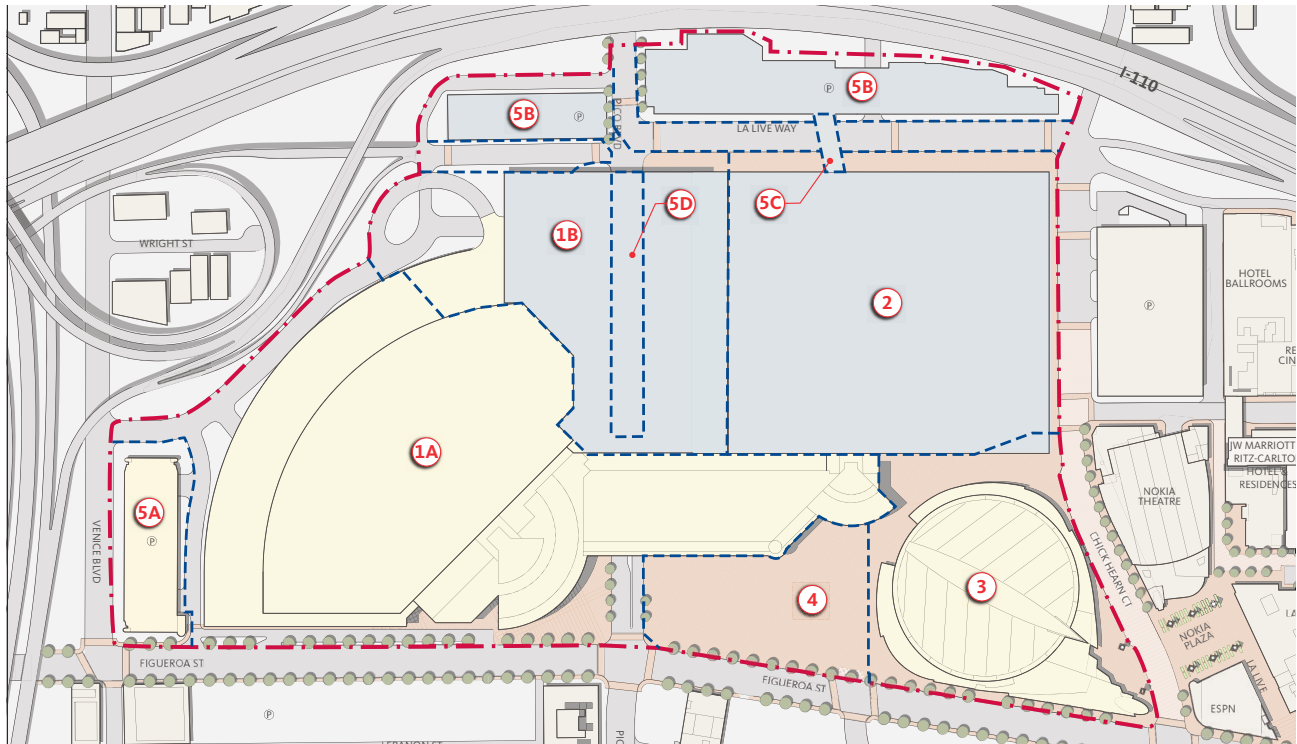
With the implementation of the Proposed Project, the Project Site would function as a unified center for convention, sports and entertainment uses. Maximum light emissions for the Proposed Project will be limited through adherence to the Project Design Features. The Project Design Features limit light emissions from proposed new buildings and related features, including signage, as well as the regulation of transportation and parking. In addition, notable elements of environmental sustainability would be comprehensively integrated into the Proposed Project and would be one of the key elements that would guide the design of the Proposed Project.

The Proposed Project’s first component would involve the demolition and replacement of the Convention

Center's existing West Hall. The new structure (hereafter referred to as the "New Hall"), would bridge over a portion of Pico Boulevard such that it would adjoin the Convention Center's existing South Hall and would consist of roughly the same amount of square footage as the former West and Petree Halls.

The Proposed Project's second component is the development of the Event Center, a multi-purpose, entertainment and sports facility with a potentially retractable roof on the site of the former West Hall. The approximately 1,750,000 square-foot structure would include approximately 72,000 permanent seats with expandable seating capacity to approximately 76,250 seats for major events, such as a Super Bowl.

The Proposed Project's third component would involve the construction of new larger, more efficient parking facilities on the existing Bond Street Parking Lot and Cherry Street Garage sites.



1A	(existing) Los Angeles (LA) Convention Center
1B	(new) re-constructed West Hall of the LA Convention Center, referred to as New Hall
2	(new) a 1,750,000 square foot, +72,000 seat, stadium that is expandable to accommodate special events
3	(existing) Staples Center
4	(existing) Gilbert Lindsay Plaza
5A	(existing) Venice Garage
5B	(new) Bond Street & LA Live Way include approximately 30,000 square feet of parking
5C	(new) Pedestrian Bridge
5D	(new) Pico Boulevard Arrival Area

Figure 1.1.2.1 depicts the location of the Proposed Project and identifies the major components of the Project.

The Project Site boundary and the adjacent LA Live development boundary are bisected by Chick Hearn Court, and Figure 1.1.2.1. Chick Hearn Court will incur high levels of pedestrian traffic passing from the Event Center to LA Live, and vice versa, during events.

1.1.4 Proposed Project Light Emissions Assessment

The Proposed Project will introduce new sources of lighting that are consistent with the context of the existing site and the adjacent LA Live site, as well as the function the Proposed Project is intended to serve. This report will review the existing conditions around the Project Site, and analyze potential impacts caused by additional new lighting associated with the Proposed Project, as part of the environmental review process set forth by the California Environmental Quality Act (CEQA).

This analytical review of the current conditions and the potential impacts of the Proposed Project will be analyzed and assessed based on established thresholds set forth in the *Los Angeles CEQA Thresholds Guide* (2006), as well as with metrics from recognized lighting industry societies and technical bodies, including the Illuminating Engineering Society of North America (IESNA) and the Commission Internationale de l'Eclairage (CIE). Additional criteria will be drawn from California state and local City of Los Angeles codes and regulations.

1.2 Report Methodology

An overview of the methodology used to assess the light emissions for the Proposed Project is shown in Figure 1.2.1 (below). The relevant sections for each component of the light emissions assessment methodology is referenced for convenience.

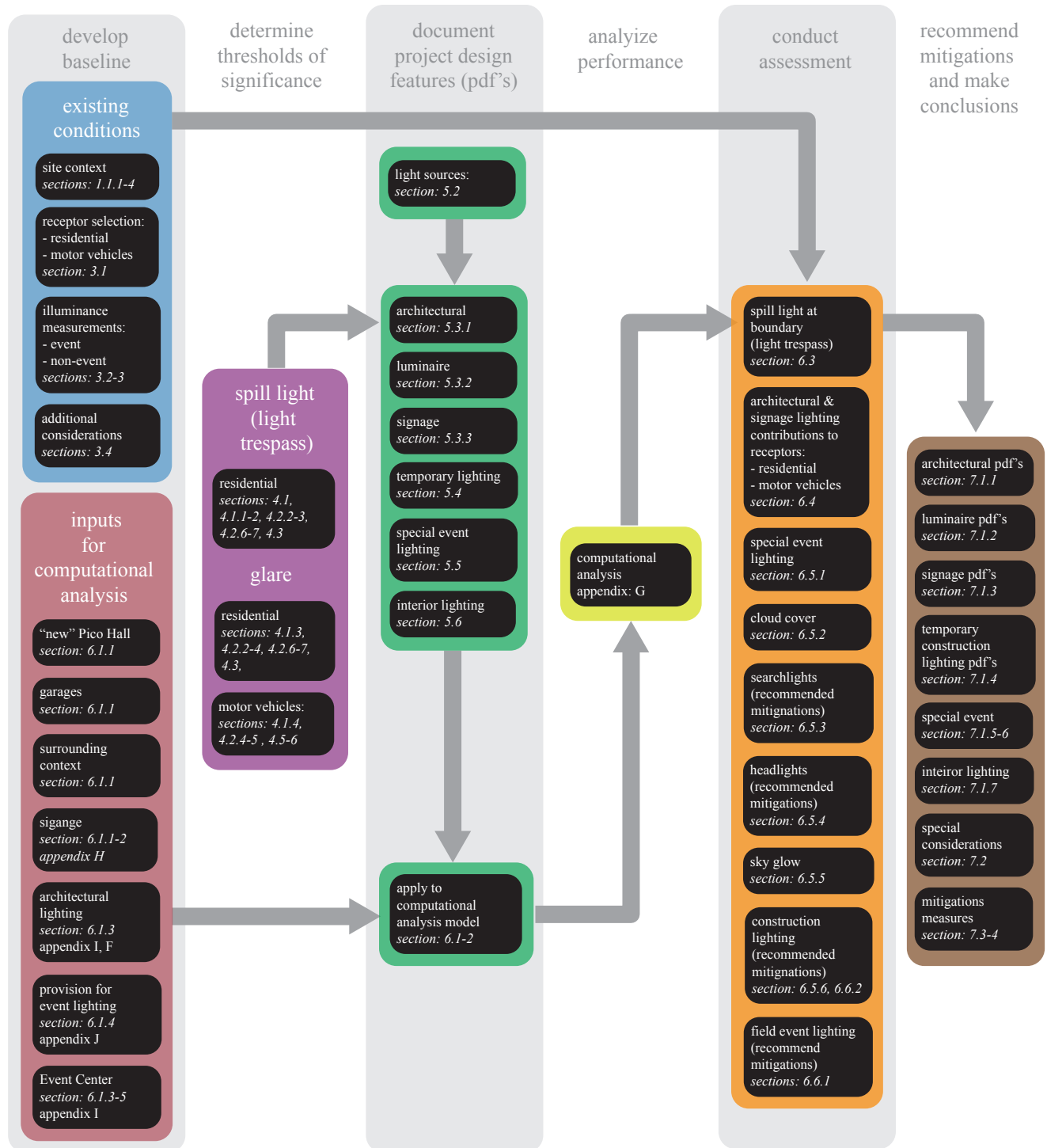


Figure 1.2.1 Light emission assessment methodology

1.3 Report Overview

This technical memorandum assesses the potential for light emissions associated with the Proposed Project to result in significant impacts. In order to document this, the report has been laid out in the following format, to present findings and recommendations:

Section 2 - Technical Terminology

This section provides definitions of frequently used terminology in this document to help the reader understand the technical issues discussed herein.

Section 3 - Existing Conditions Review and Receptor Site Observations

This section provides an overview of the areas adjacent to the Proposed Project. Receptor sites (observation locations) that were used for this report are described and observations are documented. Sensitive receptors are identified.

Section 4 - Thresholds of Significance

This section outlines the technical criteria used to establish thresholds of significance with respect to light emissions from the Proposed Project.

Section 5 - Project Design Features

This section describes the specific lighting features proposed as part of the Project to reduce light emissions from the Proposed Project.

Section 6 - Impact Analysis of Project Design Features

This section documents the analysis undertaken to validate the Project Design Features and the predicted light emissions resulting from the Proposed Project with the implementation of these features.

Section 7 - Conclusion

This section presents an overview of the findings of this report.

Appendices

Supplemental information and input documents received for this study are presented.

2 Glossary of Terms

Albedo

The fraction of the Sun's radiation (or visible light) reflected from a surface. This includes all wavelengths reflected by a body or surface to the amount incident upon it.

Brightness

An impression of the appearance of a light source or illuminated surface to a human eye, either qualitative or quantitative. It can be determined by the measured luminance of the source or simply observed conditions. For example, a bright light source may be perceived as brighter at night than during the day because of the lack of natural daylight.

Candela (cd)

Basic unit for measuring luminous intensity from a light source in a given direction. A common candle emits light with a luminous intensity of roughly one candela. If emission in some directions is blocked by an opaque, the emission would still be approximately one candela in the directions that are not obscured.

Candlepower (cp)

The luminous intensity of a source expressed in candelas.

Contrast

The ratio of one surface luminance to another surface luminance in the same field of view. A value in excess of 30 to 1 is typically considered high contrast while a value of 10 to 1 is clearly visible. A value that is less than 3 to 1 yields surfaces that appear of equal luminance value to the average person.

Curfew

The time of day after which stricter requirements for the control of potentially obtrusive lights will apply. Often, these conditions are controlled by a local government agency.

Cutoff Classifications (of luminaires, specific to exterior site lighting)

Full Cutoff

A luminaire light distribution where zero candela intensity occurs at an angle of 90 degrees above nadir, and at all greater angles from nadir. The candela per 1000 lamp lumens cannot numerically exceed 100 (10 percent) at a vertical angle of 80 degrees above nadir.

Cutoff

A luminaire light distribution where the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir. At a vertical angle of 80 degrees above nadir,

the lamp lumens may not exceed 100 (10 percent).

Semicutoff

A luminaire light distribution where the candela per 1000 lamp lumens does not numerically exceed 50 (5 percent) at an angle of 90 degrees above nadir. At a vertical angle of 80 degrees above nadir, the lamp lumens may not exceed 200 (20 percent).

Non-cutoff

A luminaire light distribution where there is no candela limitation in the zone above maximum candela.

Direct Beam Illuminance

The illuminance produced by lumens leaving a light source onto the first surface the lumens hit. Reflected light does not qualify.

Disability Glare

The effect of stray light in the eye whereby the contrast of the retinal image is reduced, and consequently, whereby visibility and visual performance may also be reduced. A direct glare source that produces discomfort may also produce disability glare by introducing a measurable amount of stray light in the eye.

Exitance

The density per area of luminous flux leaving a surface at a point, independent of direction. This is the total luminous flux emitted, reflected, and transmitted from the surface measured in lumens per square feet.

Footcandle (fc)

A unit of illuminance. One footcandle is one lumen per square foot (lm/ft^2).

Glare

The sensation produced by luminances within the visual field that are sufficiently greater than the luminance level to which the eyes are currently adapted to cause annoyance, discomfort, or loss in visual performance and visibility.

High Brightness Sources

A light source or fixture surface such as a lens or lamp reflector where the brightness contrast ratio exceeds 30 to 1.

Medium Brightness Sources

A light source or fixture surface such as a lens or lamp reflector where the brightness contrast ratio exceeds 10 to 1, but is less than 30 to 1.

Low Brightness Sources

A light source or fixture surface such as a lens or lamp reflector where the brightness contrast ratio exceeds 3 to 1, but less than 10 to 1.

Habitable Room

A room within a dwelling that is normally occupied by people for extended periods of time, especially at night. Examples of this include bedrooms, living rooms, hospital rooms, and studies.

Illuminance

The concentration of luminous flux falling on a surface of a given area. It is measured in lumens per square foot or lumens per square meter, with units of footcandle (fc) or Lux (lx) respectively. Illuminance incident on surfaces depends on the luminous intensity of the light source, and decreases with the square of the distance from the light source. (For example, a light source providing an illuminance of x at a distance d , will provide an illuminance of $0.25x$ at a distance of $2d$.)

Illumination

The act of illuminating or the state of being illuminated.

Lambertian Surface

A surface that emits or reflects light of the same luminance regardless of the viewing angle.

Lighting Zone LZ3

Outdoor areas of human activity where the vision of human residents and users is adapted to moderately high light levels. Lighting is generally desired for safety, security and/or convenience and it is often uniform and/or continuous. After curfew, lighting may be extinguished or reduced in most areas as activity levels decline.

Light Source

Something which emits visible light, such as an electric light source or the sun.

Light Trespass

Light that strays from the intended purpose from a subject property incident onto an adjacent property. Typically measured in footcandles, or lux.

Lumen (lm)

The SI unit of luminous flux. It is the luminous flux emitted within a unit solid angle (one steradian) by a point source having a uniform luminous intensity of one candela.

Luminaire

A complete lighting unit consisting of a lamp or lamps and equipment required to drive the lamps together with the parts designed to distribute the light, to position and protect the lamps, and to connect

the lamps to the power supply. A luminaire may also be referred to as a light fixture.

Luminance

The quantitative measure of brightness of a light source or an illuminated surface, equal to luminous flux per unit solid angle (one steradian) emitted per unit projected area of the source or surface (candela/ft². or candela/m²).

Luminous Flux

Radiant flux in the range of visible wave lengths expressed in lumens instead of watts.

Lux (lx)

The SI unit of illuminance. One lux is one lumen per square meter (lm/m²).

Mounting Height (above the workplane)

The distance from the reference plane to the light center of the luminaire.

Nadir

The direction that points directly vertically downward from any location.

Obtrusive Light

Light which, because of quantitative or directional characteristics, results in annoyance, distraction, or a reduction in the ability to see essential information.

Radiant Flux

Radiant flux is the time rate of flow of radiant energy measured in watts.

Shielding

A design feature or a device that is applied to a luminaire to prevent its luminous output from being visible from selected locations or specific angles.

Sky Glow

The brightening of the night sky that results from the reflection of visible radiation scattered from the constituents of the atmosphere (gaseous molecules, aerosols, and particulate matter).

Natural Sky Glow

The part of the sky glow which is attributable to radiation from celestial sources and luminescent processes in the earth's upper atmosphere.

Artificial Sky Glow

The part of the sky glow which is attributable to man-made sources of radiation (e.g., outdoor electric lighting) including radiation that is emitted directly upwards and radiation that is reflected from the earth's surface

Spill Light

Light emitted from a lighting source which falls outside the boundaries of the property on which the luminaire is located.

Steradian

The SI unit of measure of solid angles that is expressed as the solid angle subtended at the center of the sphere by a portion of the surface whose area is equal to the square of the radius of the sphere

Threshold Increment

Measure of disability glare expressed as the percentage increase in contrast required between an object and its background for it to be seen equally well with a source of glare present.

Upward Component

That portion of the luminous flux from a luminaire emitted at angles above the horizontal line, 90 degrees up from nadir.

Visual Angle

The angle subtended by an object or detail at the point of observation, measured in minutes of arc.

Zenith

The direction pointing directly “above” a particular location, zenith is opposite nadir.

3. Existing Conditions

This section provides an overview of the selection of receptors, and the field measurements and observations taken for the existing site and its adjacencies at these receptor locations.

3.1 Existing Site Observations

The Convention Center, Staples Center, and plaza areas within the Project Site currently contain brightly illuminated facades, and a mixture of illuminated changeable LED signage and static illuminated signage. Plaza lighting, and other temporary lighting equipment, all of which add to the overall bright ambient illumination characteristic of the Proposed Project.

The adjacent existing LA Live site to the north contains the same illumination characteristics as the existing site, and includes a higher concentration of illuminated signs, and high brightness surfaces. Figure 3.1.1 shows a selection of these bright components on or near the Project Site.



Figure 3.1.1 - Photographs of bright components on or near the Project Site.

The existing exterior lighting at the Staples Center, Convention Center, and the adjacent LA Live site create a bright ambient exterior environment at night, consistent with a large scale public gathering area and event center. The events occurring are high-profile in nature, garnering frequent print publication and televised broadcasts showing the exterior buildings. The LA Live site includes prominent illuminated signage that is visible from pedestrians on and off site. The bright ambient conditions at night designate this as a destination location within the city, and the context is well established.

In the Pico Union neighborhood and other adjacent neighborhoods, the existing lighting is typical of suburban conditions. Architectural exterior lighting for low-rise and mid-rise mixed use, commercial and residential properties provide low to medium brightness, consistent with the property use. Signage associated with businesses and billboard signage are also used in these areas. These areas have decreased illuminance levels that are commensurate with the nighttime activities in those neighborhoods. Bright luminaires and bright surfaces from within the existing Project Site and the adjacent LA Live can be viewed from a considerable distance, by specific receptors within these neighborhoods.

3.1.1 Receptor Sensitivity and Selection

Ten receptor locations, representative of lighting conditions in neighborhoods adjacent to the Proposed Project, were selected for this assessment. The *Los Angeles CEQA Thresholds Guide* states that uses that are considered sensitive to nighttime light include, but are not limited to, residential, some commercial

and institutional uses and natural areas. For this report, residential uses, hotels, and patient areas within hospitals are all specifically considered to be sensitive receptors with respect to nighttime light, in addition to the general description provided by the *Thresholds Guide*. Additionally, motor vehicles are being reviewed with respect to glare thresholds documented in the *2011 California Vehicle Code* and the *International Commission on Illumination (CIE 112:1994 and CIE 150:2003)*.

Based on the above definitions, sensitive uses that are located near the Proposed Project were selected, and a representative selection of receptors were generated:

Receptor 1

The uppermost floors of this residence are likely to have unobstructed views to the Event Center and some event field lighting within the stadium. Elevated residences with unobstructed views are likely to experience higher levels of glare from the Event Center than residences at, or near, grade.

Receptor 2

This medical facility is considered a sensitive use. It is nearly equal in elevation to receptor 1 and has been selected for the same reasons receptor 1 has been selected.

Receptor 3

This receptor is further away from the Proposed Project than receptor 1 but it has a relatively un-impeded view of the Event Center.

Receptor 4

It was selected to be representative of the view from the adjacent LA Live development and to provide context for the Proposed Project's adjacencies.

Receptor 5:

These residences are near the proposed electronic signage for the existing Los Angeles Convention Exhibit Center and the Event Center. The motor vehicles on this ramp will experience illuminance contributions from both the Proposed Project and the proposed electronic signage.

Receptor 6:

This receptor is representative of views as seen by motor vehicles on Interstate 110. Motorists are likely to experience the highest levels of glare from the Proposed Project along elevated roadways adjacent to Event Center.

Receptor 7:

This receptor is indicative of the "worst case" combination of spill light, and views of the Event Center, within Pico Union. Interstate 110, in combination with the proposed Bond Street and LA Live Way garages, obscures views of the Event Center when observed from locations closer to the Interstate from within Pico Union.

Receptor 8:

The residences at the Ritz Carlton are expected to experience the highest levels of spill light from the Event Center due to the receptors elevation and close proximity to the project site.

Receptor 9:

Is more distant than receptor 7 in Pico Union but if faces the open (northeast) end of the Event Center. It is expected to have obstructed views of the Event Center.

Receptor 10:

Is the nearest existing residence southeast of the Proposed Project.

3.1.2 Receptor Locations

As discussed in greater detail in the previous section, receptor locations were identified that are representative of the surrounding uses in the Project vicinity. Among these receptors are locations that include uses considered to be sensitive to nighttime light.

Table 3.1.2.1 lists the receptor addresses selected for this analysis. The receptors that are considered sensitive are indicated. Figure 3.1.2.1 shows the locations in plan for these selected receptors.

Table 3.1.2.1 - Addresses for the receptor locations.

1. Villa de la Esperanza Apartments 1401 South Hope (sensitive)	6. I-110 southbound at 11th Street Off-ramp
2. California Hospital Medical Center 1401 South Grand (sensitive)	7. 12th Street and Albany Street Intersection, with Nearby Residences (sensitive)
3. The Carver Apartments 1624 South Hope (sensitive)	8. The JW Marriot and the Residences at the Ritz Carlton 900 West Olympic Boulevard (sensitive)
4. Nokia Plaza 777 Chick Hearn Court	9. Olympic Primary Center 950 Albany Street (sensitive)
5. Interstate 10 Eastbound to the Interstate 110 North Connector ramp 1430 & 1438 S. Wright Street (sensitive)	10. Figueroa Street and Pico Boulevard Intersection, with Nearby Residences (sensitive)



Figure 3.1.2.1 - Receptor location map.

3.2 Field Assessment of Existing Conditions

Measurements of the existing light emissions were taken on July 13th, 2011, on the night the Nokia Theatre hosted the Excellence in Sports Performance Yearly Awards (ESPY's) Awards and the Staples Center was illuminated for the event. The measurements taken during the ESPY's is believed to be indicative of the highest existing illuminance levels the Proposed Project's adjacencies experience. Another set of measurements was taken on the same night after all of the event lighting associated with the ESPY's was turned off.

An overview of the assessment is outlined below:

- The lighting theatrics associated with the ESPY's ceremony are indicative of the typical maximum light emissions that could be expected from the existing LA Live site and its adjacencies.
- The sky was clear throughout the duration of measurements with a full moon eminent.
- Illuminance measurements and High Dynamic Range (HDR) imagery taken during the ESPY's will be referred to as "Event" lighting measurements. All Event measurements herein were taken between 9:30pm and 12:00am when the Nokia Theatre and Staples Center were fully illuminated.
- The same measurements were taken again after the lighting associated with the ESPY's was turned OFF. The Non-Event measurements were taken from 12:30am until 2:30am.
- HDR imagery documenting the view to the Project Site was taken at measurement locations. Refer to Section 3.3 for imagery.

Within this report the measurements taken during the ESPY's will be referred to as the Event measurements. Those measurements taken after the lighting associated with the ESPY's was turned off will be referred to as non-Event measurements.

3.2.1 Measuring Existing Luminous Intensities

All illuminance measurements were taken in a manner consistent with the IESNA recommendations for measuring light trespass, with the illuminance meter aimed so that the receptor head is perpendicular to the light source being measured (see Figure 3.2.1.1). All of the measurements were repeatable and a maximum, minimum, and median measurement were assessed at each receptor location.

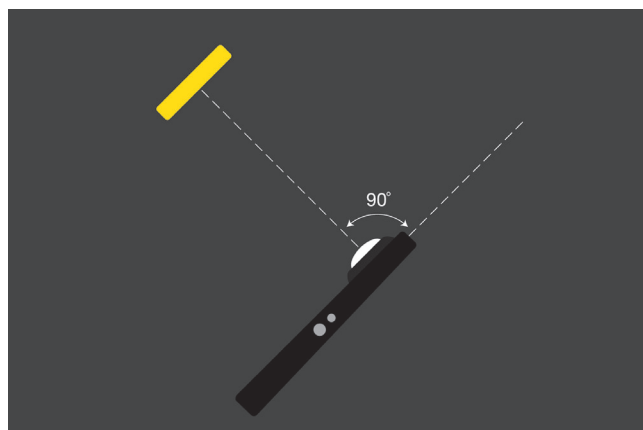


Figure 3.2.1.1 - An illuminance meter perpendicular to the measurement source.

3.2.2 Mapping Luminance with High Dynamic Range Imaging Calibrated

The HDR Imaging process, which is a composite of multiple low dynamic range images (LDRI), is used

to capture an image of a representative view from a receptor location. Measurements were taken with a calibrated luminance meter at various surface locations throughout the Project Site. These measurements were then used to calibrate the luminance mapped in the HDR imagery. After calibrating these images the variations in luminous intensity were mapped with color, which results in a pseudo-color image. The color mapping provides an aid to better understand luminance variations within a captured scene. HDR imagery was mapped to calibrated luminance measurements taken of select scenes. The limited amount of time that the Event lighting was operable necessitated that calibrated HDR imagery was used in lieu of canvassing the view with luminance measurements from each receptor location.

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.

3.2.3 Observational Assessment and Interpretation of Existing Conditions at Receptors

In addition to the analytical tools used for specific quantification of values relating to illuminance and luminance, observational assessments and interpretation of the measured data were conducted for the receptor locations. Contrast ratios that exceed values of 30 to 1 were considered to be HIGH contrast, making the illuminated elements that exhibit those ratios highly visible. The change in illuminance values measured during and after the event demonstrate the variation possible in the light levels. The changes in light values are assumed in this document to be completely resultant from the Project Site lighting changes between Event and non-Event conditions, however, it is reasonable to expect that local conditions to the measurement locations may change in ambient levels, due to the late hour when non-Event measurements were taken, as compared to the time of the Event measurements. This assumption makes these changes in values a “worst-case” assumption for the Project Site light emissions.

3.2.4 Estimation of Illuminance at Non-Accessible Receptor Locations

Select receptor locations are private residences and elevated vantage points within the residences were not accessible for use as measurement locations. The following is the method used for estimating illuminance levels at these inaccessible locations from documented illuminance measurements taken in the field. Figure 3.2.4.1 shows the methodology diagrammatically.

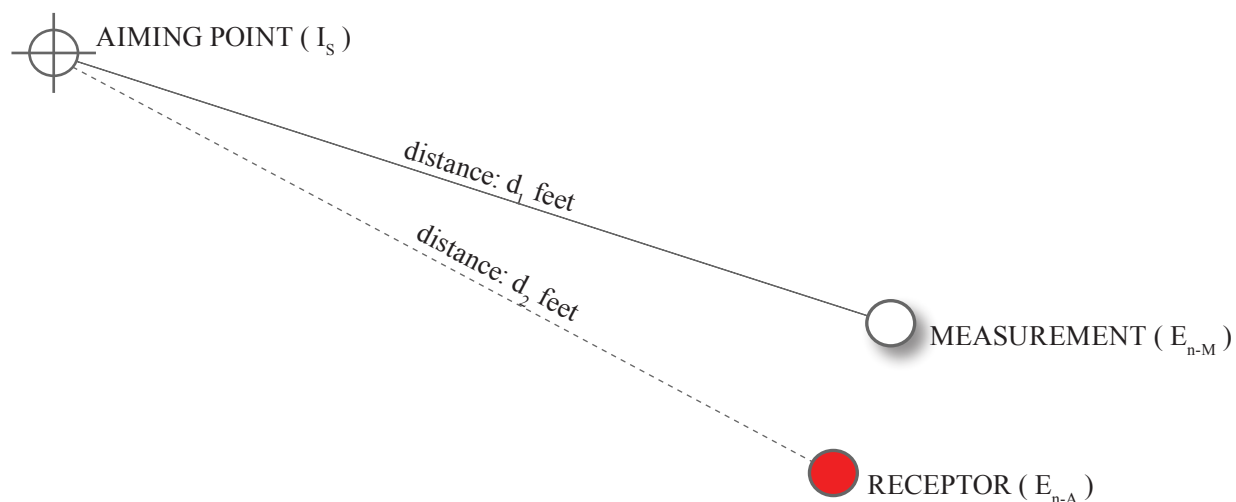


Figure 3.2.4.1 - Diagram of illuminance value estimation.

The following assumptions were made to predict illuminance values:

- The measured illuminance is emanating from a single point I_s which is assumed to be the Center of the Project Site.
- The light source (I_s), is a lambertian emitter with minimal variation in intensity with changes in viewing angle.
- The inverse square law relating a source intensity to a measured illuminance level at a specified distance does not require any correction factors due to the distance from the source.
- Variations in the vertical (z-axis) dimension of less than 200 feet represent less than a 1% change to the overall distance when distance exceeds 1500 feet horizontally. Therefore, variation in building elevation has a negligible impact, and is excluded from the calculation when horizontal distances from the Project Site exceed 1500 feet.
- Variations in the vertical (z-axis) dimension of less than 50 feet represent less than a 1% change to the overall distance when distance exceeds 350 feet horizontally. Therefore, variation in building elevation of less than 40 feet has a negligible impact, and is excluded from the calculation when horizontal distances from the Project Site exceed 350 feet.

The estimated values are based on the equation below:

$$E_{1-M} = I_s / d_1^2 \quad E_{1-A} = I_s / d_2^2$$

$$E_{1-M} \times d_1^2 = E_{1-A} \times d_2^2 = I_s$$

$$E_{1-A} = E_{1-M} \times (d_1 / d_2)^2$$

For all cases where a proposed receptor site has an estimated value, the above methodology is used to determine receptor illuminance when distances d_1 and d_2 are known. The measurement location used had full view of the brightest components of the existing buildings on site, and higher elevations measured would not have had views of significant additional light sources that were not visible at the measurement location.

The distances documented herein are based on survey data rounded to the nearest 100 feet.

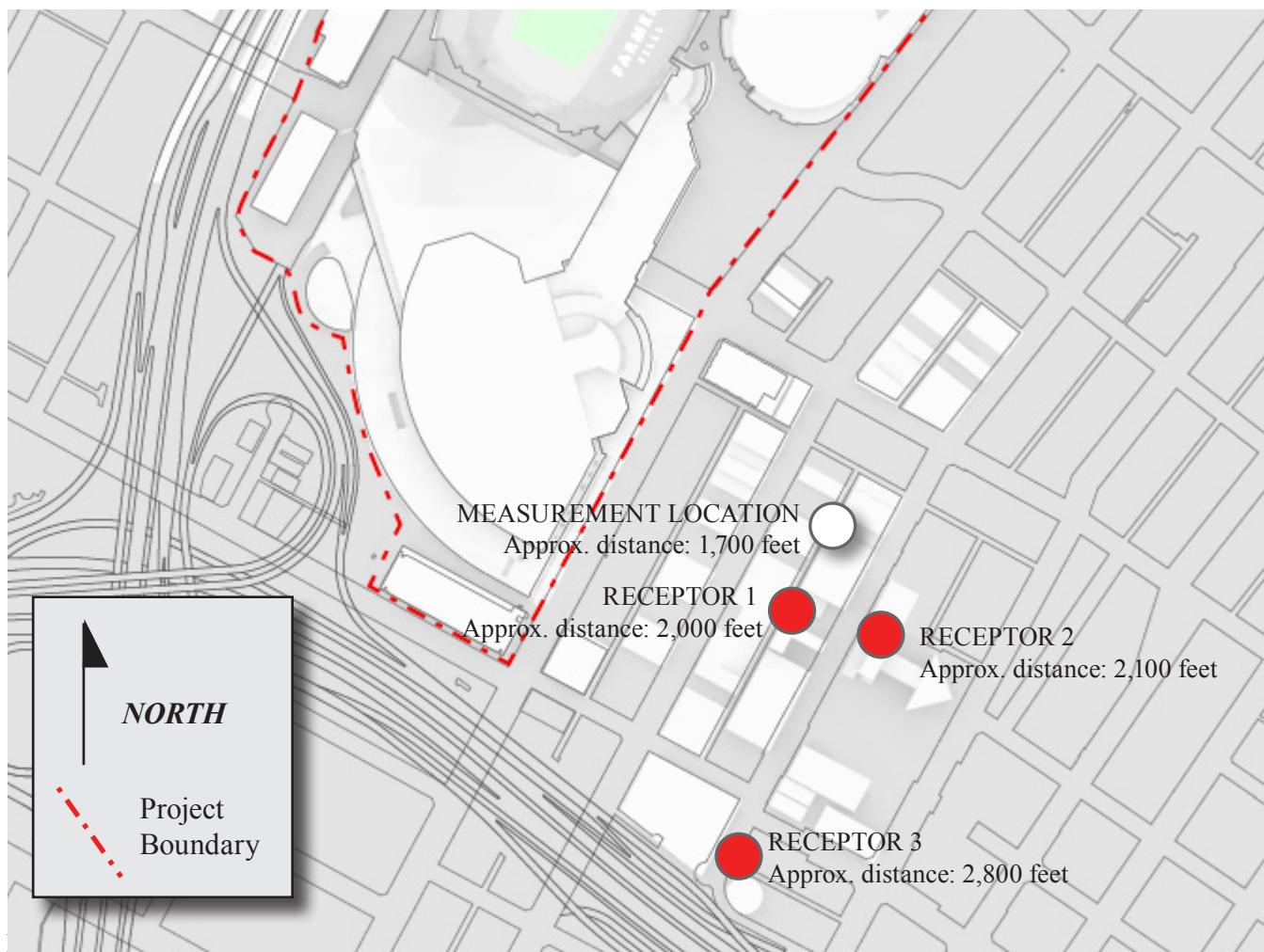
3.3 Receptor Measurements

The receptor measurements and observations documented in this section assess each location based on the operational methodologies presented in Section 3.2.

3.3.1 Receptors 1, 2, and 3

Receptors 1, 2, and 3 are two residential buildings and a hospital to the southeast of the Project Site. These locations were selected to be representative of the residential and medical facilities located to the southeast of the Project Site. The Villa de Esperanza apartment complex located at 1401 Hope Street was selected as Receptor 1. The California Hospital Medical Center located at 1401 South Grand Street was selected as Receptor 2. The Carver Apartments, located at 1624 South Hope Street, were selected as Receptor 3. The upper levels of Receptors 1, 2, and 3 have unobstructed views to the Project Site. These locations were not accessible when measurements were taken. The most comparable location to the upper floors of Receptors 1, 2, and 3 is the uppermost deck of the California Hospital Medical Center Parking Garage, on 1341 Hope Street. The measured values taken from this measurement location were at a comparable height and used to estimate the maximum existing illuminance levels incident to the upper levels of Receptors 1, 2, and 3.

Figure 3.3.1.1 shows the Receptors and the measurement location with respect to the Project Site.



The photographs in Figures 3.3.1.2 through 3.3.1.4 show the view from the measurement location used for Receptors 1, 2, and 3. This view is similar to the view from the upper level of Receptor 1.



Figure 3.3.1.2 - Photograph of daytime view from measurement location.



Figure 3.3.1.3 - Photograph of nighttime view from measurement location during an Event.



Figure 3.3.1.4 - Photograph of nighttime view from measurement location during a non-Event time.

The photographs in Figures 3.3.1.5 through 3.3.1.7 show the completely obstructed view from the ground level at Receptor 2. The view at ground level for Receptor 3 was similar.



Figure 3.3.1.5 - Photograph of daytime view from ground level of Receptor 2 location.



Figure 3.3.1.6 - Photograph of nighttime view from ground level of Receptor 2 location during an Event.



Figure 3.3.1.7 - Photograph of nighttime view from ground level of Receptor 2 location during a non-Event time.

Location

Receptors 1 and 3 are residential locations, while Receptor 2 is a hospital. All three receptor locations are considered to be light sensitive locations based on the Los Angeles CEQA Thresholds Guide.

Measured Illuminance Values

The illuminance values measured at the measurement location showed a decrease between the Event and non-Event measurements.

Refer to Tables 3.3.1.1 for the measured illuminance values.

Luminance and Contrast

Visible luminances from signage and building elements exhibit HIGH contrast ratios visible from the upper levels of the Receptor sites. Refer to Figure 3.3.1.8 for luminance values visible from the measurement location.

View of the Project Site

The view from the measurement location is partially obstructed at this distance, but the majority of architectural and signage elements at the Project Site are visible above other buildings and trees. Views from the upper levels of the three Receptor locations are similar.

The views from Receptor 2, the hospital, are being considered equivalent in sensitivity as that of a residential use. Patient rooms on the north and west faces of the hospital with views to the site are assumed to be equally affected by Project light emissions as residences in the area.

Table 3.3.1.1 - Measurement illuminance values

Condition	Max	Min	Median
Event	2.21 (23.8)	1.35 (14.5)	1.78 (19.2)
Non-Event	0.99 (10.6)	0.93 (10.0)	0.96 (10.3)

Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.

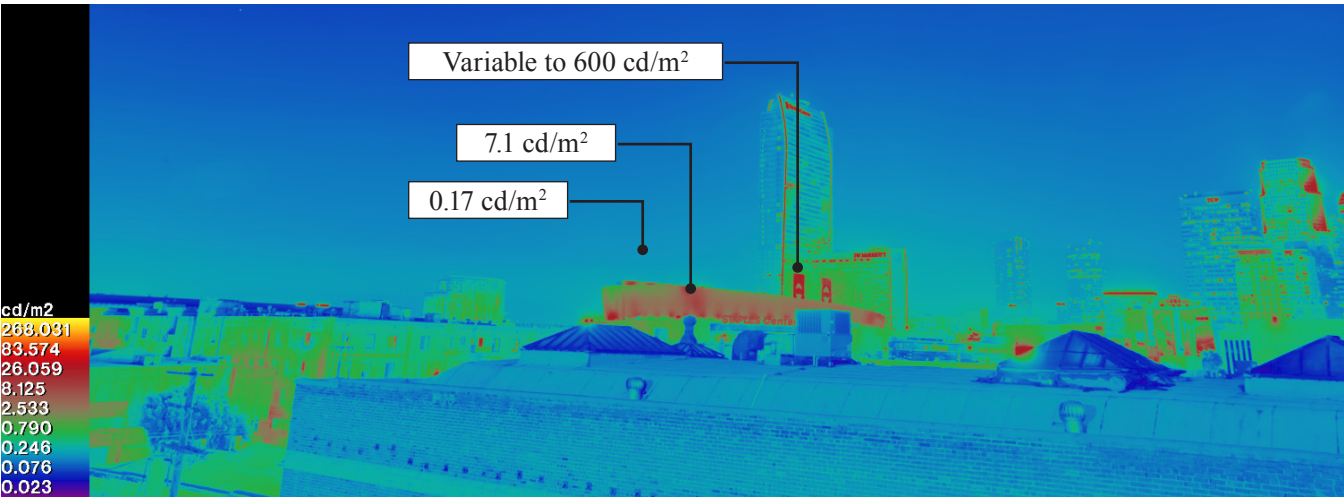


Figure 3.3.1.8 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values (in units of candela per meter squared) indicated.

Estimated Illuminance Values

The estimated illuminance values for Receptors 1, 2, and 3 used the measured values shown in Table 3.3.1.1 as a baseline. Tables 3.3.1.2 through 3.3.1.4 present the estimated illuminance values at the Receptors. These estimated values are illustrative of the values incident at the Receptor locations.

Table 3.3.1.2 - Estimated illuminance values at Receptor 1 location*

Condition	Max	Min	Median
Event	1.45 (15.6)	0.88 (9.5)	1.17 (12.6)
Non-Event	0.65 (7.0)	0.61 (6.6)	0.63 (6.8)
Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.			

Table 3.3.1.3 - Estimated illuminance values at Receptor 2 location*

Condition	Max	Min	Median
Event	1.62 (17.4)	0.99 (10.6)	1.31 (14.1)
Non-Event	0.73 (7.8)	0.68 (7.3)	0.71 (7.6)
Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.			

Table 3.3.1.4 - Estimated illuminance values at Receptor 3 location*

Condition	Max	Min	Median
Event	0.81 (8.7)	0.50 (5.4)	0.66 (7.1)
Non-Event	0.36 (3.9)	0.34 (3.7)	0.35 (3.8)
Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.			

* Illuminance values are estimates from the analysis process outlined in Section 3.2.4.

3.3.2 Receptor 4

Receptor 4 was selected as Nokia Plaza, which is located at 777 Chick Hearn Court.

This location is centered within LA Live and has direct unobstructed views to the Project Site. Figure 3.3.2.1 shows the location of Receptor 4 with respect to the Project Site.

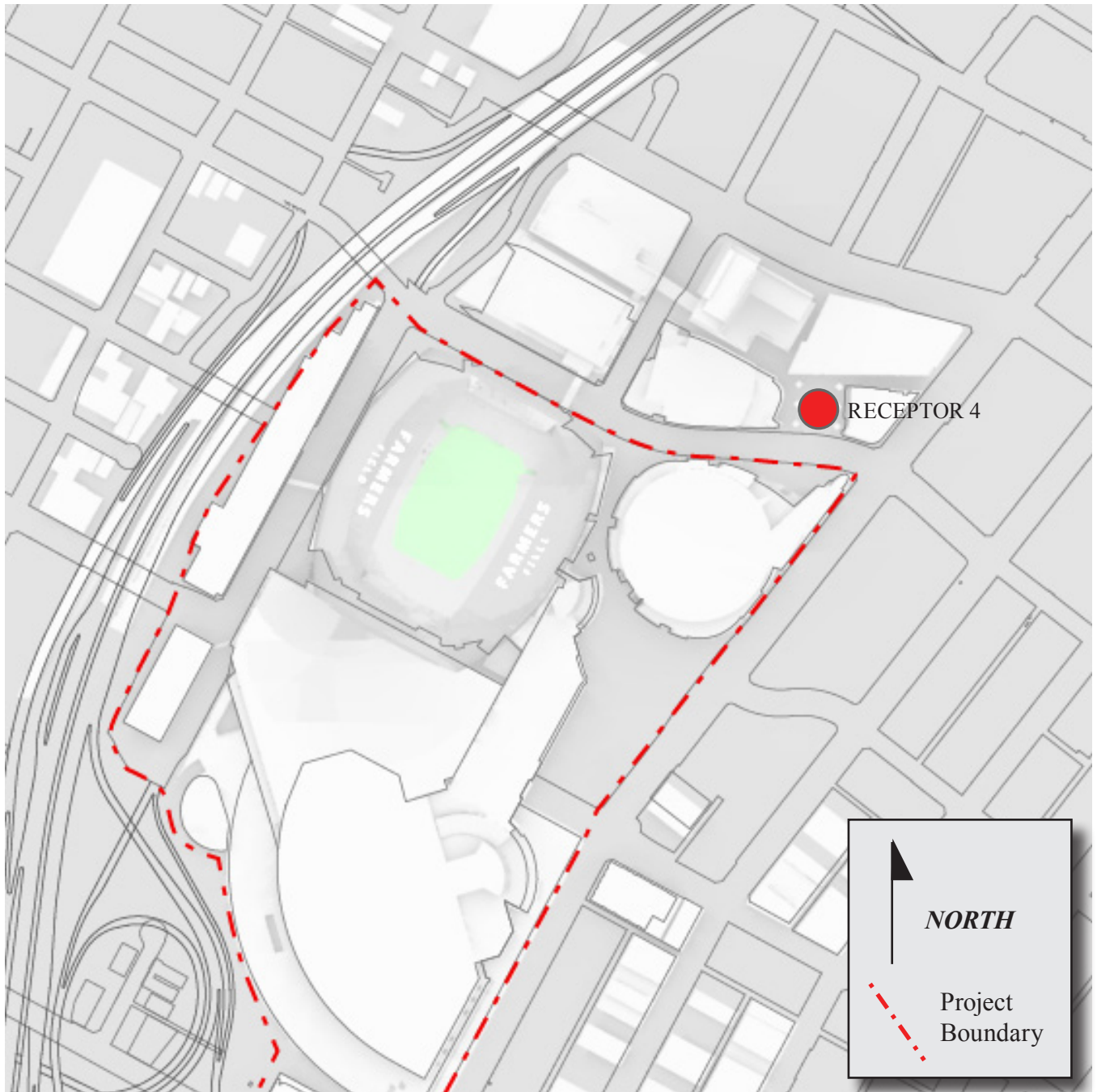


Figure 3.3.2.1 - Plan diagram showing location of Receptor 4.

The photographs in Figures 3.3.2.2 through 3.3.2.4 show the view from the location of Receptor 4.



Figure 3.3.2.2 - Photograph of daytime view from Receptor 4 location.



Figure 3.3.2.3 - Photograph of nighttime view from Receptor 4 location during an Event.



Figure 3.3.2.4 - Photograph of nighttime view from near the Receptor 4 location during a non-Event time. (Photography was not allowed at the location in Figure 3.3.2.3 due to equipment and work occurring at the non-Event time on July 13)

Location

Receptor 4 is not considered to be a light sensitive location based on the Los Angeles CEQA Thresholds Guide. It was selected as a Receptor Location based on its proximity to the Project Site and other sensitive uses including residential and hotel uses in the Ritz-Carlton tower.

Measured Illuminance Values

The illuminance values measured showed a decrease between an Event and non-Event times.
Refer to Table 3.3.2.1 for the measured illuminance values.

Luminance and Contrast

Visible luminances from signage and building elements exhibit HIGH contrast ratios visible from this receptor location. Refer to Figure 3.3.2.5 for luminance values visible from the Receptor location.

View of the Project Site

The view to pertinent sight adjacencies is unobstructed.

Table 3.3.2.1 - Measurement illuminance values

Condition	Max	Min	Median
Event	41 (441)	39.3 (423)	40.15 (432)
Non-Event	19.58 (211)	n/a	19.58 (211)
Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.			

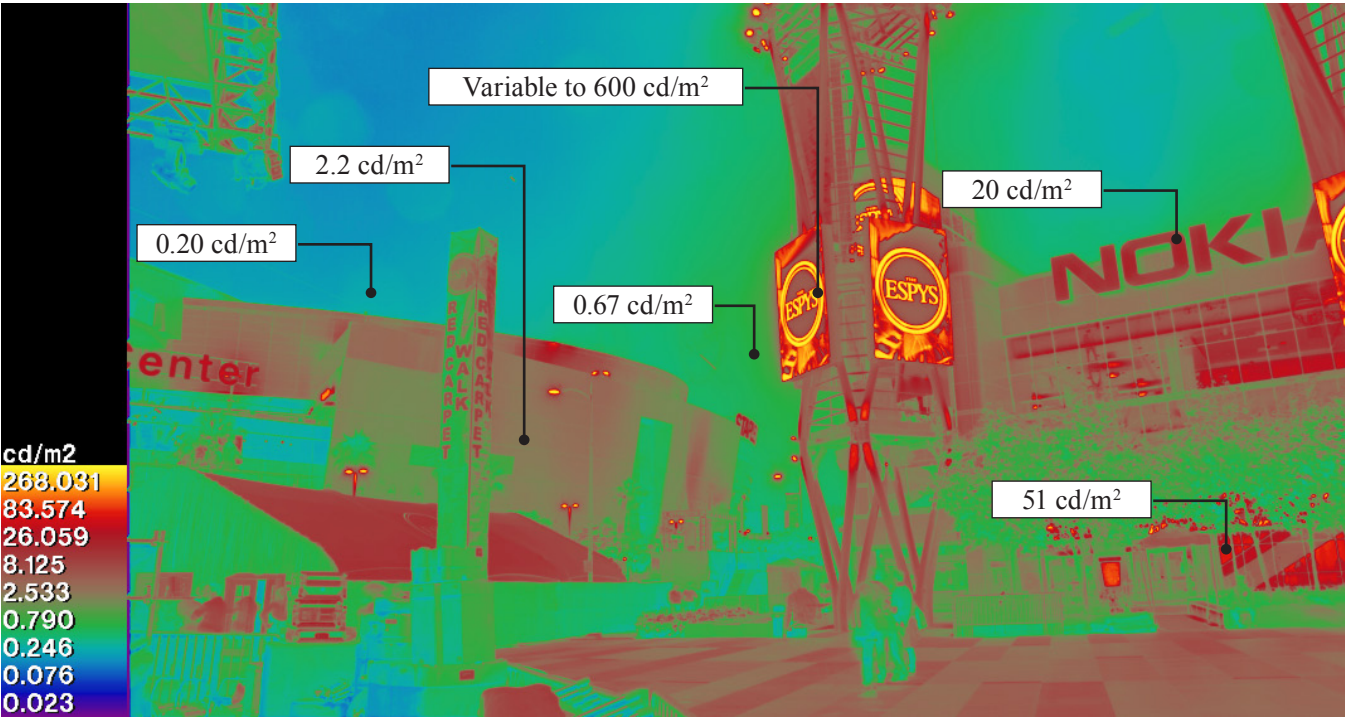


Figure 3.3.2.5 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values (in units of candela per meter squared) indicated.

3.3.3 Receptor 5

Receptor 5 measurements were taken at the Interstate 10 eastbound connector ramp to the Interstate 110 north. This location passes near to the LACC South Hall, which obstructs views to much of the Project Site. Figure 3.3.3.1 shows the location of Receptor 5 with respect to the Project Site. This receptor location provides for the residences at 1430, 1438 S. Wright Street and the roadway directly adjacent to the residences. The measured values taken from this measurement location were at a comparable height to the receptor. This measurement location was used to estimate the maximum existing illuminance levels incident to the upper levels of Receptors 5.

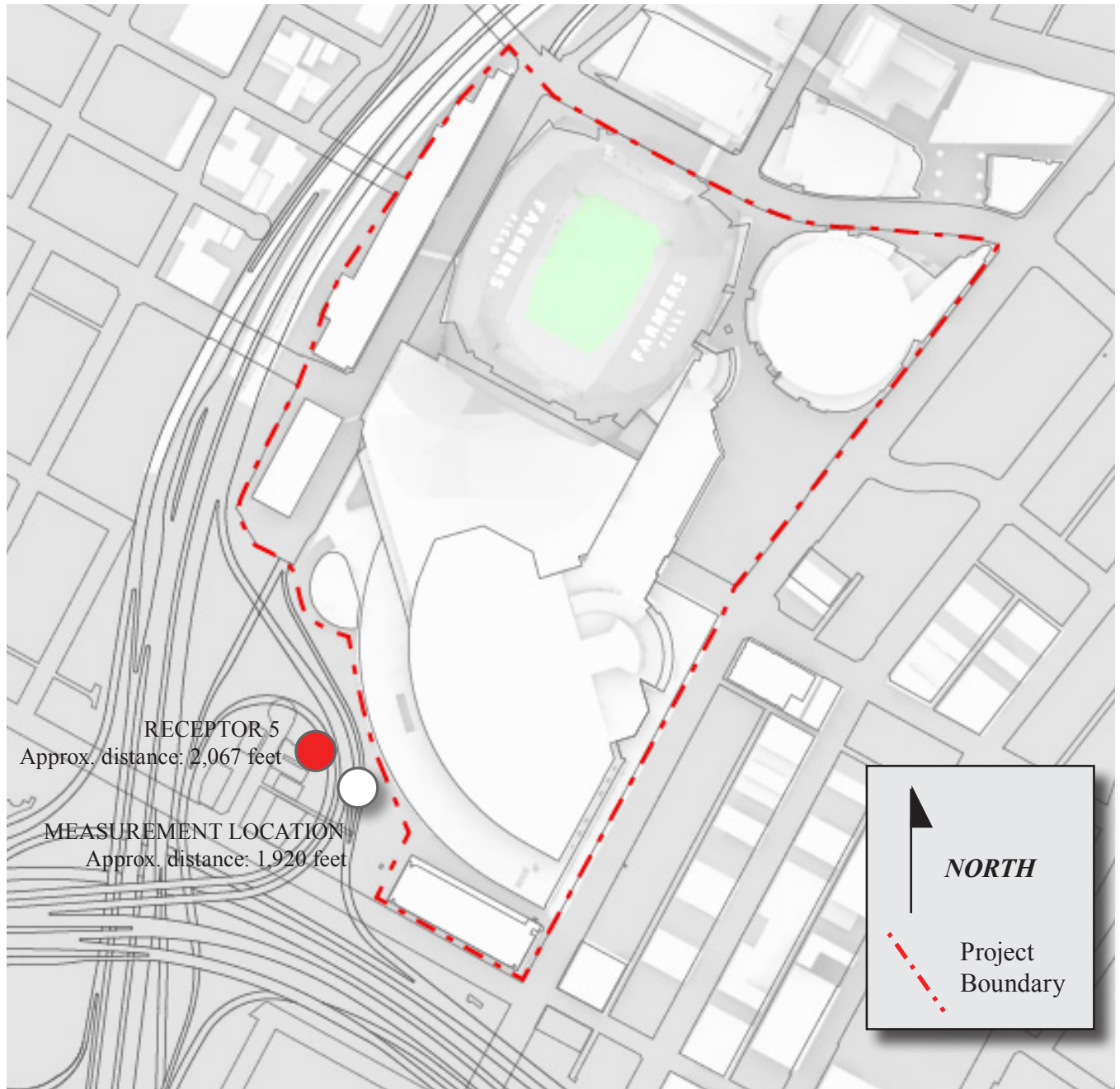


Figure 3.3.3.1 - Plan diagram showing location of Receptor 5.

The uppermost northeast corner of 1430 S. Wright Street is nearest the Proposed Project and likely to experience the highest illuminance contributions from the Proposed Project. The proposed Event Center and much of the existing LACC South Hall is obscured from view by the existing freeway for the lower floors of the residence.



Figure 3.3.3.1 - 1430 South Wright Street (at right of image) and Interstate I-10 on-ramp (at left of image)

Nighttime photographs are not provided for this receptor. The shoulder of the freeway is constrained and not suitable (un-safe) for setting up a tripod which is required for night time photographs. All measurements and daytime photographs were taken from within the confines of a vehicle.

During Events the LACC South Hall is used as a staging area so the measured Event light levels are appreciably higher than non-Event levels.

The photographs in Figures 3.3.3.2 and 3.3.3.3 show the view from the location of Receptor 5.

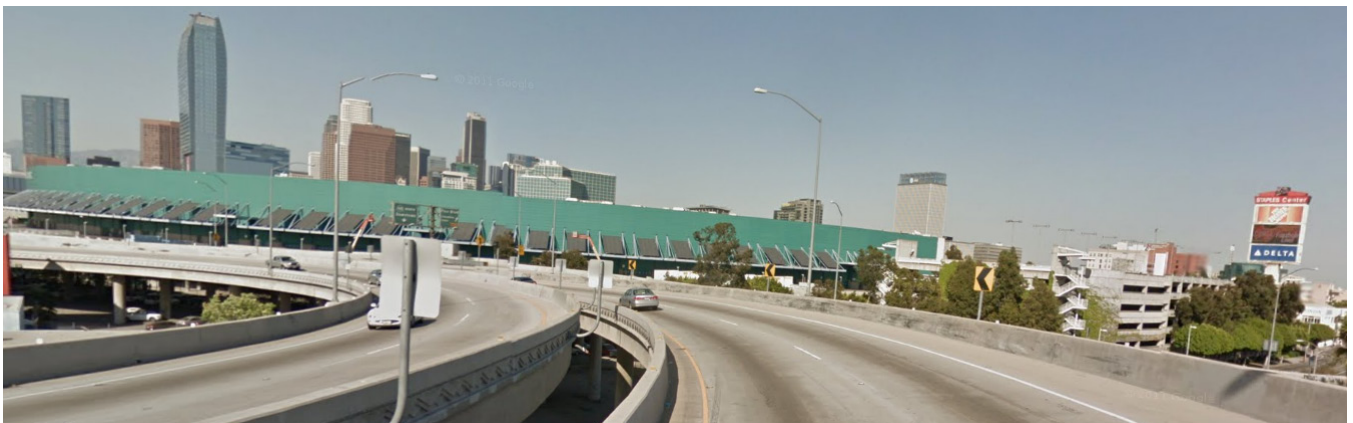


Figure 3.3.3.2 - Photograph of daytime view from Receptor 5. (Photo courtesy Google: google.maps.com)



Figure 3.3.3.3 - Photograph of daytime view from Receptor 5. (Photo courtesy Google: google.maps.com)

Location

Receptor 5 is assessed as both a residence and a roadway. The residence at 1430 South Wright Street is within 50ft of the on-ramp. These residences are considered to be light sensitive locations based on the Los Angeles CEQA Thresholds Guide. Since this is a roadway the California Motor Vehicle Code Section 21466.5 (Light Impairing Driver's Vision) does apply.

Predicted Illuminance Values

The illuminance values measured showed a decrease between an Event and non-Event times.

Refer to Table 3.3.1.2 for the measured illuminance values.

Luminance and Contrast

Visible luminances from signage exhibit HIGH contrast ratios visible from this Receptor location from select vantage points on the ramp.

View of the Project Site

The receptor's view is primarily limited to the back-side of the Los Angeles Convention Center South Hall, as well as the existing Staples Center Luminous Sign. Views of the Project on-site development are otherwise largely obstructed by the existing South Hall. Views of the Project are almost completely obscured by the freeway with the exception of the uppermost level of the residential building facing the Project.

Table 3.3.1.2. - Measurement illuminance values

Condition	Max	Min	Median
Event	10.08 (108)	9.89 (106)	9.99 (107)
Non-Event	3.12 (33.6)	2.69 (29.0)	2.91 (31.3)
Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.			

Estimated Illuminance Values

The estimated illuminance values for Receptors 5 uses the measured values shown in Table 3.3.1.2 as a baseline. Table 3.3.1.3 presents the estimated illuminance values at the Receptor. These estimated values are illustrative of the values incident at the Receptor location.

Table 3.3.1.3 - Estimated illuminance values at Receptor 5 location*

Condition	Max	Min	Median
Event	9.96 (107)	9.09 (98)	9.19 (99)
Non-Event	02.87 (31)	2.47 (27)	2.68 (29)
Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.			

* Illuminance values are estimates from the analysis process outlined in Section 3.2.4.

3.3.4 Receptor 6

Receptor 6 measurements were taken at the intersection of LA Live Way and Chick Hearn Court. This location is near the I-110 Freeway, and has direct views to the Convention Center and obstructed views to the Staples Center and other portions of the Project Site. This site was selected to be representative of the views seen by motorists on adjacent roadways, including the I-110 Freeway, as well as Chick Hearn Court. Figure 3.3.4.1 shows the location of Receptor 6 with respect to the Project Site.

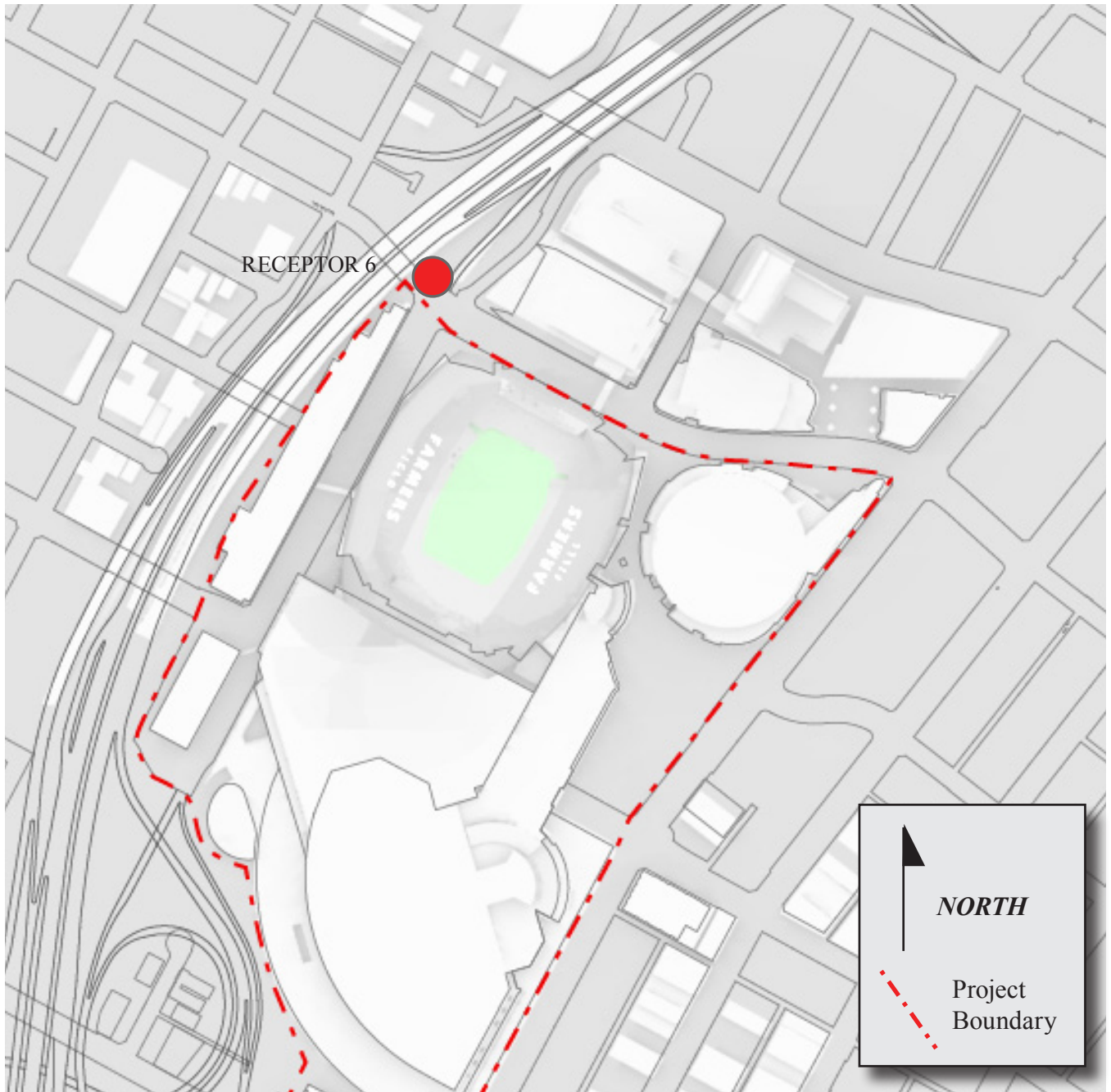


Figure 3.3.4.1- Plan diagram showing location of Receptor 6.

The photographs in Figures 3.3.4.2 through 3.3.4.4 show context for the location of Receptor 6.



Figure 3.3.4.2 - Photograph of daytime view from Receptor 6 location.



Figure 3.3.4.3 - Photograph of nighttime view from Receptor 6 location during an Event.



Figure 3.3.4.4 - Photograph of nighttime view from Receptor 6 location during a non-Event time.

Location

Receptor 6 is not considered to be a light sensitive location based on the Los Angeles CEQA Thresholds Guide. Receptor 6 is a roadway location, thus the California Motor Vehicle Code Section 21466.5 (Light Impairing Driver’s Vision) does apply.

Measured Illuminance Values

The illuminance values measured show a decrease between an Event and non-Event times.
Refer to Table 3.3.4.1 for the measured illuminance values.

Luminance and Contrast

Visible luminances from signage and building elements exhibit HIGH contrast ratios visible from this receptor location. Refer to Figure 3.3.4.5 for luminance values visible from the location of Receptor 6.

View of the Project Site

The receptor’s view is extensive and is not significantly increased due to the close proximity to the Project Site. The Convention Center is prominent in view, with the Staples Center and related signage also clearly visible.

Table 3.3.4.1 - Measurement illuminance values

Condition	Max	Min	Median
Event	4.96 (53.4)	4.5 (48.4)	4.73 (50.9)
Non-Event	4.75 (51.1)	4.25 (45.7)	4.5 (48.4)

Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.

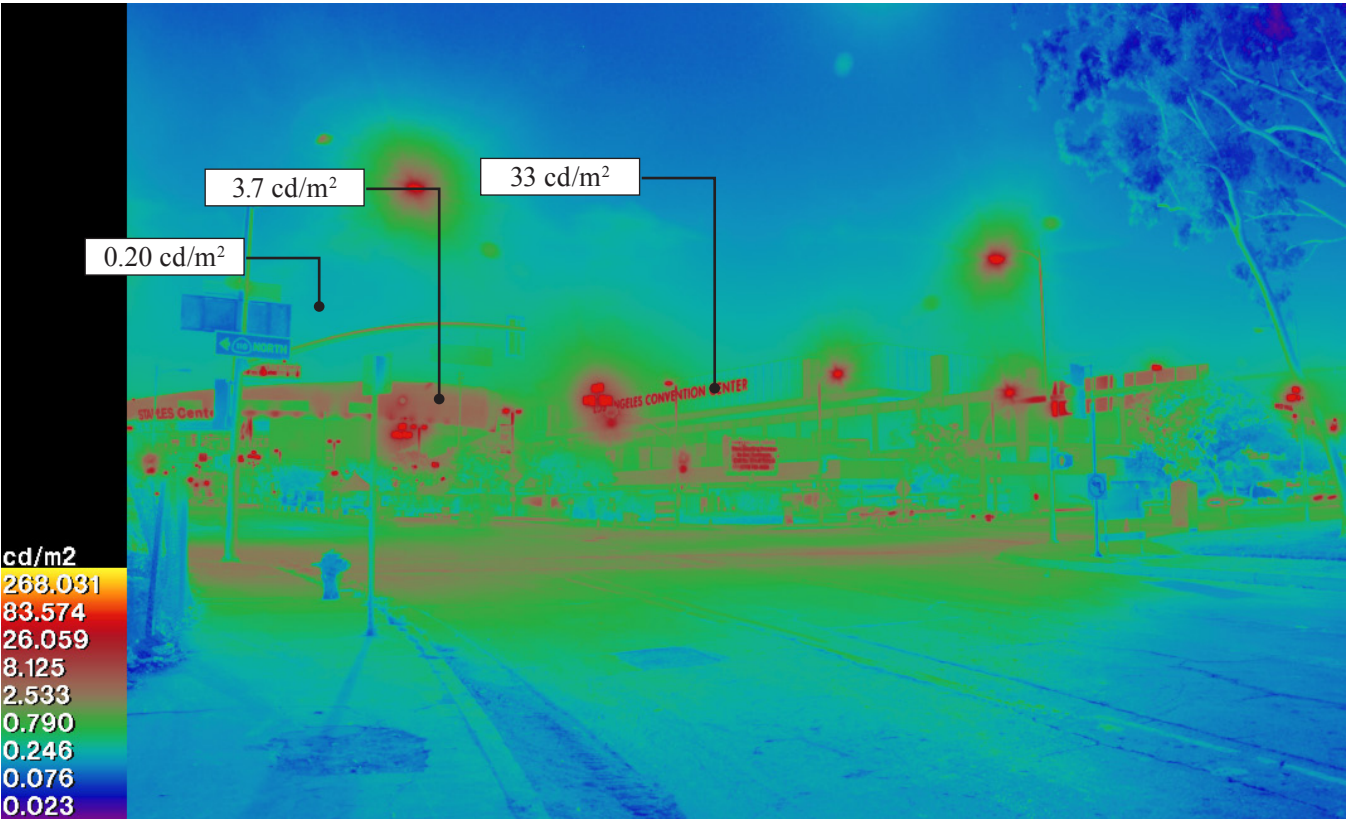


Figure 3.3.4.5 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values (in units of candela per meter squared) indicated.

3.3.5 Receptor 7

Receptor 7 measurements were taken at the intersection of 12th Street and Albany Street. This location is representative of residences in the area, although access to specific residential buildings was not available. The views and measurements taken at street level are indicative of the light emissions we would expect at a residence a few floors above street level. Section 3.2.4 discusses the impact of variation in elevation between available measurement locations and sensitive receptors.

Figure 3.3.5.1 shows the Receptor location.

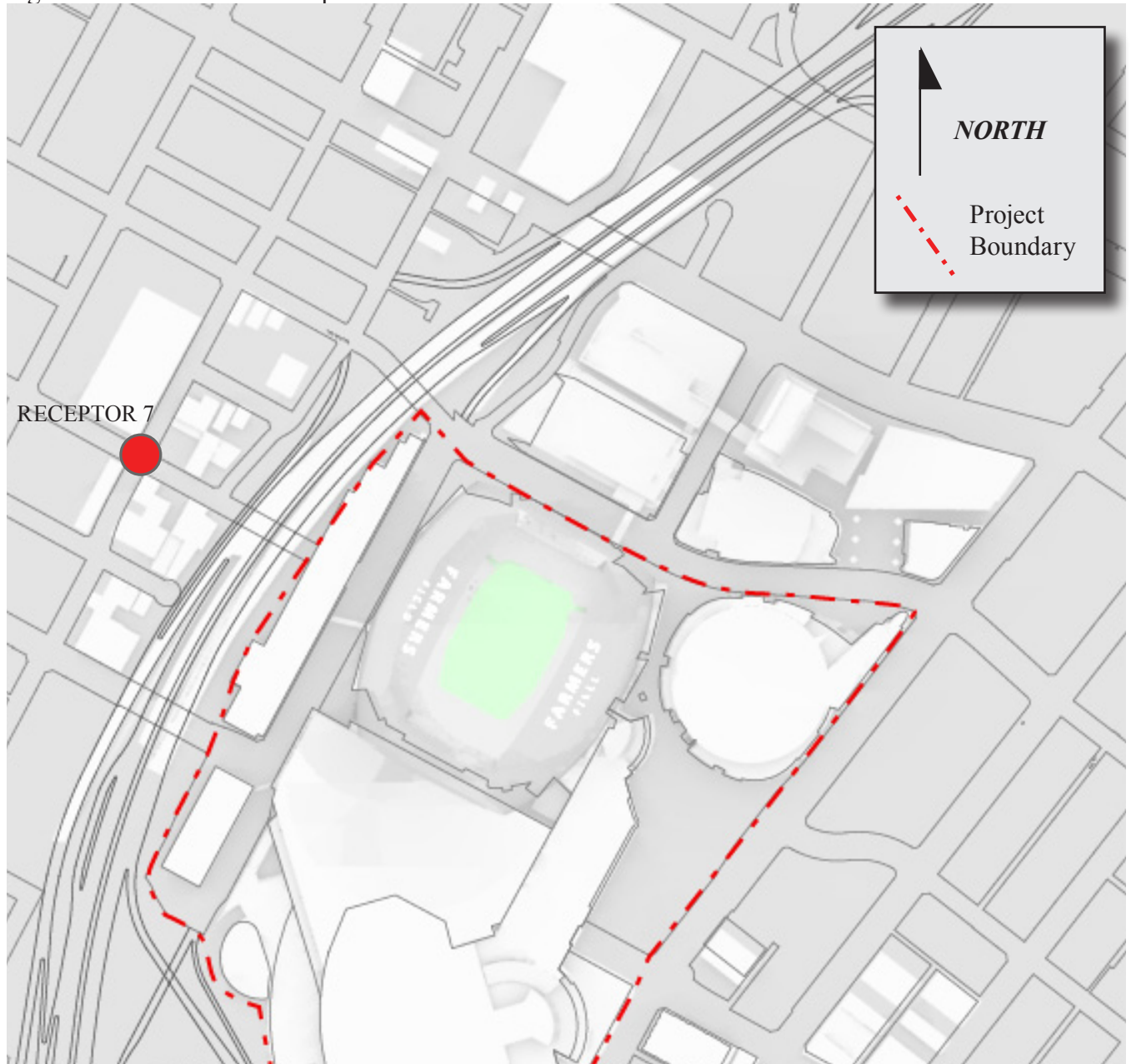


Figure 3.3.5.1 - Plan diagram showing location of Receptor 7.

The photographs in Figures 3.3.5.2 through 3.3.5.4 show context for the location of Receptor 7.



Figure 3.3.5.2 - Photograph of daytime view from Receptor 7 location.



Figure 3.3.5.3 - Photograph of nighttime view from Receptor 7 location during an Event.



Figure 3.3.5.4 - Photograph of nighttime view from Receptor 7 location during a non-Event time.

Location

Receptor 7 is a residential location and is considered to be a light sensitive location based on the Los Angeles CEQA Thresholds Guide.

Measured Illuminance Values

The illuminance values measured show a very minimal decrease between an Event and non-Event time. Illuminance does not appear to have been affected by the event lighting on the Project Site.

Refer to Table 3.3.5.1 for the measured illuminance values.

Luminance and Contrast

Visible luminances from local signage and building elements exhibit HIGH contrast ratios visible from this receptor location; however, the Project Site was not visible. Refer to Figure 3.3.4.5 for luminance values visible from the Receptor location.

View of the Project Site

The receptor’s view is partially obstructed at this distance, but some architectural and signage elements at the Project Site may be visible above adjacent buildings and trees if viewed from upper levels of the apartments near this location. This location has a mix of residential buildings and light commercial buildings, with architectural security lighting, and illuminated billboards visible.

Table 3.3.5.1 - Measurement illuminance values

Condition	Max	Min	Median
Event	3.63 (39.1)	3.23 (34.8)	3.43 (36.9)
Non-Event	3.34 (35.9)	3.25 (35.0)	3.30 (35.5)

Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.

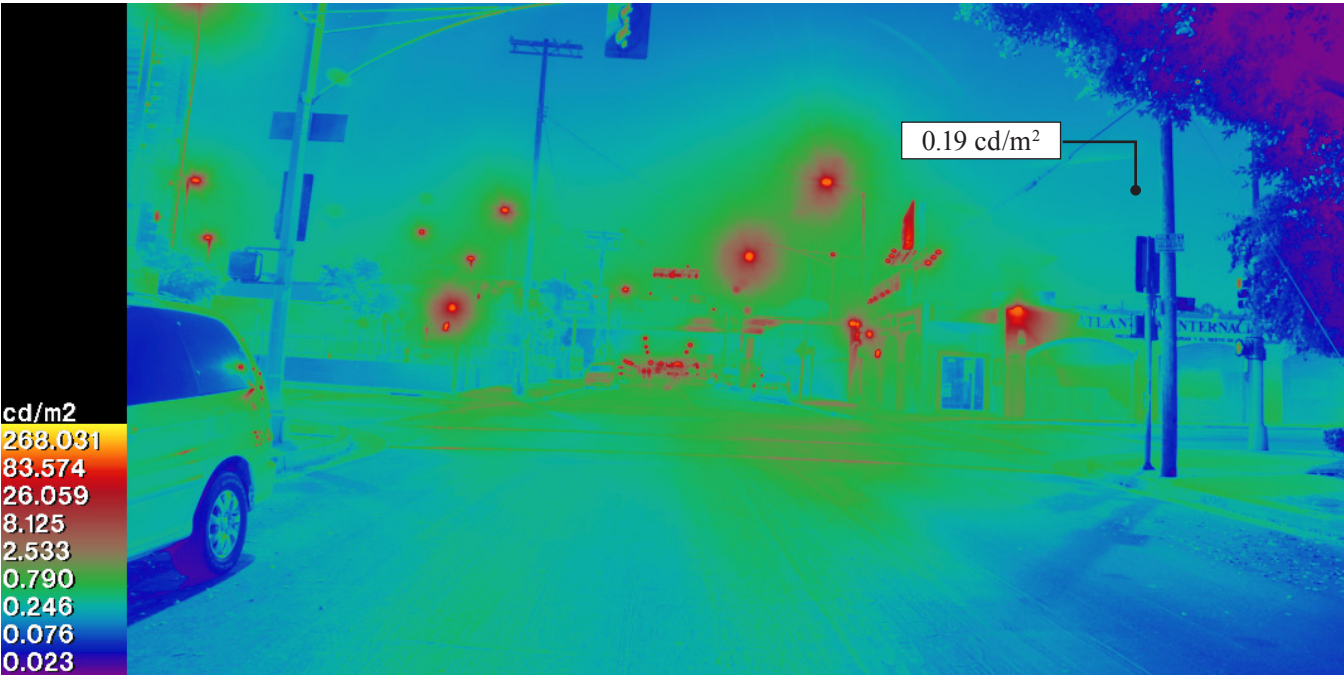


Figure 3.3.5.5 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values (in units of candela per meter squared) indicated.

3.3.6 Receptor 8

Receptor 8 measurements were taken at the edge of the mechanical level at the Ritz Carlton at 900 West Olympic Boulevard. This location is representative of the residences in the upper levels of the tower. This location includes a hotel use in addition to the residences. Direct access to hotel rooms and specific residences was not available; however, the view is similar for all units facing the Project Site.

Figure 3.3.6.1 shows the Receptor location.

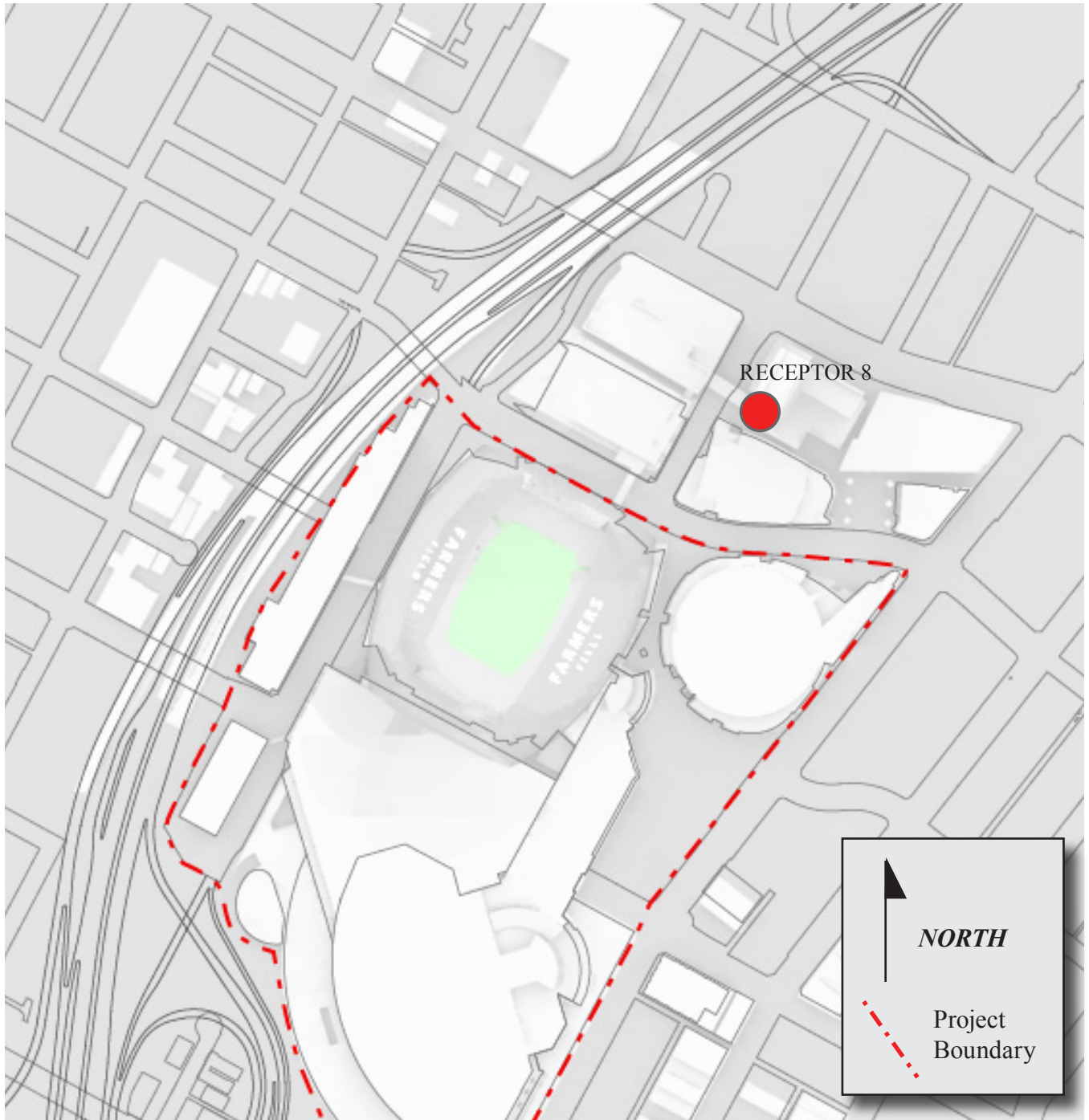


Figure 3.3.5.1 - Plan diagram showing location of Receptor 8.

The photographs in Figures 3.3.6.2 through 3.3.6.4 show context for Receptor 8.



Figure 3.3.6.2 - Photograph of daytime view from Receptor 8 location.



Figure 3.3.6.3 - Photograph of nighttime view from Receptor 8 location during an Event.



Figure 3.3.6.4 - Photograph of nighttime view from Receptor 8 location during a non-Event time.

Location

Receptor 8 is a hotel and residential location. The residences are considered to be a light sensitive location based on the Los Angeles CEQA Thresholds Guide.

Measured Illuminance Values

The illuminance values measured showed a decrease between an Event and non-Event time.
Refer to Table 3.3.6.1 for the measured illuminance values.

Luminance and Contrast

Visible luminances from signage and building elements exhibit HIGH contrast ratios visible from this receptor location. Refer to Figure 3.3.6.5 for luminance values visible from the Receptor location.

View of the Project Site

The receptor’s view of the Project Site is extensive due to the close proximity to the Project Site. Sky-Tracker search lights at the Staples Center aimed up at the sky create sources of glare when viewed from above.

Table 3.3.6.1 - Measurement illuminance values

Condition	Max	Min	Median
Event	4.36 (46.9)	3.33 (35.8)	3.85 (41.4)
Non-Event	2.46 (26.5)	2.37 (25.5)	2.42 (26.0)
Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.			

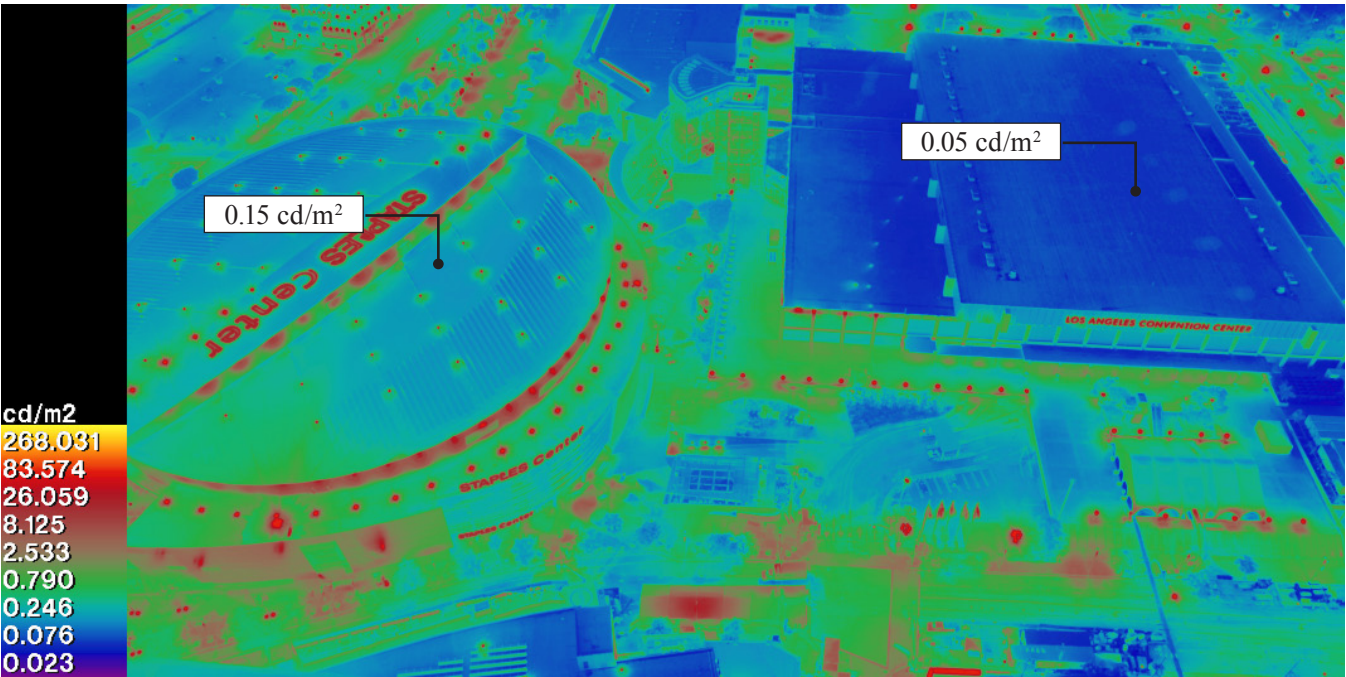


Figure 3.3.6.5 -Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values (in units of candela per meter squared) indicated.

3.3.7 Receptor 9

Receptor 9 measurements were taken at the sidewalk adjacent to the Olympic Primary Center located at 950 Albany Street.

Figure 3.3.6.1 shows the location of Receptor 9.

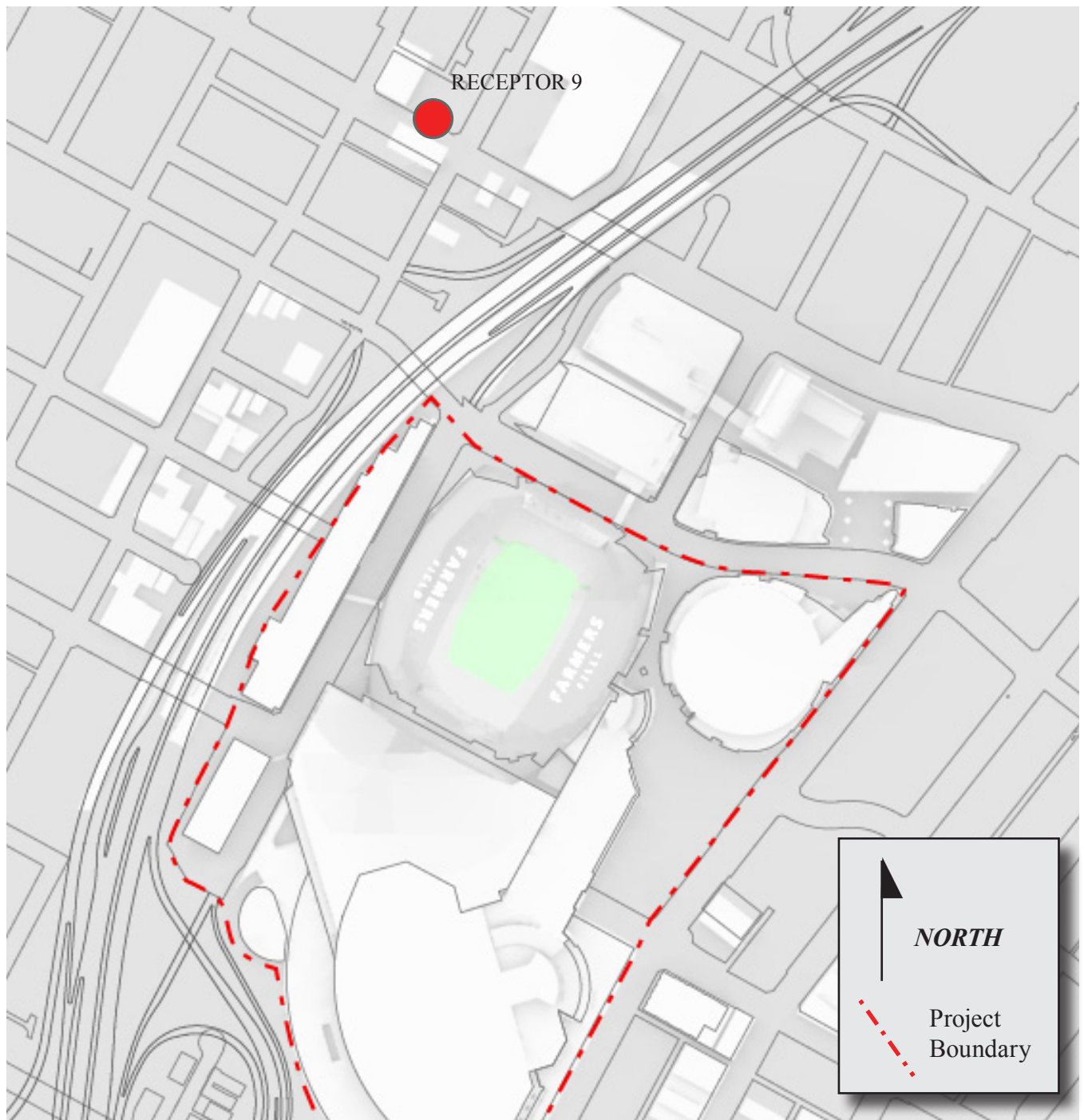


Figure 3.3.7.1 - Plan diagram showing location of Receptor 9.

The photographs in Figures 3.3.7.2 through 3.3.7.4 show context for the location of Receptor 9.



Figure 3.3.7.2 - Photograph of daytime view from Receptor 9 location.



Figure 3.3.7.3 - Photograph of nighttime view from Receptor 9 location during an Event.



Figure 3.3.7.4 - Photograph of nighttime view from Receptor 9 location during a non-Event time.

Location

Receptor 9 is an educational facility that operates primarily during the daytime hours, and is thus not considered to be a light sensitive location based on the Los Angeles CEQA Thresholds Guide.

Measured Illuminance Values

The illuminance values measured showed a very minimal decrease between an Event and non-Event time and did not appear to have been affected by the Project Site event lighting.

Refer to Table 3.3.7.1 for the measured illuminance values.

Luminance and Contrast

Visible luminances from local signage and building elements exhibit HIGH contrast ratios visible from this Receptor location; however, the Project Site was largely not visible. Refer to Figure 3.3.7.5 for luminance values visible from the Receptor location.

View of the Project Site

The Receptor's view is largely obstructed at this location, but some architectural and signage elements at the Project Site may be visible above adjacent buildings and trees if viewed from upper levels of the buildings near this location. The area near this location has a mix of residential buildings, and light commercial buildings with architectural security lighting and illuminated billboards visible.

Table 3.3.7.1 - Measurement illuminance values

Condition	Max	Min	Median
Event	4.7 (50.6)	4.5 (48.4)	4.6 (49.5)
Non-Event	4.6 (49.5)	4.3 (46.3)	4.45 (47.9)

Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.

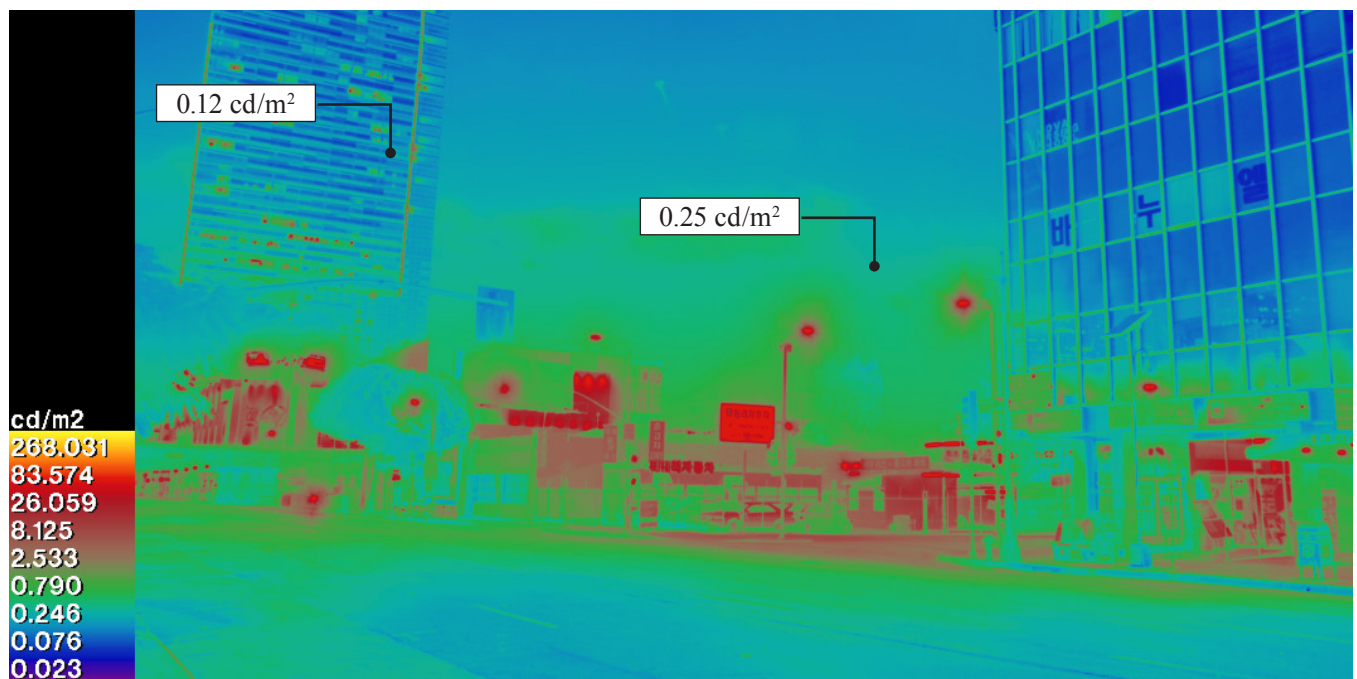


Figure 3.3.7.5 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values (in units of candela per meter squared) indicated.

3.3.8 Receptor 10

Receptor 10 measurements were taken at the southeast corner of the intersection of Figueroa Street and Pico Boulevard, close to the City Lights on Fig residential complex located at the southeast corner of the intersection. The views and measurements taken at street level are indicative of the light emissions we would expect at a residence a few floors above street level. Section 3.2.4 discusses the impact of variation in elevation between available measurement locations and sensitive receptors.

Figure 3.3.8.1 shows the location of Receptor 10.

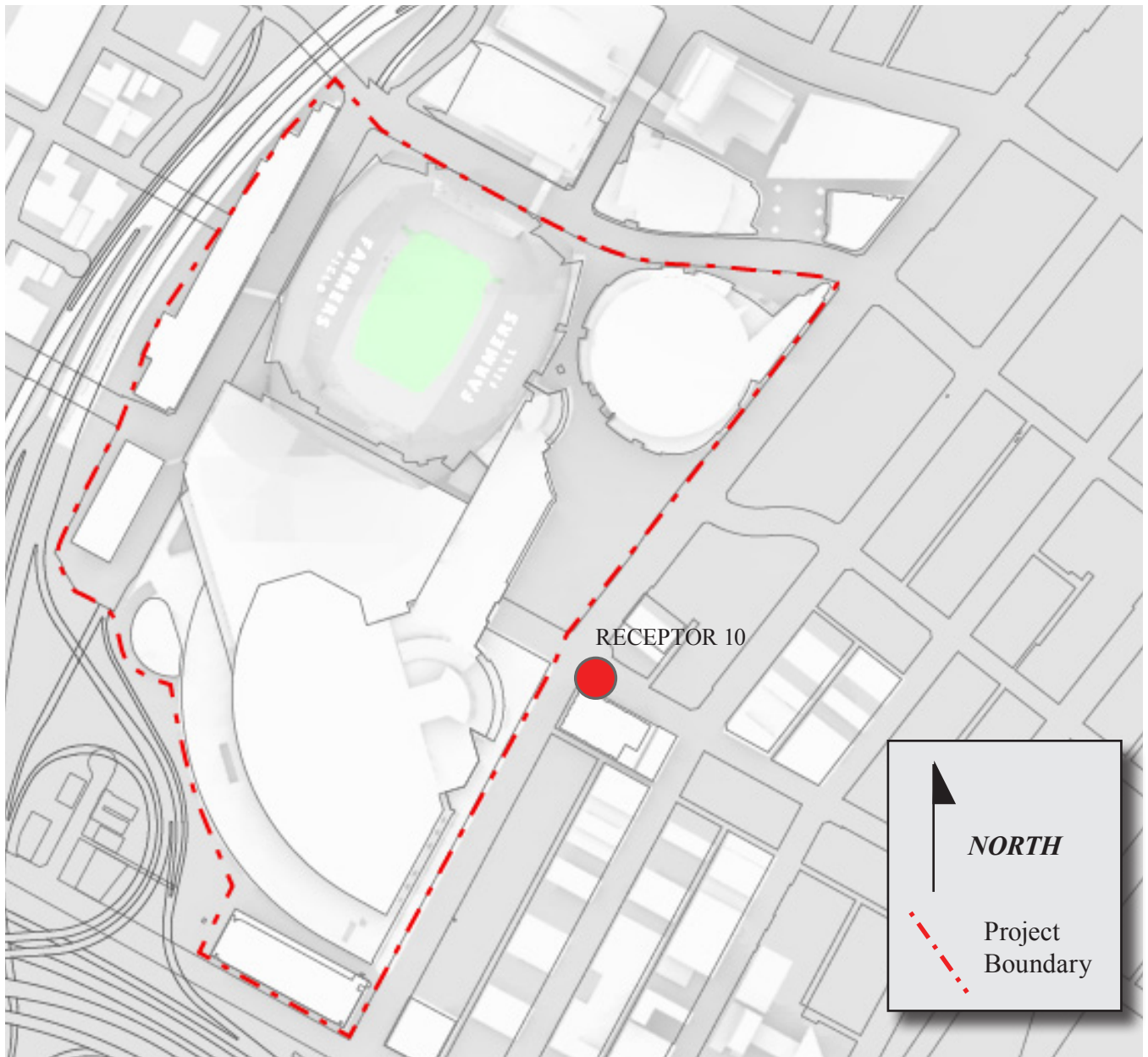


Figure 3.3.8.1 - Plan diagram showing location of Receptor 10.

The photographs in Figures 3.3.8.2 through 3.3.8.4 show context for the location of Receptor 10.



Figure 3.3.8.2 - Photograph of daytime view from Receptor 10 location.



Figure 3.3.8.3 - Photograph of nighttime view from Receptor 10 location during an Event.



Figure 3.3.8.4 - Photograph of nighttime view from Receptor 10 location during a non-Event time.

Location

Receptor 10 is a residential location and is considered to be a light sensitive location based on the Los Angeles CEQA Thresholds Guide.

Measured Illuminance Values

The illuminance values measured showed a decrease between an Event and non-Event time

Refer to Table 3.3.8.1 for the measured illuminance values.

Luminance and Contrast

Visible luminances from Project signage and building elements exhibit HIGH contrast ratios visible from this Receptor location. Refer to Figure 3.3.8.5 for luminance values visible from the Receptor location.

View of the Project Site

The receptor's view of the Project Site is extensive due to the close proximity to the Project Site. This Receptor is located next to a residential building. Low-density commercial buildings with architectural and security lighting are also nearby.

Table 3.3.8.1 - Measurement illuminance values

Condition	Max	Min	Median
Event	4.16 (44.8)	3.52 (37.9)	3.84 (41.3)
Non-Event	3.4 (36.6)	2.99 (32.2)	3.20 (34.3)

Illuminance values in table are shown in footcandles, with the lux conversion shown in parenthesis.

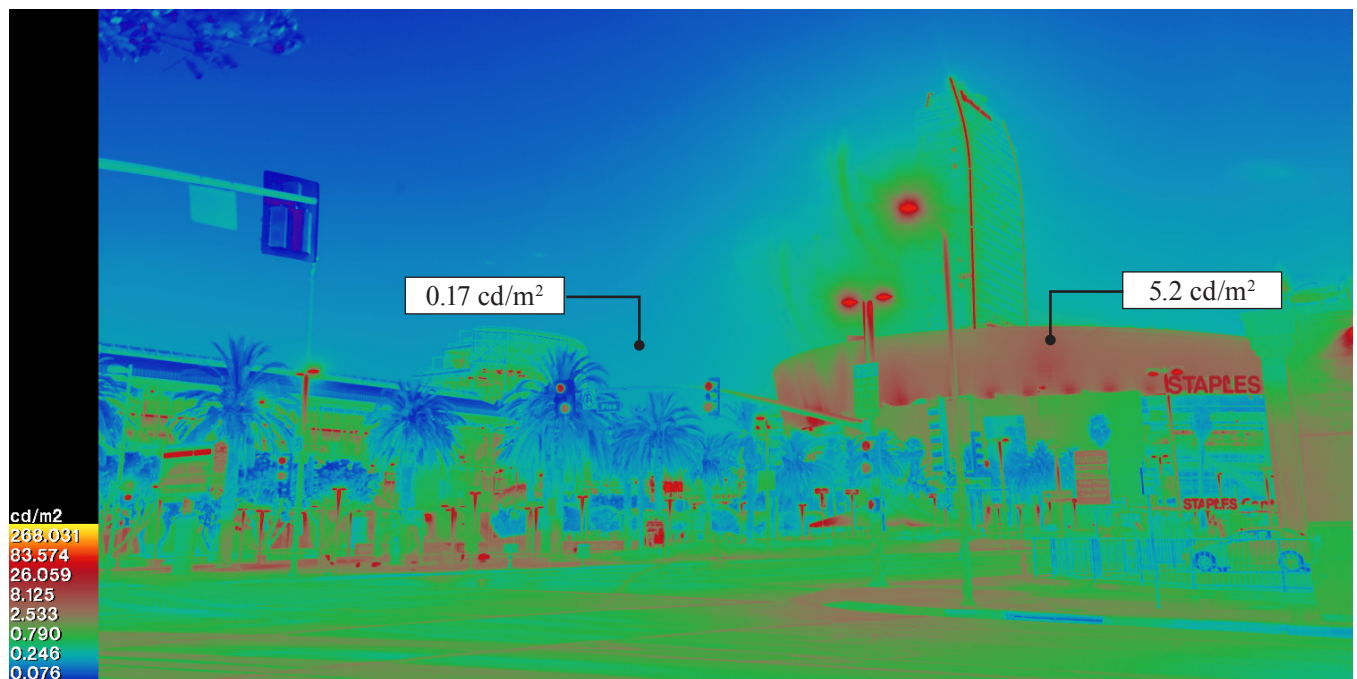


Figure 3.3.8.5 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values (in units of candela per meter squared) indicated.

3.4 Additional Lighting Considerations

The previous sections address observed existing conditions with respect to views towards the Project Site from the Receptor locations. However, other specific considerations impact existing light levels. Sky-tracker “searchlights” when used temporarily during events emit high intensity focused beams. Cloud cover and atmospheric conditions can increase illuminance intensities by reflecting light emissions directed upward back towards the ground. Increased automobile presence creates more opportunities for headlight sources to be visible from surrounding areas.

3.4.1 Sky-tracker “Searchlights”

Sky-tracker style luminaires that are aimed up to the sky have the potential to be sources of high brightness and glare if not operated in a controlled manner. These fixtures are currently used on site during events at the Staples Center on a temporary basis.

3.4.2 Atmospheric Conditions

Atmospheric conditions have the capability of increasing the ambient brightness at all receptors reviewed. The night measurements were taken with predominantly clear sky conditions. Low-level clouds in an overcast sky condition create a reflective surface that has the potential to increase measured illuminance levels. Cloud albedo can magnify light pollution. A review of potential impacts from albedo is provided in Section 6 of this report.

3.4.3 Headlights

The project is anticipated to create periods of high traffic at night, where high numbers of vehicles will be arriving or leaving the site. Vehicle headlights may be visible from receptors that have direct views of the street or existing project garages.

In the case of the Venice Boulevard Garage, tree canopies currently shield existing vehicular headlights from view.

3.4.4 Sky Glow

The location of the Proposed Project is compromised with respect to views of the night sky and celestial events due to an accumulation of existing light emitters that direct light into the night sky, creating sky-glow or light pollution.

4. Thresholds of Significance

This section of the report outlines the thresholds establishing significant impacts at the Project boundary and off-site receptors due to lighting from the Project Site. The relevant codes and applicable sections are discussed in this section, following the description of the significant impact thresholds. The terminology used in this section is defined in Section 2 of this report.

4.1 Significant Impact Thresholds

Under the City of Los Angeles CEQA Thresholds Guide (2006), the determination of significance from nighttime illumination 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.

Based on these criteria, the specific criteria outlined in this section have been identified to determine whether significant impacts would occur.

4.1.1 Significant Impact Threshold at Project Boundary: Spill Light

The IESNA provides recommendations for the maximum levels of illuminance that establish the limitation on light trespass from exterior architectural lighting and luminaires. Per the measurement procedures outlined by the Illuminating Engineering Society of North America (IESNA), **spill light beyond the Project boundary is significant** if the following condition occurs:

- Light intensity measured at the Project boundary exceeds **8 lux** (0.7 fc) resulting from architectural lighting and luminaires. ¹ In the case of the Proposed Project, this excludes the boundary that parallels Chick Hearn Court.

4.1.2 Significant Impact Thresholds at Sensitive Receptors: Spill Light

The Los Angeles CEQA Thresholds Guide (2006) establishes illuminance levels that result in significant impacts if met or exceeded. Per the measurement procedures outlined by the Illuminating Engineering Society of North America (IESNA), **spill light at the property line of a sensitive receptor is significant**, if any of the following conditions occur:

- An exterior light source produces 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). ²
- Light emissions associated with an illuminated sign produce a light intensity exceeding **32.3 lux** (3.0 fc) at the property line of a residence or other sensitive receptor. ²

¹ The IESNA Lighting Handbook, Tenth Edition provides classifications for outdoor lighting zones given context (Appendix A, Table 26.4). Chick Hearn Court borders the LA Live complex and is not considered a significant boundary with respect to the IESNA criteria for light trespass, due to its use as a pedestrian thoroughfare between the Proposed Project and LA Live. The illuminance levels required to provide safe passage to pedestrians (at night) will exceed 8 lux (0.7 fc) given the context of the existing LA Live light levels in excess of 53 lux (5 fc) at the ground plane.

² The City of Los Angeles California Environmental Quality Act Thresholds Guide, 2006 references illuminance thresholds contained within the Los Angeles Municipal Code (Refer to Appendix B for specific excerpt of this code section).

4.1.3 Significant Impact Thresholds at Sensitive Receptors: Glare

The International Commission on Illumination (CIE) provides guidelines for the luminance levels for building facades. Based on the CIE levels, the Project light emissions are **significant with respect to glare** if any of the following conditions occur:

- The building facade luminance (excluding contributions from illuminated signage) exceeds **10 candelas per square meter (cd/m^2)** average, with a maximum luminance in excess of **40 cd/m^2** visible beyond the Project Site boundary.³
- Luminaire intensities (excluding field event lighting) that exceed **10,000 candelas (cd)** and are not shielded from view beyond the Project Site boundary.⁴
- Field event luminaires that exceed a **Glare Rating of 55** as viewed from residences.⁵
- The signage luminance exceeds **800 cd/m^2** and is visible beyond the Project Site.⁶

4.1.4 Significant Impact Thresholds for Motorists (and Vehicular Traffic): Glare

The California Department of Motor Vehicles has established criteria limiting the output of light sources within a motorist's field of view. Based on the Vehicle Code, the Project **light emissions are significant with respect to impairing drivers' visibility** if any of the following condition occurs:

- The maximum measured 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 footlamberts (fL).⁷
- If minimum values are below 10 footlamberts (fL), the source **brightness shall not exceed 500 fL plus 100 times the angle**, in degrees, between the driver's line of sight and the light source.⁶

The criteria outlined above are referenced from the California Motor Vehicle Code and are discussed in more detail in Section 4.2.5.

The CIE provides guidelines for limiting glare related to field event lighting. The field event lighting contained within the Event Center lighting is **significant with respect to impairing drivers' visibility** if it exceeds a **Glare Rating of 45**.⁵

3 The International Commission on Illumination (CIE) 150:2003, an internationally accepted guide on limiting obtrusive light, provides standardized maximum and average luminance values for building facades (Appendix C, Table 2.6). The luminance criteria adopted is prescribed for a site with select residential surroundings. Field measurements of luminance within the existing LA Live site (Appendix E) demonstrate that this luminance intensity is consistent with Project's context.

The maximum luminance value dictates that brighter surfaces be illuminated more uniformly than less-bright surfaces in order to reduce glare. The maximum luminance value is determined from a calculation using the IESNA's facade maximum illuminance recommendations for users adapted to moderately high ambient lighting (refer to Appendix B for Table 26.2 and the associated calculation).

4 The CIE 150:2003 provides maximum values for luminaire intensities when views of bright luminaires are potentially troublesome to residents (Appendix C, Table 2.3).

5 The CIE 112-1994 provides a Glare Rating assessment specifically for outdoor sports lighting to determine the potential for glare from an observer location. (Appendix C, CIE 112-1994 excerpt.)

6 The CIE 150:2003 provides maximum permitted values of average surface luminance for signs. The luminance criteria proposed is prescribed for a site with select residential surroundings (Appendix C, Table 2.6).

7 The California Department of Motor Vehicles publication 2011 California Vehicle Code includes Section 21466.5: Light Impairing Driver's Vision. This code section stipulates the limitation requirements on light sources that may be considered potentially objectionable. Refer to Appendix D for this specific code section.

4.2 Relevant Codes

The State of California and City of Los Angeles regulations require that new developments meet the minimum standard of care for illuminating egress paths and illuminating the built environment. Public safety, requirements for enhanced security, and general liability can require more illumination than code minimums to deter crime, create a sense of security and/or to prevent accidents. The following sections present the relevant excerpts from the codes that establish limitations on exterior lighting.

4.2.1 The California Building Code (and the California Electrical Code)

The City of Los Angeles enforces the California Building Code and the California Electrical Code. These codes stipulate minimum light intensities for pedestrian pathways, circulation ways and paths of egress.

4.2.2 The City of Los Angeles California Environmental Quality Act (CEQA) Thresholds Guide, 2006 (and Los Angeles Municipal Code)

The City of Los Angeles CEQA Thresholds Guide (2006) references the City of Los Angeles Municipal Code regarding light thresholds that are deemed significant herein. The City of Los Angeles Municipal Code stipulates the following requirements:

Chapter 9, Article 3, Section 93.0117, Part (b) limits the maximum amount of illuminance from an exterior light source to a residential property to a maximum of 21.5 lux (2.0 footcandles)

Section 14.4.4 General Provisions, Part (e) limits the maximum contribution from illuminated signage above ambient to 32.3 lux (3.0 footcandles) as measured at the nearest property line zoned for residential use.

Section 12.21 General Provisions, paragraph A, Section 5, Part (k) restricts light spill onto adjacent properties and provides minimum illuminance levels for safety within and around parking facilities.

Excerpts of the Municipal Code providing the specific text for these code requirements are provided in Appendix A.

Based on the *LA CEQA Thresholds Guide*, nighttime spillover of light onto adjacent properties has the potential to disrupt some activities and functions, such as sleep, vision, privacy, and enjoyment of the nighttime condition. The Guide states that the significance of impact depends on the type of use impacted, proximity and intensity of the light source, and the existing ambient light environment.

Receptors that are considered sensitive to nighttime light per the Guide include (but are not limited to) residential uses, some commercial and institutional uses, and natural areas. For this report, residential uses, hotels, and medical facilities/hospitals are all specifically considered to be sensitive receptors with respect to nighttime light, in addition to the general description provided by the Guide.

4.2.3 IESNA Handbook, Tenth Edition

Recommended limits for light trespass are provided for within the IESNA Recommended Practice Lighting for Exterior Environments (RP-33-99), and the IESNA Technical Memorandum on Light Trespass (TM-11-00). The recommendations set forth in both of these documents have been incorporated in the **IESNA Handbook, 10th Edition**.

The Handbook defines outdoor lighting conditions by classification into distinct categories. Appendix B provides an overview of the exterior lighting zone categories. The Proposed Project is considered an exterior lighting zone category 3 (LZ3) for this analysis. The LZ3 zone is appropriate for most urban environments, as it designates areas with moderately high ambient lighting. The lighting zone category 4 (LZ4) is used for areas of high ambient night lighting as opposed to moderately high ambient lighting; however,

the California Energy Commission (CEC) does not recognize any LZ4 zones within California at present. These lighting zones provide the recommendations for the extent of control of light trespass that is considered necessary or desirable for a particular area.

Excerpts of the IESNA Handbook pertaining to exterior lighting zone categories are provided in Appendix B.

4.2.4 International Commission on Illumination (CIE)

The **CIE 112:1994** guide provides guidelines for evaluating glare for outdoor sports and area lighting systems. The system proposed in this technical report provides a means for calculating and predicting glare as it relates to viewing directions and the location of the observer.

The **CIE 150:2003** guide refers to the potentially adverse effects of outdoor lighting on both natural and man-made environments for people in most aspects of daily life, from residents, sightseers, transport users to environmentalists and astronomers. The guide establishes luminous intensity and luminance level criteria based on environmental lighting zones.

Much like the IESNA Handbook, the CIE defines environmental lighting zones by a series of categories representative of different levels of activity and development. Per Table 2.1 of the CIE 150:2003 the site has been categorized as an environmental lighting zone 3 (E3) due to the adjacent residences with a lighting context consistent of a suburban area.

Pertinent excerpts of both CIE 112:1994 and CIE 150:2003 are referenced in Appendix C that define the environmental lighting zones, and pertinent Glare Ratings for sports lighting. The CIE provides internationally recognized guidelines for the mitigation of light pollution.

4.2.5 California Vehicle Code

The California Department of Motor Vehicles publication **2011 California Vehicle Code** includes specific criteria for limiting the potential of impairing drivers' vision due to bright light sources within a drivers field of view. Section 21466.5: Light Impairing Drivers' Vision is included in Appendix D.

4.2.6 California Green Building Standards Code (2010)

The California Green Building Standards (Cal Green) code stipulates light level maximums, efficiency requirements for lighting, miscellaneous control requirements and light trespass requirements for electric lighting and daylighting.

The California Building Standard Commission (CSBC) has accepted a petition to modify the mitigation requirements of the CalGreen Code for site lighting, section A5.106.8, on an emergency basis. Requirements provided prior to the CSBC accepting this petition have not been applied to this analysis since section A5.106.8 has been withdrawn. A new standard has been drafted and is anticipated in July 2012. The new standard is expected to be codified in January 2013.

Cal Green (2010) **Section A5.106.8** previously stipulated the following:

- Light trespass from the Project shall not exceed 0.1 lux (0.01 footcandles) 15 feet beyond the project site
- Shield all luminaires that exceed 175 watts or provide full-cutoff luminaires, except when illuminating surfaces of a building facade
- Contain interior lighting within each source

The petition accepted by the CSBC alleges that the restrictions set forth by the CalGreen Standards are unreasonable and may potentially compromise the ability of projects to provide levels of illumination required for safety. An overview of the accepted petition is provided for as a reference in Appendix E.

4.2.7 California Energy Commission Efficiency Standards, Title 24 (2008)

The CEC stipulates allowances for lighting power and it provides lighting control requirements for various lighting systems, with the aim of reducing energy consumption through efficient, and effective, use of lighting equipment.

Title 24, (2008) Section 10-114 (b) denotes default zoning characteristics for urban areas. Under the stipulated zoning characteristics all urban areas within California are currently zoned with a LZ3 designation. This LZ3 designation is the same as the IESNA exterior lighting zone as defined in Section 4.2.3 of this document.

4.3 Post-Curfew Lighting Consideration

The guidelines and recommended practices used to develop standards for significance thresholds reference curfew lighting reduction during hours of inactivity, or reduced nighttime activity. Appendices B and C contain tables referencing reduced, or curfew, light emissions. Any curfew related reductions in light emissions should be commensurate with a review of safety and security considerations. These stipulated reductions are not included in this analysis, as they do not impact the potential for significant impacts.

4.4 Sign Ordinance

The City of Los Angeles is in the process of adopting an updated citywide sign ordinance. The Proposed Citywide Sign Ordinance is currently in a state of on-going review and commenting, and has not been approved or implemented. The new ordinance as currently written includes a stipulation for sign illumination limitations. The proposed ordinance states that no sign shall be arranged, or illuminated, to create a light intensity greater than 0.3 footcandles above ambient lighting, as measured at the property line of the nearest residentially zoned property.

Since this ordinance is not approved, and still under review, it is not applicable to this project. Further, there is a list of “grand fathered” projects to which this new sign ordinance - if approved - would not be applicable. The Proposed Project is included on this list.

4.5 California Outdoor Advertising Act

The Outdoor Advertising Act (Cal. Bus & Prof. Code Section 5200) regulates the placement of advertising signs as visible from California Highways. Project signs shall be in compliance with the regulations of this act. This Act outlines specific qualitative criteria for eliminating the potential for distractions through limiting content and placement of signs. The Act also specifies that signs shall not be illuminated to cause a glare source to impair a drivers vision. This impairment of vision due to glare is more thoroughly regulated and quantified by the provisions of the California Motor Vehicle Code, which is the established threshold for this report.

4.6 Los Angeles Convention Center and Staples Center Signage Approval Ordinance

The City Ordinance No. 172,465 provides regulation for the types of signage permitted on and around the Staples Center. This ordinance regulates the number, location, height, area, and permitted illuminance, but does not provide specific illuminance criteria.

5. Project Design Features

The proposed **Project Design Features** set forth herein control light trespass at the site boundary and at sensitive receptor property lines. Additionally, the Project Design Features restrict glare by limiting the visibility of select light sources and the intensities of light that can be applied to architectural surfaces. The Project Design Features are presented in conjunction with the light source, or light emissions, they are limiting with respect to the Project and existing conditions.

5.1 Existing Lighting Conditions

All lighting that exists on the effective date of this plan is not required to comply with the standards documented herein. Future alterations or additions to existing lighting shall be permitted if those changes do not materially change the location, orientation or intensity of a previously existing light source. Comparable lighting can replace existing lighting in the event of the fixtures being damaged or failing.

5.2 Proposed Project Light Sources

The Proposed Project is expected to add new light sources, and the following lighting components will be reviewed: Event Center field event lighting (i.e. stadium sport lighting), architectural and facade lighting, parking garage lighting, plaza lighting, and lighting resulting from illuminated signage.

5.2.1 Event Center Field Event Lighting

Field event lighting is assumed to be served by an array of high output narrow beam metal halide fixtures aimed at the field. The design criteria for the system is to provide 300[fc] (average horizontal) on the playing field and 20-100 [fc] at seating locations. The floodlights are currently anticipated to be located near the edge of the two long sides of the roof at an elevation angle of 30 degrees above center of field.

5.2.2 Architectural and Façade Lighting

The lighting design for the new buildings has not yet been determined beyond a conceptual level. Therefore, several assumptions were made to account for the light emissions from the roofs and facades of the Event Center and the New Hall. Conceptual design assumptions with respect to architectural & facade lighting are provided in the documents furnished by the design team architectural lighting consultant, Horton Lees Brogden Design Inc. (HLB). The conceptual design with the Project Design Features applied is referenced in Section 6, Table 6.1.3.1 with the conceptual design referenced in Appendix F.

5.2.3 Parking Garage Lighting

Lighting for the Bond Street garage and LA Live Way garage is predicted to be in compliance with the IESNA recommendations for garage lighting. The recommendation is to achieve a minimum 5 fc on floor surface in the general parking areas when automobiles aren't present.

5.2.4 Plaza Lighting

The lighting design for the plaza areas adjacent to the Event Center has not yet been determined beyond a conceptual level. Light levels are predicted at 10 [fc] (average, horizontal at the ground) for Gilbert Lindsey Plaza and other Project plaza areas. This intensity is consistent with the existing sight lighting illumination levels measured by Arup and HLB. Refer to Appendix F for documentation demonstrating these existing illuminance measurements

5.2.5 Illuminated Signage Lighting

Light emissions resulting from the illuminated signage, provided for as part of the Project, are expected to be emitted from three types of signs: front-lit billboard style signs, luminous channel letter signs, and changeable LED signs that can play video, or display changeable graphics.

The new signage, provided for as part of this Project, will be included on both new and existing buildings throughout the Project Site. The proposed locations, and brightness of all signs, were provided by AEG via email on July 27th, 2011. The conceptual design with the Project Design Features applied is referenced in Section 6, Table 6.1.2.1 with the conceptual design referenced in Appendix G.

The image in Figure 5.2.5.1 shows the location in plan of the new signage. See Appendix H for the complete signage information document provided by AEG. Updated signage information has been included as a reference aid in Appendix K. It documents the signage intent more clearly than the original input. Both input documents denote proposed signage: locations, types and outputs. The information provided for the illuminated signage brightness is described in Table 6.1.2.1 in addition to the revised values following the implementation of the Design Features.

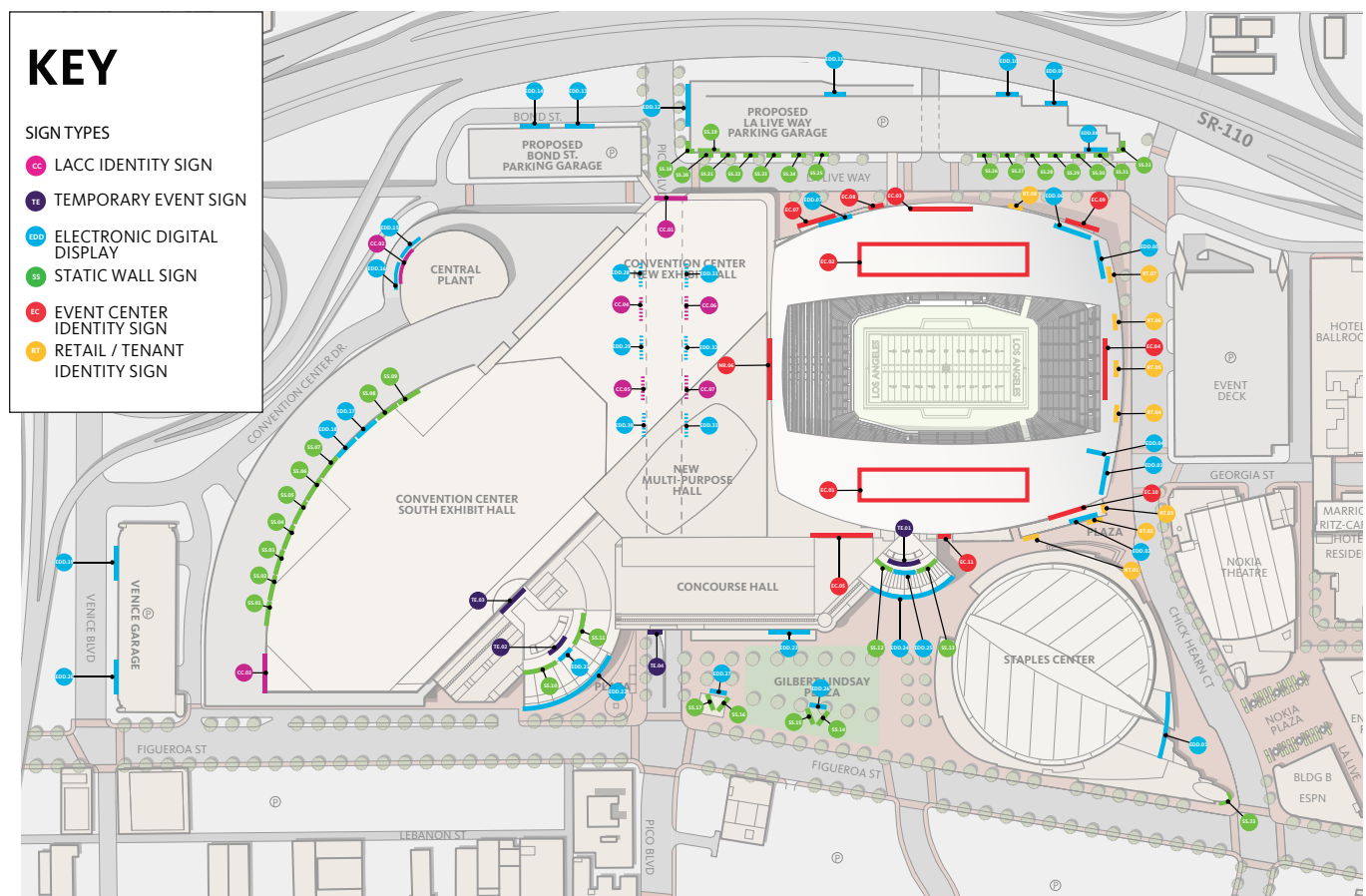


Figure 5.2.5.1 - Plan layout of sign types and locations for the Proposed Project.

5.3 Specific Project Design Features to Control Light Emissions

This section outlines specific Project Design Features that are proposed as part of the Project to control light trespass and restrict the potential for glare. The following restrictions are divided into the following three categories relating to the type of design feature:

- Architectural
- Luminaire
- Illuminated Signage.

Each of the three categories above will be outlined with the specific Project Design Features that apply to those aspects of the Proposed Project design.

5.3.1 Architectural Project Design Features

The following list of architectural design constraints are proposed as part of the Project to reduce the nighttime lighting emissions.

1. **Event Center Architecture:** The architectural design for the Event Center includes the structure, facade, and the upper portion of the stadium structure supporting the deployable roof in the open position. The Proposed Project architecture will provide equivalent, or reduced, light transmissions when compared to the configurations of material properties shown in Figure 6.1.5.1 and Figure 6.1.5.2. These transmission limits will reduce emissions from some field event lighting (located within the bowl) and other bowl light sources.
2. **Screening on Parking Garages:** Exterior screening would minimize the spill light from luminaires within open structure buildings from reaching beyond the Project Site. The screening also addresses the views and potential glare of headlights of motor vehicles within the garage from beyond the Project boundary. Screening measures may include, but are not limited to, shielding attached to the luminaire, building or site structures.
3. **Building Facade Lighting Limitations:** The maximum measurable luminance of the illuminated building facade would not exceed 40 cd/m². An area weighted average of field measurements would not exceed 10 cd/m² for any single contiguous facade area greater than 7,500 square feet in area.¹
4. **Plaza Lighting Limitation:** Permanently installed architectural lighting shall be designed to not exceed 10 fc (average, horizontal maintained at the ground) within Gilbert Lindsey Plaza and other outdoor plaza areas on the within the Proposed Project.

¹ An area weighted average can be achieved by measuring a select area of the facade with a luminance meter. A luminance meter averages the luminous intensities within its field of view. The IESNA Lighting Handbook, 10th Edition references parameters for Far-Field Photometry in section 10.3.2 for the purpose of calculating illuminance when a maximum dimension of a light source is no more than one-fifth the distance of the source to the receiver. This “five times rule” is accepted as a standard practice for conducting lighting calculations when the emitter and receiver are oriented towards each other. The proximity of the nearest receptor location (approximately 500 feet at Receptor 8) to the Proposed Project dictates that the maximum, average luminance shall not exceed the stipulated luminance intensity for more than 7500 ft² of any portion of the building façade. Per the manufacturer’s recommendations the meters viewing angle can be adjusted by focusing the luminance meter appropriately and/or changing the proximity of the meter to the surface being measured.

5.3.2 Luminaire Project Design Features

The following list of luminaire design and specification constraints would be implemented as part of the Project to limit the light emissions from the design and application of associated lighting equipment.

1. **Illuminance Restriction:** Illuminance from specified light sources would not exceed 21.5 lux (2.0 footcandles) at the property line of the nearest residential property or sensitive receptor.
2. **Facade Luminaire Restrictions:** Luminaires illuminating the building facade, with intensities greater than 10,000 candela would be shielded from view beyond the Project site boundary.
3. **Exterior Luminaire Restrictions:** Luminaires not illuminating the building facade, with intensities greater than 10,000 candela, would be shielded or rated as cut-off per the IESNA.
4. **Field Event Luminaire Restrictions:** Luminaires used for field event lighting within the Event Center shall be aimed, shielded or screened from view so that the Glare Rating shall not exceed 45 for motorists and vehicles operated on roadways.

Prior to the issuance of the first building permit for the Event Center structure, the Event Center Applicant shall prepare a study of the Glare Ratings at all roadways that have a direct line of sight to the Event Center's Spectator Event luminaires located within a 1-mile radius of the Project Site. The lighting study shall demonstrate to the satisfaction of the City of Los Angeles Department of Building and Safety that the Event Center's design does not result in a Glare Rating above 45 at any roadway location within a 1-mile radius of the Project Site. This assessment should include all receptors denoted in Section 3 as observer locations.

5. **Luminaires in Exposed Structures:** Luminaires within the Bond Street & LA Live Way garages would be equipped with screening measures that limit light spill beyond the north and west side of the garage toward to Project boundary.
6. **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 footlamberts (fL). If minimum values are below 10 footlamberts (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.
7. **Sky-Tracker "Searchlights" (on the Event Center):** The aiming of these luminaires, used on a temporary basis, would be regulated to prevent the high intensity beam from striking any adjacent building facades. Specifically, Sky-Tracker luminaires would not project light more than 25 degrees from zenith.

5.3.3 Illuminated Signage Project Design Features

The following list of illuminated signage design and specification constraints would be implemented as part of the Project to limit the light emissions the design and application of associated lighting equipment lighting signs, or self illuminated signs.

1. **Illuminance Restriction:** Illuminance from signage would not exceed 32.3 lux (3.0 footcandles) at the property line of the nearest residential property.
2. **Luminance Restriction:** Changeable, or animated, LED signs would be permitted. This includes moving, programming, flashing, neon, LCD or similar lighting displays or installations. The measurable luminance of permitted signage would not exceed 800 cd/m² after sunset or before sunrise.
3. **Restrictions for Drivers' Visibility:** Self-illuminated signs and/or luminaires intended to illumi-

nate 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 footlamberts (fL). If minimum values are below 10 footlamberts (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.

5.4 Temporary Construction Lighting Project Design Feature

Temporary light sources associated with interim construction conditions, or Project construction, would be shielded and/or aimed so that no direct beam illumination is aimed outside of the Project Site. However, construction lighting would not be so limited to compromise the safety of workers involved in the construction, or the safe operation of equipment associated with construction activities. Foreseeable temporary lighting for the Proposed Project is as follows:

- Temporary lighting used for the construction and potential repair, of Project facilities, as required for safe construction at the Project site. Construction light sources provided for the safety of workers, when located at elevations of 80 feet or higher on the Event Center (above the parking garages), will be visible from beyond the Project boundary. This visibility would be diminished once construction activities are contained within the bowl of the Event Center.
- Emergency lighting, or temporary supplemental lighting may be used for repair or construction on the Project Site by City or government agencies. Construction light sources located at grade near the project boundary provided for the safety of workers may be required to illuminate areas that cause spill light beyond the project boundary.
- Temporary supplemental lighting may be provided by public agencies for the purpose of directing or navigating vehicular traffic. Light sources located within the Project boundary, used to illuminate adjacent right-of-ways, are likely to spill light beyond the Project boundary.

5.5 Project Design Features for Special Event Lighting

With the exception of the construction conditions outlined in Section 5.4, HDTV broadcasts of sporting events is assumed to be the brightest, foreseeable condition within the Event Center. The Project Design Features for these events are provided for in Section 5.3.2. Other less luminous events may occur on a temporary basis within the Event Center, or on the Proposed Project Site. This section outlines the Design Features that will limit the light emission for these less luminous events, and identify the temporary sources that have the potential to create significant impacts.

5.5.1 Special Event Lighting Within the Event Center

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. These special events may require the installation of temporary lighting equipment. Due to the wide range of possible events, the type, intensity, aiming, and distribution of these temporary lights are not able to be clearly identified for all types of events, and thus represent a possible temporary light source that may cause a significant impact with respect to glare.

Light emissions associated with the use of Pyro-technics and/or fireworks may be visible for any Receptor with line of sight to the emission source.

Any Sky-tracker luminaire, that is aimed out of the open roof structure shall be **aimed within 25 degrees of zenith** to minimize the potential for a significant impact.

5.5.2 Special Event Lighting External to the Event Center

Special event lighting for productions, or other events, that are installed external to the Event Center on the Project Site represents a variety of temporary installations of lighting. Due to the wide range of possible events, the type, intensity, aiming, and distribution of these temporary lights are not able to be clearly identified for all types of events, and thus represent a possible temporary light source that may cause a significant impact with respect to glare and light spill beyond the Project boundary.

All luminaires installed for special events on a temporary basis on the Project Site must be aimed such that the direct beam illuminance is directed at the activity or object within the Project boundary that requires illumination.

5.6 Interior Lighting Project Design Feature

The Project Design Features outlined in this section apply to the exterior lighting of the Proposed Project, and provide the guidelines that direct the specification, installation and operation of the luminaires and illuminated signs. The interior lighting for the Proposed Project, and associated luminances of interior surfaces are not considered in these Project Design Features.

The project design feature for the interior lighting would require that interior lighting be designed, specified, and installed such that the maximum candela direct beam illuminance (from luminaires) is not directed out of the building envelope. In doing so the interior light spill from the Event Center is assumed to be negligible beyond the confines of the Project Site.

6. Analysis of Project Design Features on Proposed Project and Impact Assessment

The Project Design Features presented in Section 5 of this report would be implemented to reduce light trespass (referred to as spill light) and brightness associated with glare. This section provides a demonstration of how these Project Design Features minimize light trespass and glare, and provide an analysis of the Project's potential impacts at off-site receptors.

The following information is presented to demonstrate an overview of this assessment:

1. Overview of the Proposed Project design inputs that were used to build the analysis model.
2. Overview of how the Project Design Features applied to the inputs and resultant model.
3. Assessment of the Lighting Conditions at the Project Boundary
4. Assessment of the Lighting Conditions at the Receptor Locations
5. Additional Lighting Considerations from the Impact Assessment

6.1 Proposed Project Design Inputs and Development of Analytical Model

In order to assess the impacts of the Project Design Features on the Proposed Project, an analytical model was developed to simulate the lighting impacts of the Proposed Project. The analytical model consists of a three dimensional virtual geometric space that simulates light intensities utilizing a calculation program called Radiance. The output from the analysis calculations consists of data points for illuminance values, as well as rendered imagery of the Proposed Project demonstrating resultant luminance values. Appendix G provides a detailed overview of the computer simulation process.

Because the Proposed Project consists of several building types, and involves multiple lighting components, the following overview presents the input data received to construct the model, and what assumptions were made in the development of the model.

6.1.1 Proposed Project Master Plan and Architectural Information

Architectural information and geometric data for the development of the model came from multiple sources. Table 6.1.1.1 provides an overview of the source information used to develop the model geometry.

Table 6.1.1.1 - Geometry data inputs to analytical model, and sources of data.

Geometry	Furnished by
Farmers Field (Event Center)	Gensler
New Hall	Populus
Garages (Bond Street and LA Live Way)	AEG/Arup
South Hall (Convention Center)	Gensler
Existing site buildings (Nokia, Staples, Ritz Carlton, etc.)	Gensler
Surrounding context	Arup

6.1.2 Illuminated Signage Input Data

New signage is included in the Project on both new and existing buildings on the site. These signs will contribute to light trespass at receptor locations and at the site boundary. The original signage document used as an input for this assessment is contained in Appendix G. Updated signage information has been included as a reference aid in Appendix K. It documents the signage intent more clearly than the original input made available via e-mail on July 27th, 2011. Both input documents denote proposed signage: locations, types and outputs. The information provided for the illuminated signage brightness is described in Table 6.1.2.1 in addition to the revised values following the implementation of the Design Features.

Table 6.1.2.1 - Sign luminance inputs

Sign Type	prior to application of Design Features		with Design Features applied	
	Luminance [cd/m ²]	Illuminance [fc]	Luminance [cd/m ²]	Illuminance [fc]
Naming Rights	40		40	
Sponsorship Sign (front lit)		25		25
Changeable Message LED	2500		800	
LACC Identity Sign	40		40	
Temporary Event (front lit)		25		25

6.1.3 Architectural Lighting Input Data for Proposed Project

At this time the lighting design for the Proposed Project has not been designed. In order to accurately predict the illuminance contributions associated with spill light from the Proposed Project, some assumptions have been made about how much light will be emitted from the Proposed Project. For the purpose of predicting light emissions for the Proposed Project, Arup has analyzed the lighting design for new buildings with a uniform luminance distributed across each building facade based on the received inputs.

The initial facade luminance inputs for new buildings were provided for by Horton Lees Brogden Design, Inc. (HLB). The illuminance criteria for the plaza lighting was also received from HLB. All of these inputs are summarized here in Table 6.1.3.1 and are presented in greater detail in Appendix F.

The architectural lighting for the Bond Street and LA Live Way was modeled by Arup based on the recommendation set forth in the IESNA Recommended Practice for Parking Facility Lighting (RP-20-98). Based on the recommended practice, an average of 5 footcandles, horizontal at the floor of the garage, is an appropriate assumption for a preliminary garage design.

Representative references used in the development of the architectural lighting components of the analytical model are shown in the Figures 6.1.3.1 and 6.1.3.2.

Table 6.1.3.1 - Architectural lighting inputs

Facade	Prior to Application of Project Design Features			With Project Design Features Applied	
	Basis of Design*	Luminance [cd/m ²]	Illuminance [fc]	Luminance [cd/m ²]	Illuminance [fc]
Event Center - Roof (ETFE)	A	20		10	
Event Center - Tenara Fabric	A	30		10	
Event Center - Plaza lighting	B		10		10
Event Center - Exterior Walls	A	60		10	
New Hall - Roof	B	0.05		0.05	
New Hall - Roof pools	B	0.1		0.1	
New Hall - Exterior Walls	B	4		4	
* Basis of Design Notes: A - HLB proposed design B - HLB field measurements of existing site					



Figure 6.1.3.1 - Architectural rendition of the proposed stadium.

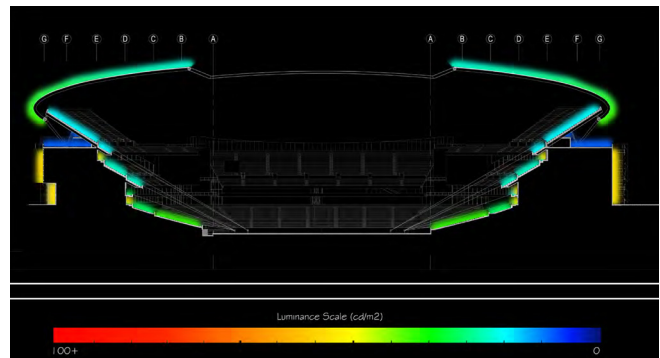


Figure 6.1.3.2 - HLB proposed luminance values of the stadium roof and façade.

6.1.4 Event Center Field Event Lighting

Field event lighting is served by an array of narrow beam metal halide sports lighting fixtures selected by Arup to provide 300 fc (horizontal) on the field. The floodlights are located near the edge of the two long sides of the stadium roof at an elevation angle of 30 degrees from the center of the playing field.

6.1.5 Event Center Architectural Roof Material Properties

The materials used for the construction of the Event Center Roof element will affect how light is transmitted from within the Event Center. Figure 6.1.5.1 shows a diagram of the roof element, and the material input data provided by Gensler about the roof material properties. Figure 6.1.5.2 shows how the roof was modeled, with the parameters for direct transmittance (T_{vis}), diffuse luminance emitted (10cd/m² Project Design Feature), and the diffuse reflectance (R_{vis}) for the inner surface of the roof. A calculation with all Event Center lighting on determined the 26fc value for the incident illuminance on the inner face of the roof. Additional information about the calculation assumptions and ETFE material data assumptions are included in Appendices G and I respectively of this report.

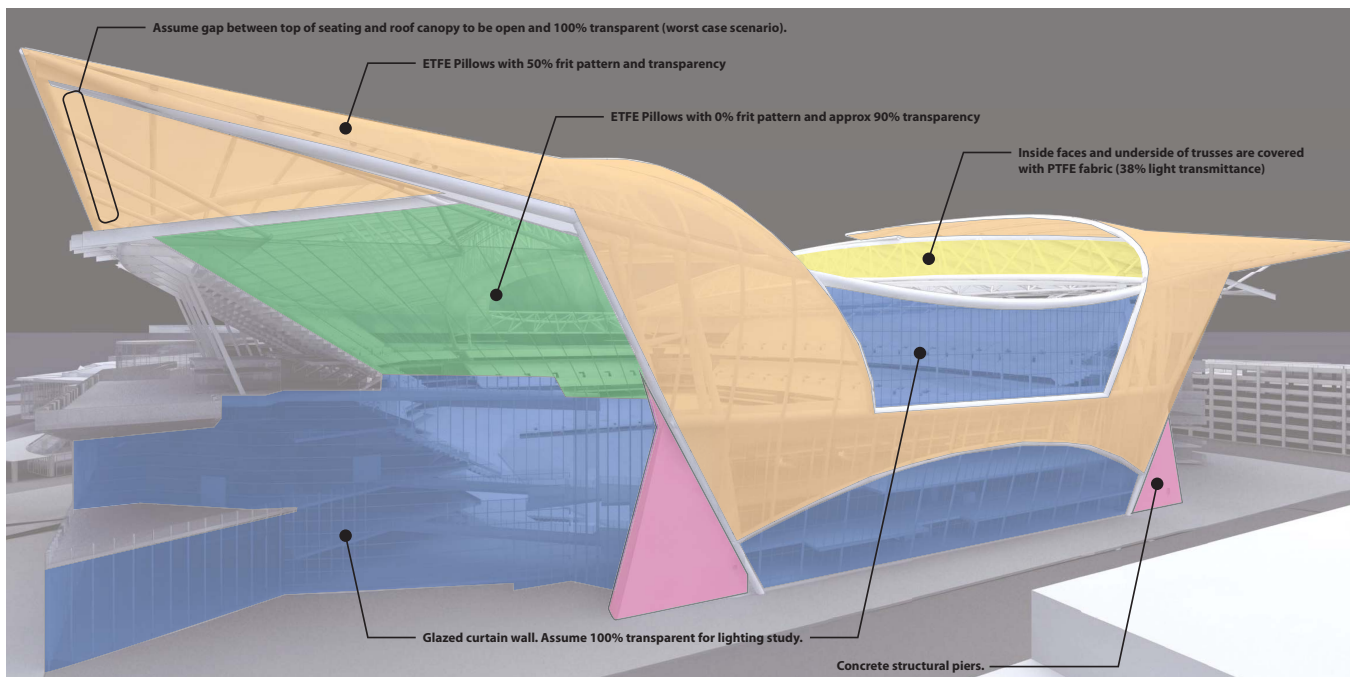


Figure 6.1.5.1 - Architectural diagram (by Gensler) with proposed material properties indicated.

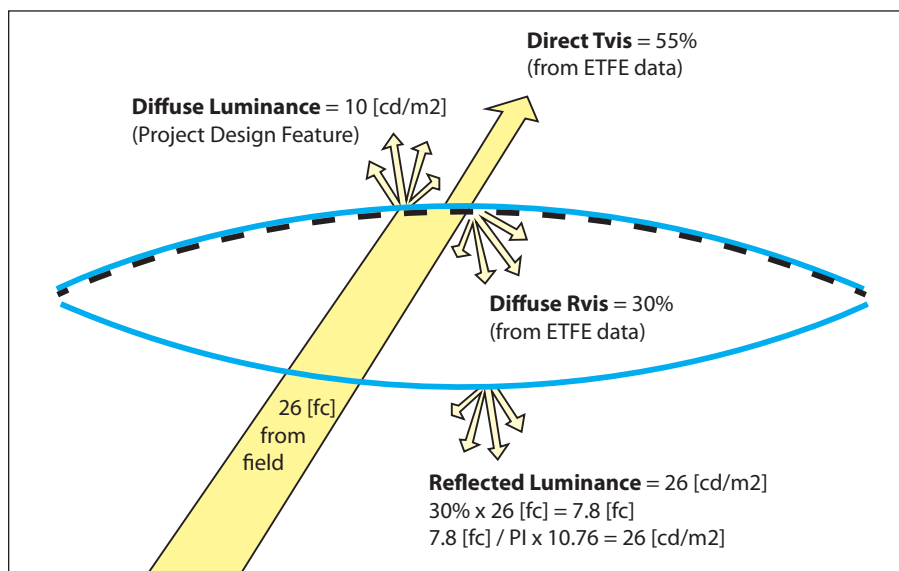


Figure 6.1.5.2 - Diagram illustrating ETFE pillow material properties used in analysis.

6.2 Analysis of Project Design Features on Nighttime Light Emissions

The design inputs summarized in the previous section were compiled to create a comprehensive analytical model of the Proposed Project, and the surrounding neighborhoods. In many cases, the inputs were not consistent with the Project Design Features proposed in Section 5 of this document. In order to understand the Proposed Project's potential impacts on the surrounding community, the Project Design Features were applied to the model. This section will provide an overview of the Project Design Features incorporated into the analytical model.

6.2.1 Architectural Project Design Features

Section 5.3.1 of this document provides an overview of the proposed Project Design Features applicable to the architecture of the Proposed Project. The application of these specific features pertaining to the analysis is discussed here.

Event Center Architecture

The Event Center architecture proposed by the design team, includes the structure, facade, and the upper portion of the stadium structure supporting the deployable roof in the open position to mitigate obtrusive light beyond the confines of the Event Center. Without these design features, the field event lighting positions for the luminaires illuminating the stadium bowl would be directly visible to the east and west of the Event Center and at Receptor 8, and spill light would increase beyond the Project Boundary. The architecture obscures direct views to the field event lighting equipment within the stadium, aiding in the reduction of potential glare sources. The Event Center ETFE skin, facade, and roof elements reduce illuminance intensities associated with spill light at the uppermost levels of the residences at the Ritz-Carlton (Receptor 8) and beyond the Project Boundary. The properties of a semi-translucent facade has negligible impact to spill light intensities at the lower residences of the Ritz-Carlton tower, due to the transparency and diffusion characteristics of the architecture.

Screening on Parking Garages

The garages were analyzed with the assumption that screening mechanisms were in place to avoid spill light to the north and west of the Proposed Project boundary. The final Proposed Project design can incorporate a variety of screening mechanisms to avoid obtrusive spill light from headlights.

Facade Lighting Limitations

The original design inputs indicate that facades and architectural surfaces may be illuminated to values ranging up to 60 cd/m². However, as described in Section 5.3.1, a Project Design Feature would be implemented as part of the Proposed Project to ensure that the luminance levels are below this value. The exterior luminance values for facades and exterior building surfaces were modeled with a maximum, average of 10 cd/m². This average luminance allows for a maximum of 40 cd/m² within any 7,500ft² as measured by a luminance meter on the building façade per the Project Design Features.

6.2.2 Luminaire Project Design Features

The analytical model assumed that the luminaire Project Design Features, as presented in Section 5.3.2 of this document, are fully implemented. The luminaire Project Design Features are primarily specification restrictions that stipulate limitations for the application of exterior lighting equipment. This analysis assumes that the final Project design fully incorporates all recommended luminaire Project Design Features. The Glare Rating requirements for the field event lighting is assumed to be met, or noted as required.

6.2.3 Illuminated Signage Project Design Features

Section 5.3.3 of this document provided an overview of the proposed Project Design Features applicable to the illuminated signage on the project. The application of Project Design Features to the model used for computational analysis is discussed below.

Illuminance and Luminance Restrictions

The Illuminance and Luminance Project Design Features applied to the signage are interlinked. The limitation of the luminance output as recommended by the Luminance Restriction Project Design Feature determines the luminous emissions of the signs. The analytical model then reviews the signs in the proposed locations, with the restricted luminance, to ensure that the Illuminance Restriction Project Design Feature is also being met.

The project design inputs, provided by AEG, proposed that the changeable LED signs have a maximum luminance of 2500 cd/m²; however, this value is in excess of the Luminance Restriction Project Design Feature. The luminance of the changeable LED signs was therefore modeled at 800 cd/m², which is consistent with the Project Design Feature recommendation, and the context of existing similar signs at the LA Live site.

Restrictions for Drivers' Visibility

The California Motor Vehicle Code restriction dictates specific brightness levels that are considered to impair drivers' visibility. The "worst-case" scenario for this code requirement is a luminous source directly in line with the drivers view (0 degrees between driver's line of sight and the luminous source). The critical value for this case is 500 foot-lamberts. When converted to the units of candela per square meter, this value is equivalent to 1713 cd/m². Application of the Luminance Restriction Project Design Feature, which limits the sign luminance to 800 cd/m², ensures that this Project Design Feature is also being met.

6.3 Project Boundary Assessment

The Project lighting and illumination contributions are divided into two distinct categories for the purposes of impact assessment along the Project boundary:

- Architectural Lighting (excluding temporary lighting)
- Illuminated Signage

The implementation of the Project Design Features is assessed along the Proposed Project boundary in order to demonstrate that potential impacts are being effectively reduced. The following sections provide a boundary analysis for the Architectural and luminaire Project Design Features, and Illuminated Signage Project Design Features. These features are evaluated separately, to be consistent with the evaluation required per the Thresholds of Significance outlined in Section 4 of this document.

6.3.1 Architectural and Luminaire Boundary Assessment

Lighting trespass calculations from the architectural lighting components were performed at the site boundary for the Project both with and without the Project Design Features applied, as shown in Figure 6.3.1.1 and Figure 6.3.1.2, respectively. The impact at the project boundary was assessed based on the LZ3 criteria, as defined in the Thresholds of Significance outlined in Section 4 of this document. Figure 6.3.1.2 demonstrates compliance with the illuminance levels below 8 lux (0.74 footcandles) at the Project boundary. The Project Design Features reduce light spill from the Bond Street and LA Live Way garages to less than the significance threshold. Spill light across Chick Hearn Court is not a significant boundary with respect to light trespass since it borders the LA Live Complex. This calculation excludes all contributions from existing lighting.

6.3.2 Illuminated Signage Boundary Assessment

The illuminated signage impact at the Project boundary is based on the CIE E3 criteria, as defined in the Thresholds of Significance outlined in Section 4 of this document. Lighting calculations were performed for changeable LED signs to identify their "zones of influence" for three typical sizes (see Appendix F for calculations). The zone of influence is the extent at which the sign produces 3(fc) vertical illuminance as measured directly perpendicular from the face of the sign. The zone of influence is a maximum potential, and the measured illuminance will be dependent on the elevation of the measurement location as compared to the elevation of the sign. A measurement location that is not in the same elevation plane as a sign may experience lower illuminance levels.

The zone of influence for changeable LED signs are overlaid on the site plan in Figure 6.3.2.1 to show light trespass across the site boundary. Figure 6.3.2.2 demonstrates the reduction of light trespass at residential properties below 3 footcandles through the implementation of the Project Design Features.

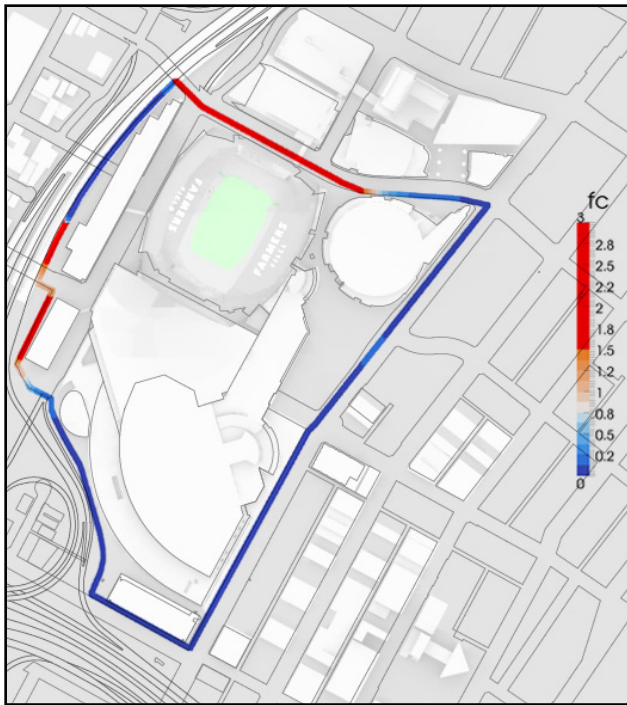


Figure 6.3.1.1 - Light trespass at site boundary from architectural lighting inputs prior to implementation of Project Design Features.

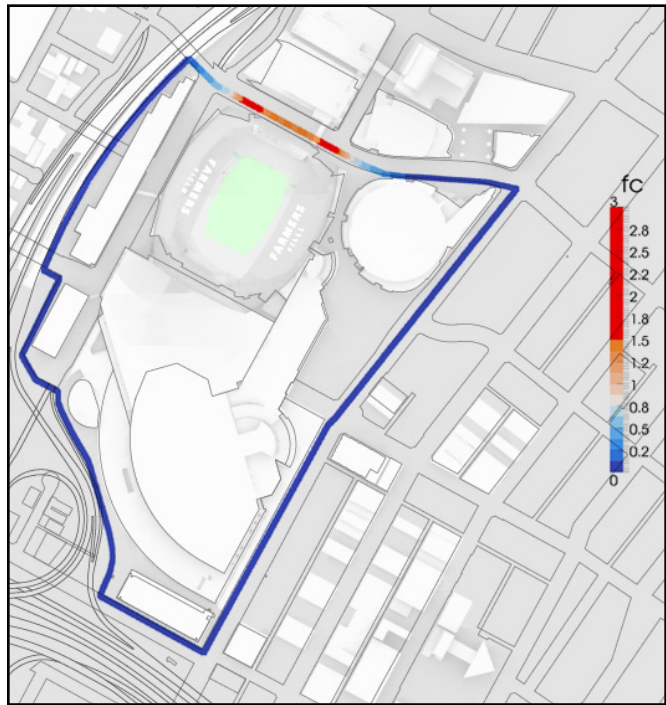


Figure 6.3.1.2 - Light trespass at site boundary from architectural lighting with the implementation of Project Design Features.

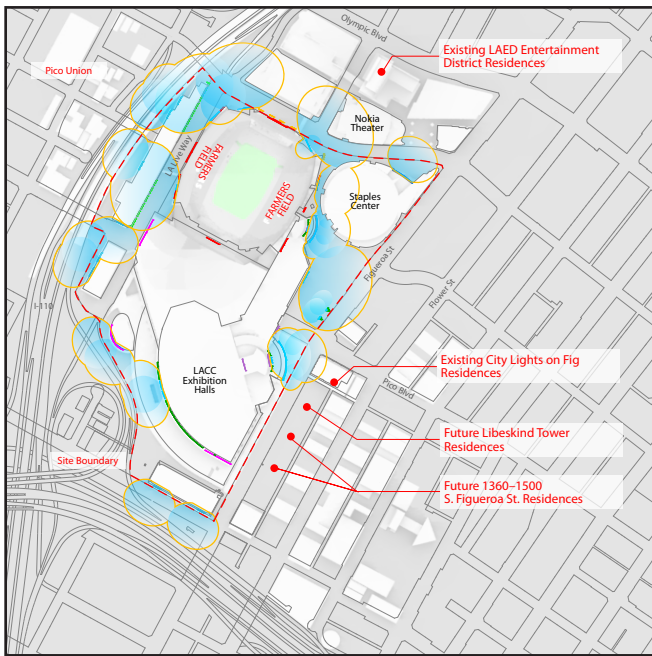


Figure 6.3.2.1 - Light trespass at site boundary based on signage design inputs, but prior to the implementation of Project Design Features.

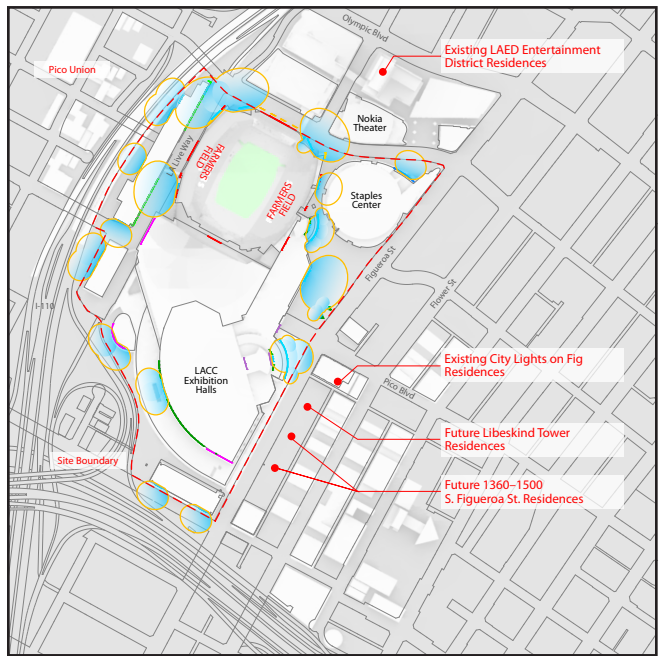


Figure 6.3.2.2 - Light trespass at site boundary from signage after implementation of the Project Design Features.

6.4 Project Impact Assessment at Receptors

The architectural lighting contribution to each of the receptors presented in Section 3 of this report were assessed with the criteria outlined in Table 6.4.1. This criteria establishes the methodology for assessing potential impacts of the architectural lighting at individual receptors.

Table 6.4.1 - Assessment Criteria for the Project's Architectural Lighting (excluding temporary lighting)

Location	The location type determines which threshold levels are applicable. Light sensitive use locations, non-light sensitive use locations, and roadway locations are identified.
Illuminance	The significant thresholds for light trespass from the project is 21.5 lux (2.0 fc) at the light sensitive use property line. If the Receptor is a light sensitive use, it is considered sensitive to the illuminance contribution from the Project architectural lighting.
Luminance and Contrast	All Receptors have existing high contrast elements (luminance ratios greater than 30:1) within the field of view. The threshold for the maintained average luminance within the Project surroundings is 10 cd/m ² . This average luminance value is the threshold for glare for adjacent light sensitive uses. The maximum contrast ratio is variable.
View to Field Event Lighting Unimpeded	Receptors which have direct, unimpeded views to bright sources, without any structure or architectural element to reduce the visual intensity of the Field Event lighting. Sensitive receptors will be significantly impacted with respect to glare if a Glare Rating of 55 is exceeded at residences, and a Glare Rating of 45 is exceeded at roadway locations.
Vehicle Code Assessment	Receptor locations that are selected to represent roadways are subject to the Vehicle Code assessment, to determine if luminance in the driver's field of view exceeds 500 foot-lamberts.
Context	Context is the relative size of high contrast luminous surfaces within the field of view. The percent increase provided is a relative metric for understanding the angle the eye subtends to high contrast surfaces within the field of view.
View	If views to Project are obstructed than the receptor view is deemed obstructed . Instances where a view is partially obstructed for a receptor are deemed partial . If the majority of a receptors view is unobstructed the view is deemed clear .

Table 6.4.2 provides a similar overview of the assessment criteria for the illuminated signage components. This criteria establishes the methodology for assessing potential impacts of the illuminated signage at individual receptors.

Table 6.4.2 - Assessment Criteria for the Project Illuminated Signage

Location	Same as for the Architectural Lighting Assessment
Illuminance	The significant thresholds for light trespass from the Project is 32.3 lux (3.0 fc) at the light sensitive use property line. If the receptor is a light sensitive use, it is considered sensitive to the illuminance contribution from the Project illuminated signage.
Luminance and Contrast	All Receptors have existing high contrast elements (luminance ratios greater than 30:1) within the field of view. A recognized threshold for the maintained average luminance within the Project surroundings is 800 cd/m ² . This average luminance value is the threshold for glare for adjacent light sensitive uses. The maximum contrast ratio is variable.
Vehicle Code Assessment	Same as for the Architectural Lighting Assessment
Context	Same as for the Architectural Lighting Assessment
View	Same as for the Architectural Lighting Assessment

Tables 6.4.3 and 6.4.4 provide an overview of the assessments at individual receptors, with the Project Design Features applied for the Proposed Project's architectural lighting components and the illuminated signage components respectively.

Following the overview tables, each receptor is analyzed individually.

Table 6.4.3 - Receptor Assessment with Project Design Features for Architectural Lighting Contributions

		Receptors									
		1	2	3	4	5	6	7	8	9	10
Location	Sensitive	✓	✓	✓		✓		✓	✓		✓
	Non-Sensitive				✓					✓	
	Roadway					✓	✓				
Illuminance Value (Footcandles)		0.04	0.03	0.03	0.01	0.02	0.49	0.06	1.08	0.07	0.02
Significant Impact	Yes								✓		
	No	✓	✓	✓	✓	✓	✓	✓		✓	✓
Maximum Average Luminance	> 10 cd/m ²										
	≤ 10 cd/m ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
View to Field Event Lighting Unimpeded			✓				✓		✓	✓	
Vehicle Code Assessment	Applicable					✓	✓				
	Impact					NO	NO				
Context (New:Existing)		5:1	3:1	4:1	1:1	4:1	> 15:1	8:1	> 15:1	1:1	1:1
View	Clear				✓	✓	✓		✓		
	Partial	✓	✓	✓						✓	✓
	Obstructed							✓			

Table 6.4.4 - Receptor Assessment with Project Design Features for Illuminated Signage Contributions

		Receptors									
		1	2	3	4	5	6	7	8	9	10
Location	Sensitive	✓	✓	✓		✓		✓	✓		✓
	Non-Sensitive				✓					✓	
	Roadway					✓	✓				
Illuminance Value (Footcandles)		0.17	0.15	0.03	1.05	2.68	2.94	0.00	0.93	0.19	0.93
Significant Impact	Yes										
	No	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Maximum Luminance	> 800 cd/m ²										
	≤ 800 cd/m ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vehicle Code Assessment	Applicable					✓	✓				
	Impact					NO	NO				
Context (New:Existing)		5:1	5:1	3:1	1:1	1:1	> 15:1	2:1	7:0	2:0	9:0
View	Clear				✓	✓	✓		✓		
	Partial	✓	✓	✓						✓	✓
	Obstructed							✓			

6.4.1 Receptor 1 Assessment

The Villa de Esperanza apartment complex located at 1401 Hope Street was selected as Receptor 1. The upper levels of Receptor 1 have unobstructed views to the Project Site but were not accessible on the night of July 13, 2011 when measurements were taken. The most comparable location to the upper floors of Receptors 1 was the uppermost deck of the California Hospital Medical Center Parking Garage, on 1341 Hope Street. The measured values taken at this location were used to estimate the maximum existing illuminance levels incident to the upper levels of Receptor 1. This measurement location was also used for analysis of light levels with the Project Design Features applied at the Proposed Project.

Figure 6.4.1.1 shows the location of Receptor 1 and measurement location with respect to the Project Site.

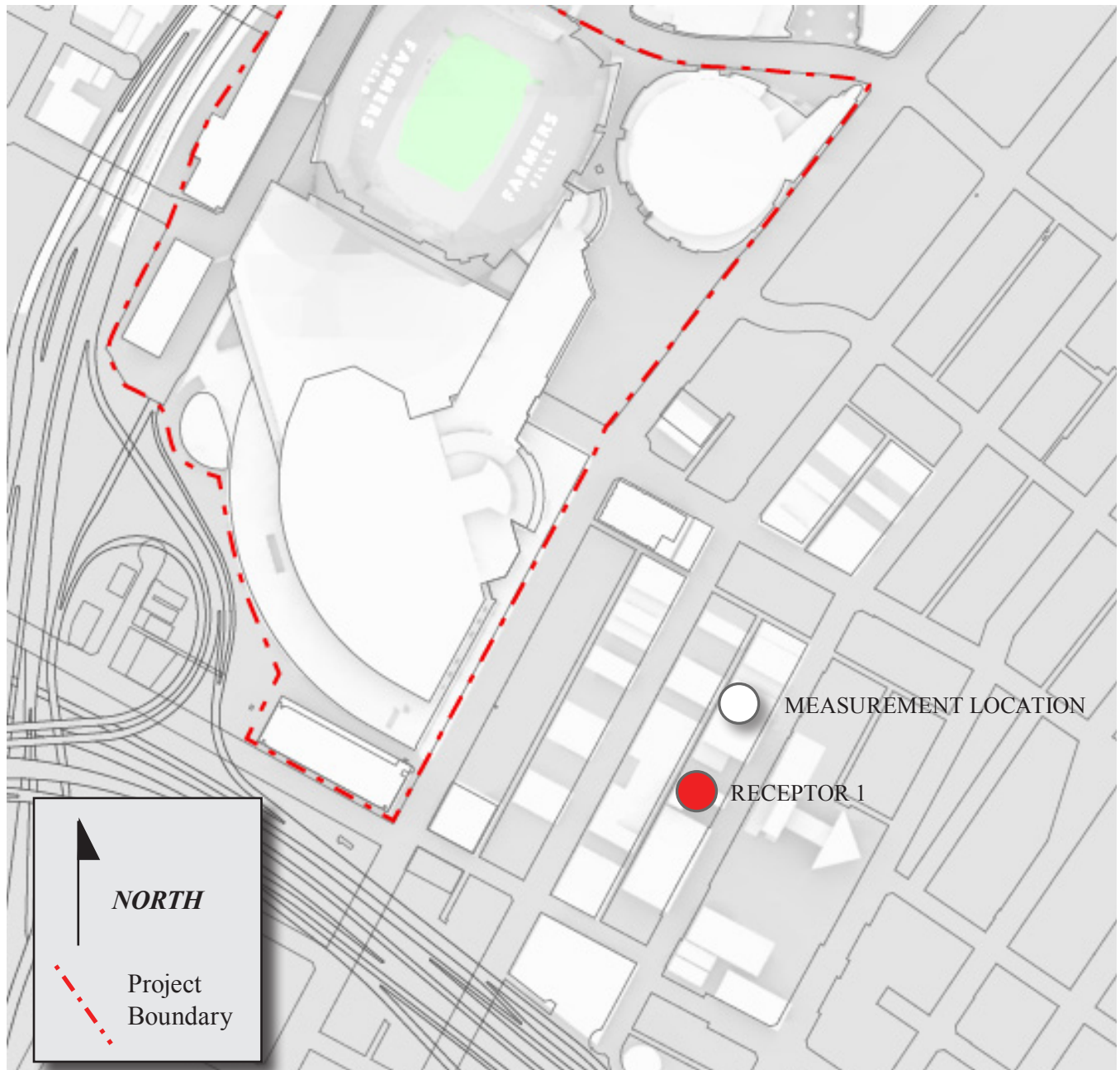


Figure 6.4.2.1 - Plan diagram showing the location of Receptor 1 and the measurement location.

Location Classification

Receptor 1 is a residential location and is considered a light sensitive use based on the Los Angeles CEQA Thresholds Guide.

Predicted Illuminance Values

The illuminance values from architectural elements of the Proposed Project do not exceed the 21.5 lux (2 footcandle) threshold at this Receptor.

The illuminance values from signage elements of the Proposed Project do not exceed the 32.3 lux (3 foot-candle) threshold at this Receptor.

Table 6.4.1.1 shows the data for the calculated illuminance values with the Project Design Features applied.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

Figures 6.4.1.2 through 6.4.1.4 show the luminance values measured and calculated.

Context and View

The Receptor view to the Project is increased by a 5:1 ratio, but at lower levels the views remain largely obstructed.

Figure 6.4.1.5 shows a plan diagram of the signage impact areas near Receptor 1 with the Project Design Features for Illuminated Signage applied. Figure 6.4.1.6 shows a perspective view of visible signage for reference.

Table 6.4.1.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Measurement Location				Receptor 1 Location			
	Illuminance		% of total	% Δ of measured*	Illuminance		% of total	% Δ of measured**
	fc	lux			fc	lux		
Event Center Architectural Lighting	0.02	0.2	15%	1.0%	0.01	0.1	6%	1.0%
Event Center Field Event Lighting	0.01	0.1	12%	0.8%	0.02	0.3	12%	2.0%
New Hall Architectural Lighting	0.00	0.0	0%	0.0%	0.00	0.0	0%	0.0%
Garages (Bond, LA Live Way) Lighting	0.00	0.0	0%	0.0%	0.00	0.0	0%	0.0%
LED Illuminated Changeable Signage	0.04	0.4	33%	2.2%	0.12	1.3	60%	10.5%
Static Illuminated Signage	0.05	0.5	39%	2.5%	0.05	0.5	22%	3.9%
Total Illuminance at Location	0.11	1.2	100%	6.4%	0.20	2.18	100%	17.3%
* The percent change at the measurement location is based on the measured value of 1.78 fc (19.2 lux) during an Event.								
** The percent change at Receptor 1 is based on the predicted value of 1.17 fc (12.6 lux) during an Event.								

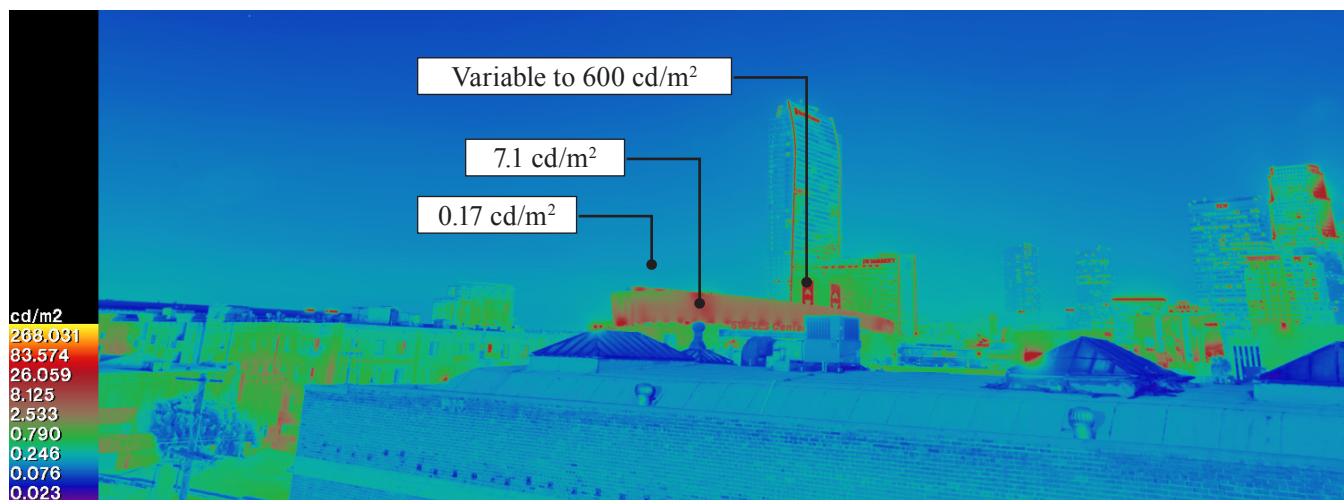


Figure 6.4.1.2 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color).

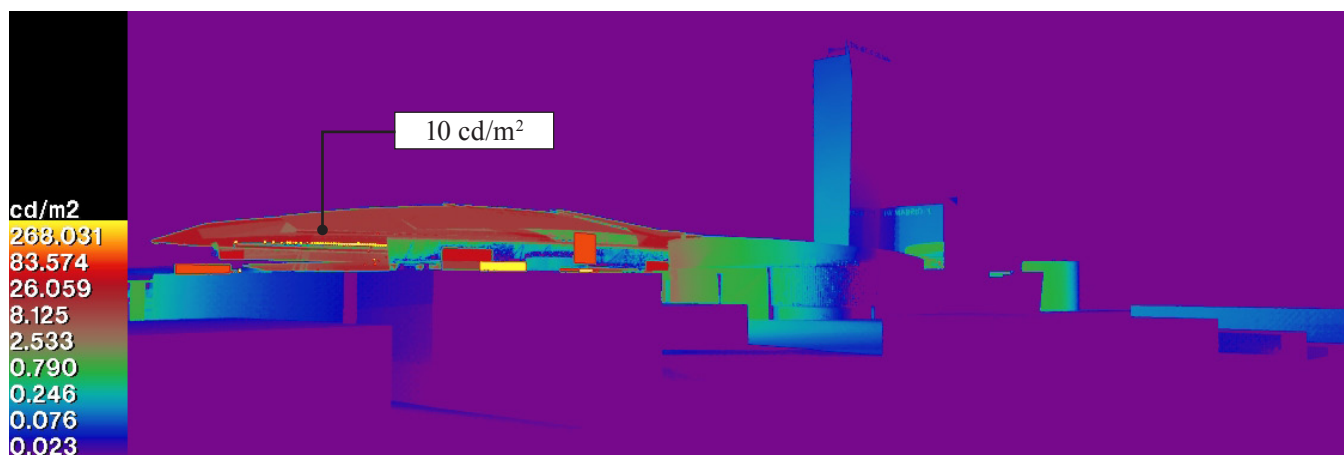


Figure 6.4.1.3 - Radiance analysis showing luminance values from measurement location for the Proposed Project with Project Design Features applied.

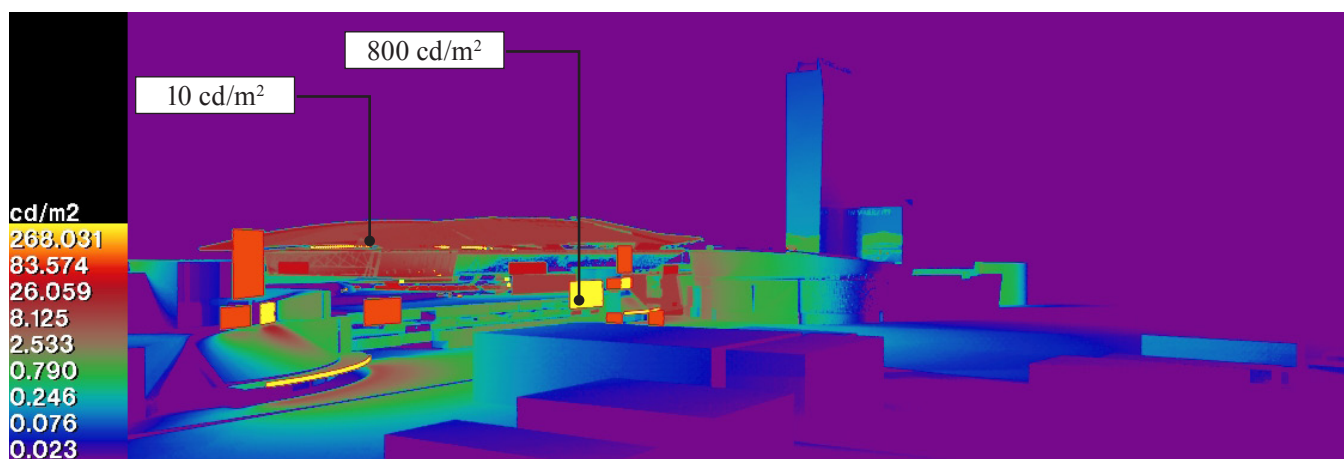


Figure 6.4.1.4 - Radiance analysis showing luminance values from Receptor 1 for the Proposed Project with Project Design Features applied.

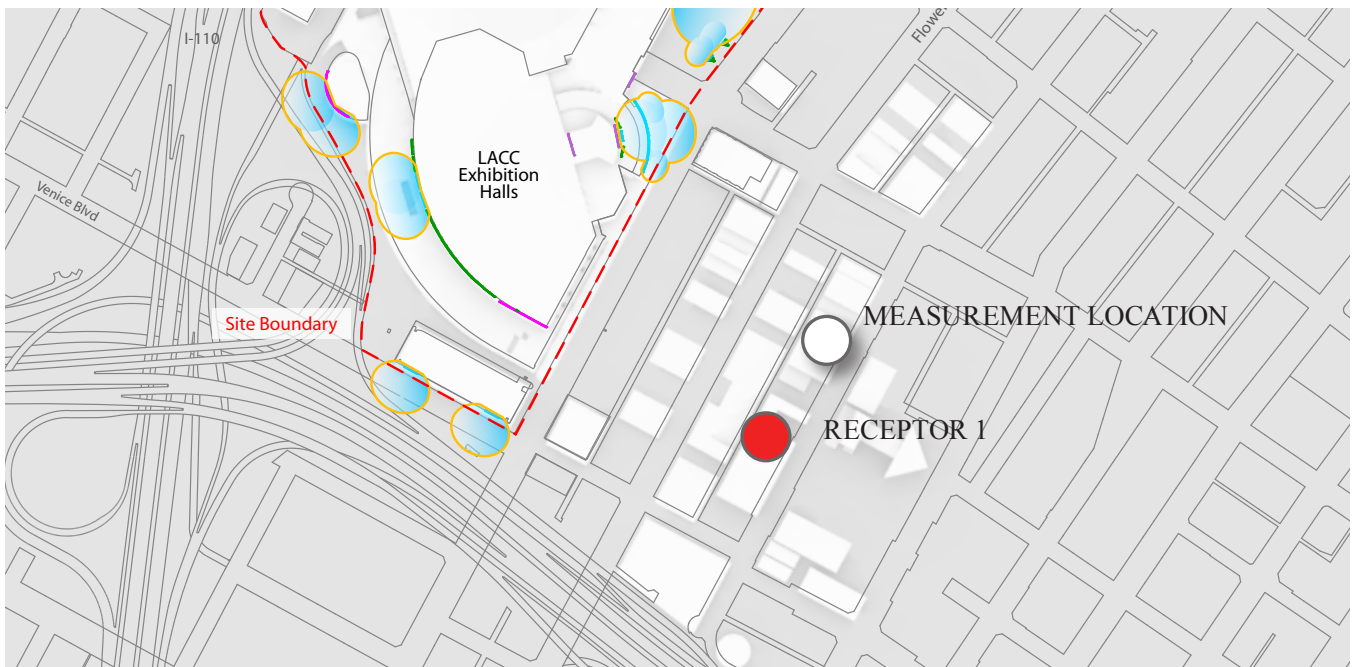


Figure 6.4.1.5 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Self Illuminated

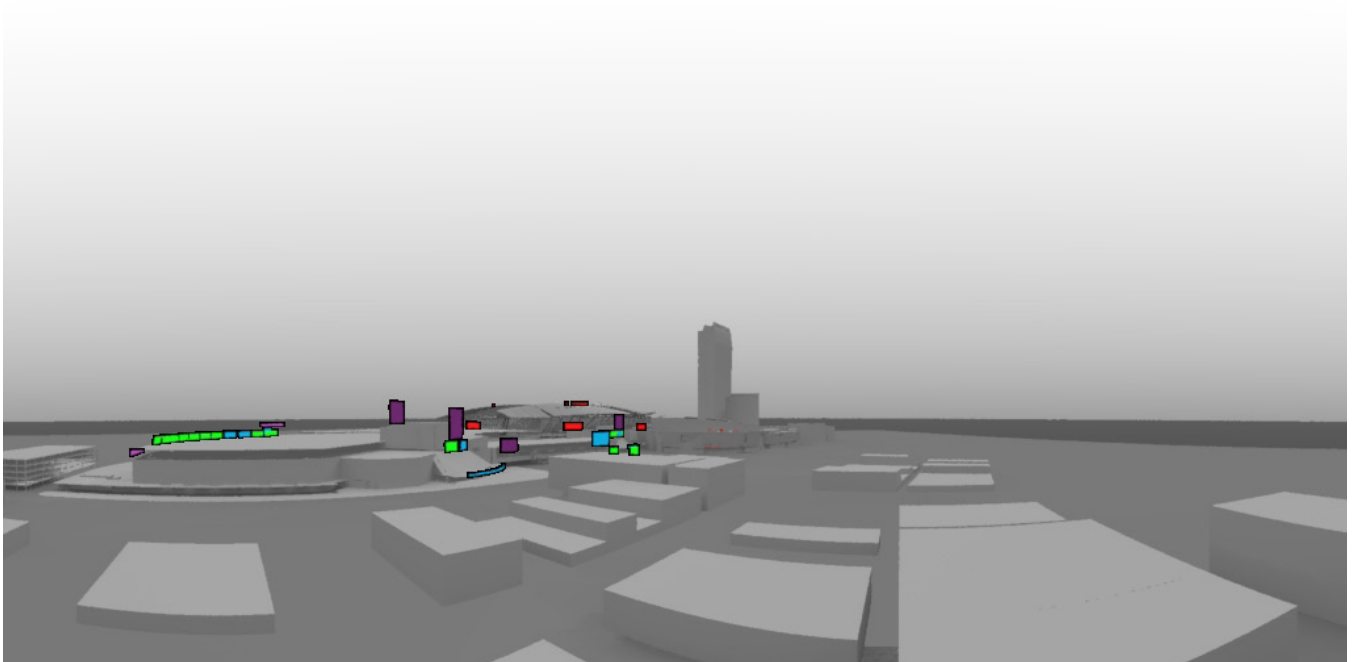


Figure 6.4.1.6 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.2 Receptor 2 Assessment

The California Hospital Medical Center located at 1401 South Grand Street was selected as Receptor 2. The upper levels of Receptor 2 which have unobstructed views to the Project Site were not accessible on the night of July 13, 2011 when measurements were taken. The most comparable location to the upper floors of Receptor 2 was the uppermost deck of the California Hospital Medical Center Parking Garage, on 1341 Hope Street. The measured values taken at this location were then used to estimate the maximum existing illuminance levels incident to the upper levels of Receptor 2. This measurement location was also used for analysis of light levels with the Project Design Features applied at the Proposed Project. Figure 6.4.2.1 shows the locations of the Receptor and measurement locations.

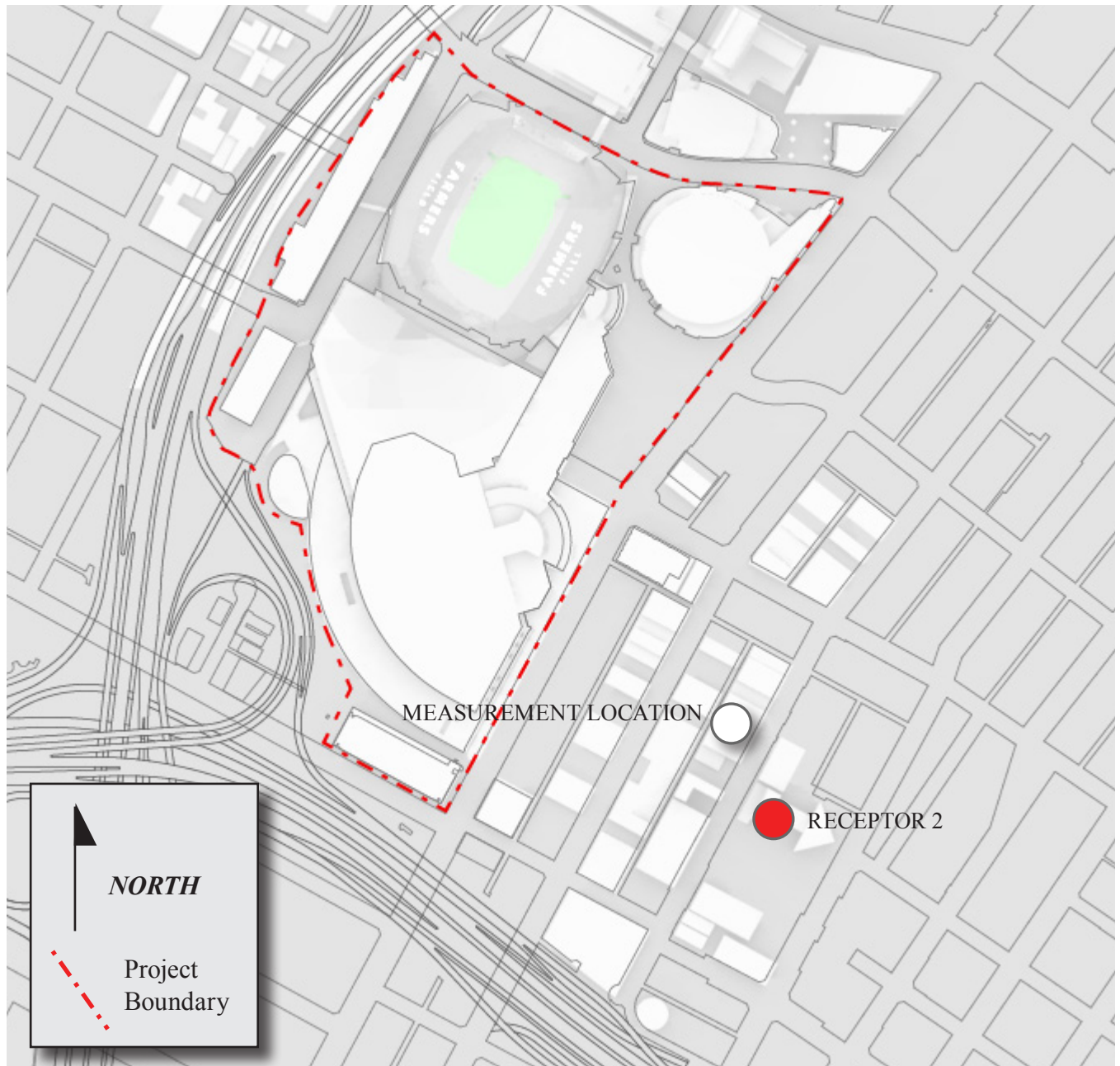


Figure 6.4.2.1 - Plan diagram showing location of Receptor 2 and the measurement location.

Location Classification

Receptor 2 is considered a light sensitive use based on the Los Angeles CEQA Thresholds Guide.

Predicted Illuminance Values

The illuminance values from architectural elements of the Proposed Project do not exceed the 21.5 lux (2 footcandle) threshold at this Receptor.

The illuminance values from signage elements of the Proposed Project do not exceed the 32.3 lux (3 foot-candle) threshold at this Receptor.

Table 6.4.2.1 shows the data for the calculated illuminance values with the Project Design Features applied.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

Figures 6.4.2.2 through 6.4.2.4 show the luminance values measured and calculated.

Context and View

The Receptor view to the Project architectural lighting is increased by 3:1, while view to the Project illuminated signage is increased by 5:1. At lower levels the views remain largely obstructed.

Views to field event lights are potentially unimpeded and seen through clear ETFE and/or with no architectural element to filter the brightness. This is a sensitive receptor, and such lighting does constitute a significant impact with respect to glare if the threshold of a Glare Rating of 55 is exceeded.

Figure 6.4.2.5 shows a plan diagram of the signage impact areas near Receptor 2 with the Project Design Features for Illuminated Signage applied. Figure 6.4.2.6 shows a perspective view of visible signage for reference.

Table 6.4.2.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Measurement Location				Receptor 2 Location			
	Illuminance		% of	% Δ of	Illuminance		% of	% Δ of
	fc	lux	total	measured*	fc	lux	total	measured**
Event Center Architectural Lighting	0.02	0.2	15%	1.0%	0.01	0.1	6%	0.8%
Event Center Field Event Lighting	0.01	0.1	12%	0.8%	0.02	0.2	9%	1.3%
New Hall Architectural Lighting	0.00	0.0	0%	0.0%	0.00	0.0	0%	0.0%
Garages (Bond, LA Live Way) Lighting	0.00	0.0	0%	0.0%	0.00	0.0	0%	0.0%
LED Illuminated Changeable Signage	0.04	0.4	33%	2.2%	0.11	1.2	61%	8.3%
Static Illuminated Signage	0.05	0.5	39%	2.5%	0.04	0.4	23%	3.1%
Total Illuminance at Location	0.11	1.2	100%	6.4%	0.18	1.91	88%	14%
* The percent change at the measurement location is based on the measured value of 1.78 fc (19.2 lux) during an Event.								
** The percent change at Receptor 2 is based on the predicted value of 1.31 fc (14.1 lux) during an Event.								

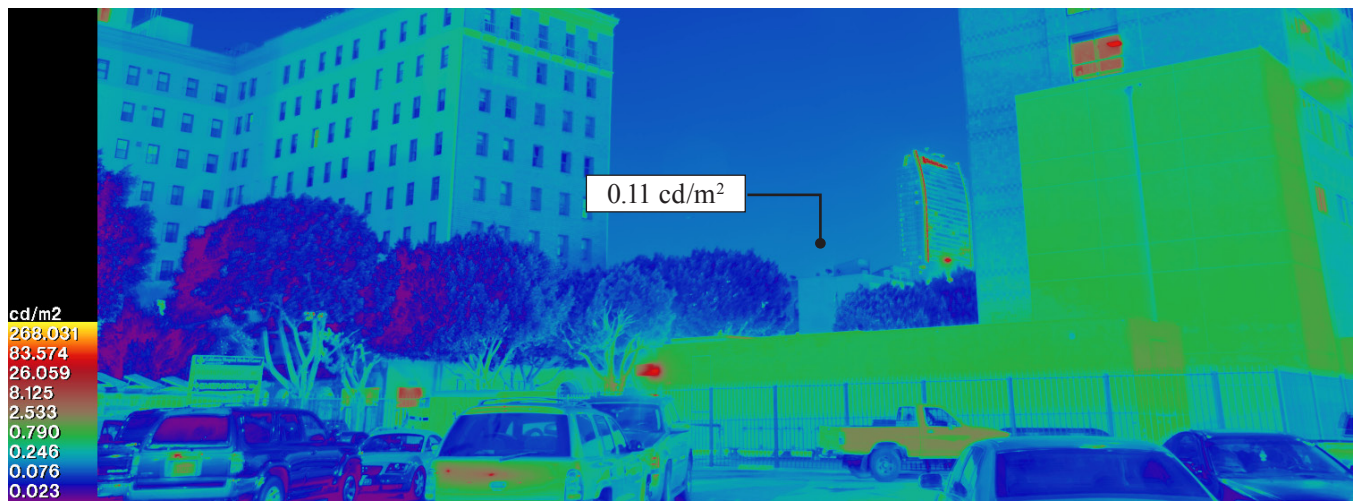


Figure 6.4.2.2 - Image from parking lot of Receptor 2 location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated. The Project Site is not directly visible at this vantage point.

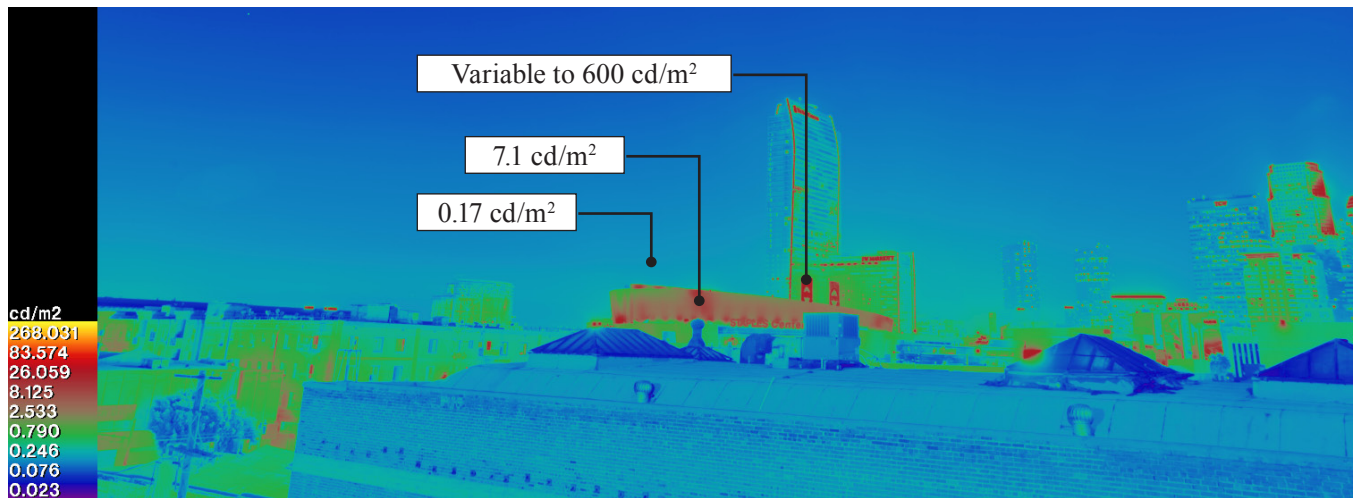


Figure 6.4.2.3 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated.

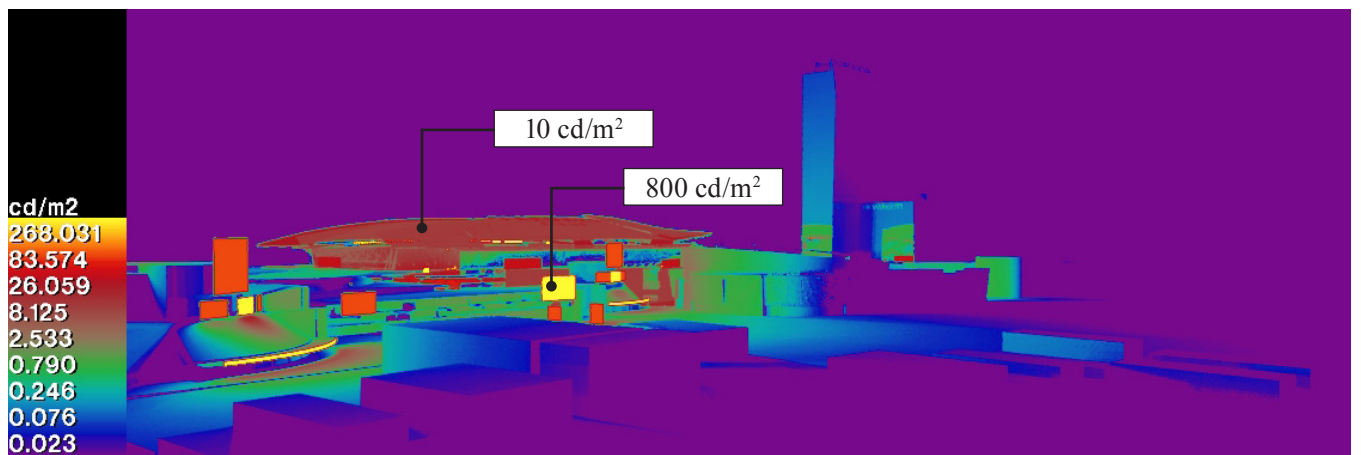


Figure 6.4.2.4 - Radiance analysis showing luminance values from Receptor 2 for the Proposed Project with Project Design Features applied.

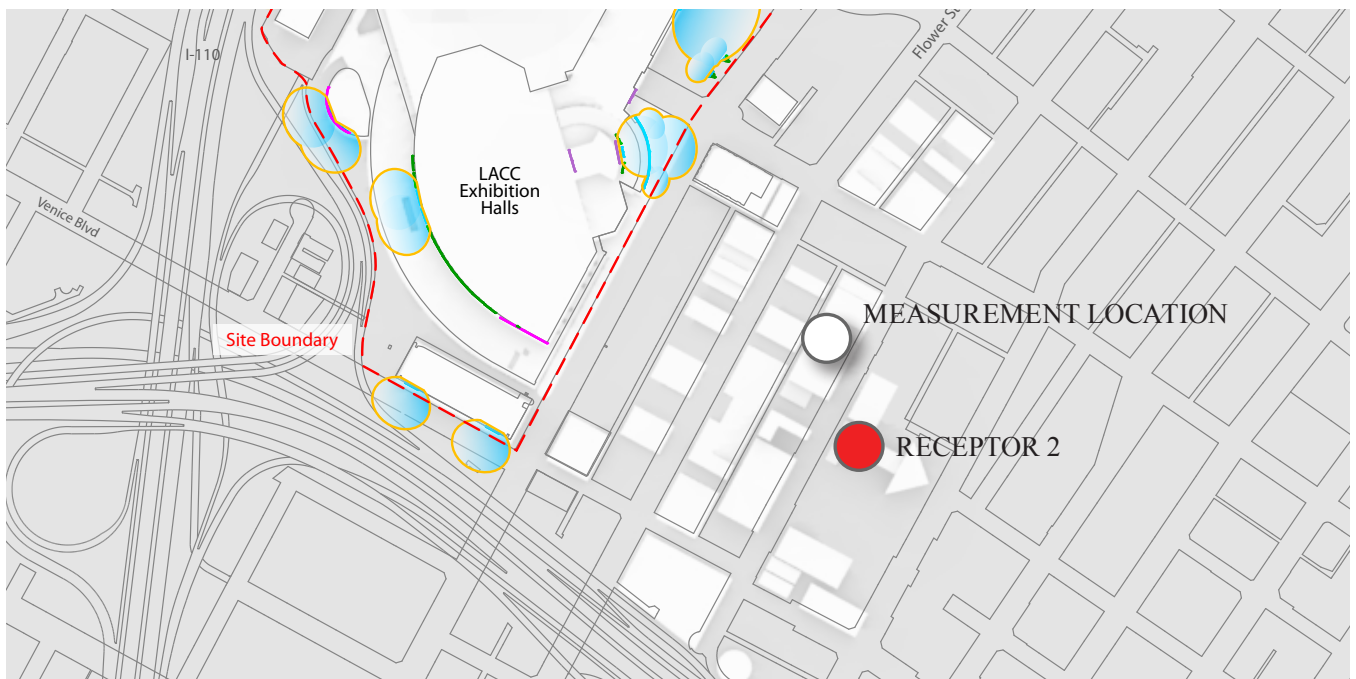


Figure 6.4.2.5 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Self Illuminated

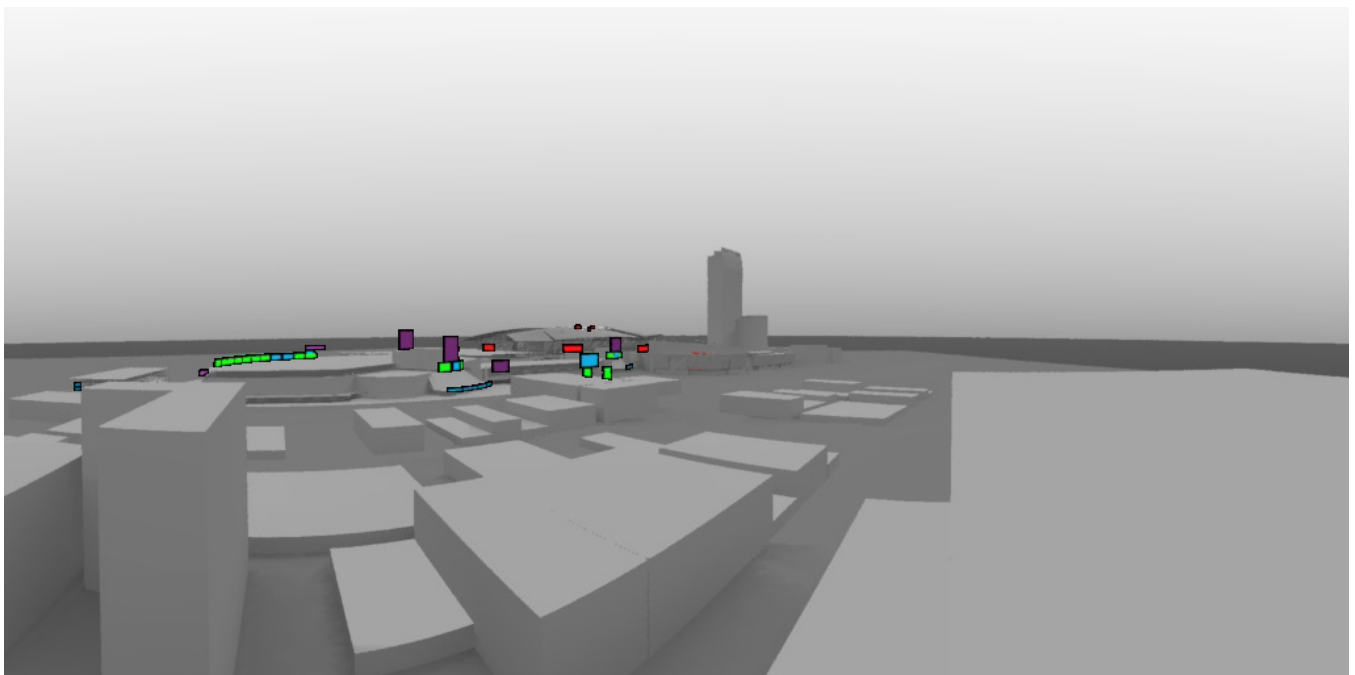


Figure 6.4.2.6 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.3 Receptor 3 Assessment

The Carver Apartments located at 1624 South Hope Street was selected as Receptor 3.

The upper levels of Receptor 3, which have unobstructed views to the Project Site were not accessible on the night of July 13, 2011 when measurements were taken. The most comparable location to the upper floors of Receptor 3 was the uppermost deck of the California Hospital Medical Center Parking Garage, on 1341 Hope Street. The measured values taken at this location were then used to estimate the maximum existing illuminance levels incident to the upper levels of Receptor 3. This measurement location was also used for analysis of light levels with the Project Design Features applied at the Proposed Project.

Figure 6.4.3.1 shows the locations of the Receptor and measurement locations.

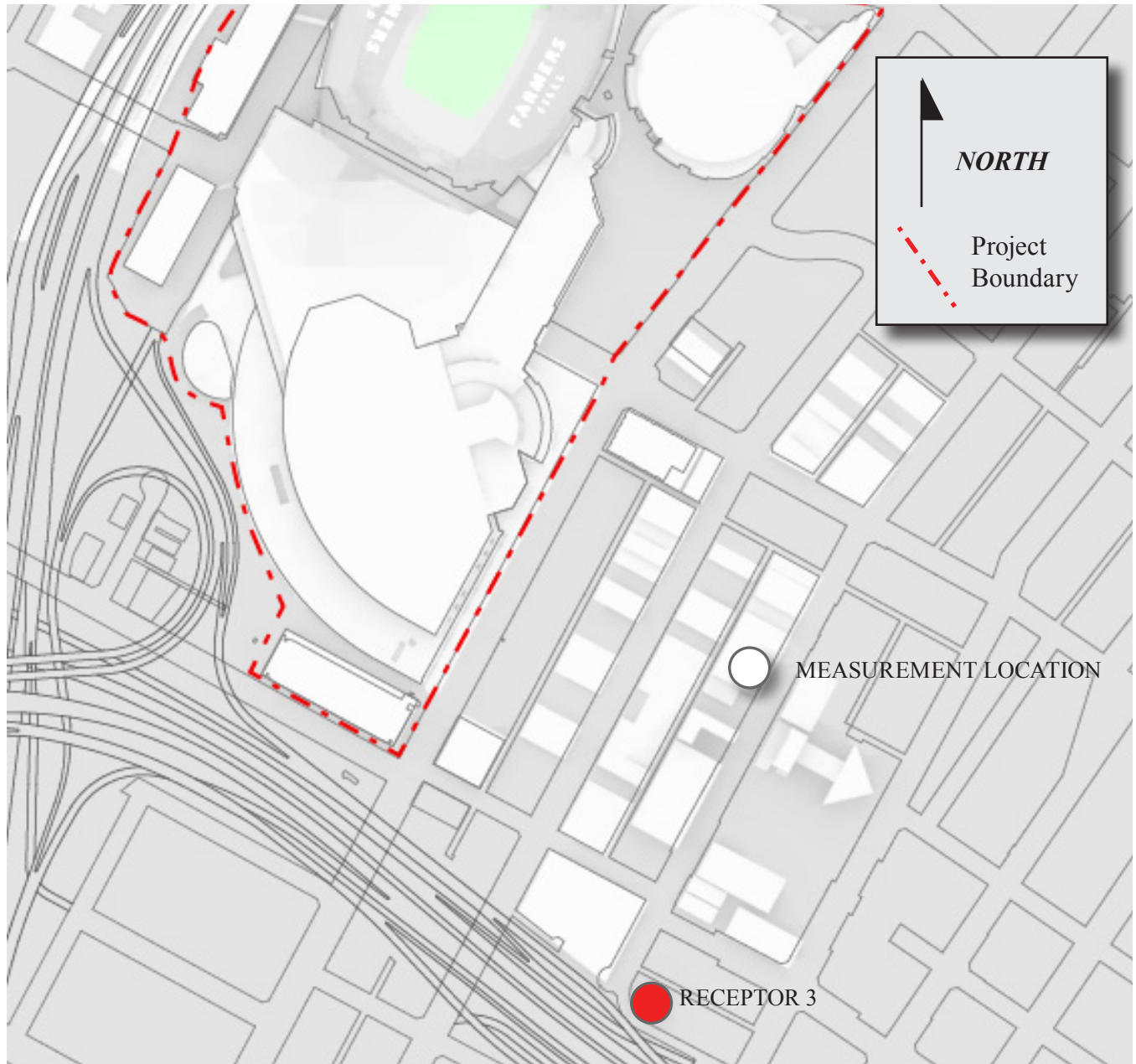


Figure 6.4.3.1 - Plan diagram showing the location of Receptor 3 and the measurement location.

Location Classification

Receptor 3 is a residential location and is considered a light sensitive use based on the Los Angeles CEQA Thresholds Guide.

Predicted Illuminance Values

The illuminance values from architectural elements of the Proposed Project do not exceed the 21.5 lux (2 footcandle) threshold at this Receptor.

The illuminance values from signage elements of the Proposed Project do not exceed the 32.3 lux (3 foot-candle) threshold at this Receptor.

Table 6.4.3.1 shows the data for the calculated illuminance values with the Project Design Features applied.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

Figures 6.4.3.2 and 6.4.3.3 show the luminance values measured and calculated.

Context and View

The Receptor view to the Project architectural lighting is increased by 4:1, while view to the Project illuminated signage is increased by 3:1. At lower levels the views remain largely obstructed.

Figure 6.4.3.4 shows a plan diagram of the signage impact areas near Receptor 3 with the Project Design Features for Illuminated Signage applied. Figure 6.4.3.5 shows a perspective view of visible signage for reference.

Table 6.4.3.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Measurement Location				Receptor 3 Location			
	Illuminance		% of total	% Δ of measured*	Illuminance		% of total	% Δ of measured**
	fc	lux			fc	lux		
Event Center Architectural Lighting	0.02	0.2	15%	1.0%	0.01	0.1	10%	0.9%
Event Center Field Event Lighting	0.01	0.1	12%	0.8%	0.03	0.3	43%	4.2%
New Hall Architectural Lighting	0.00	0.0	0%	0.0%	0.00	0.0	0%	0.0%
Garages (Bond, LA Live Way) Lighting	0.00	0.0	0%	0.0%	0.00	0.0	0%	0.0%
LED Illuminated Changeable Signage	0.04	0.4	33%	2.2%	0.02	0.2	30%	2.9%
Static Illuminated Signage	0.05	0.5	39%	2.5%	0.01	0.1	16%	1.6%
Total Illuminance at Location	0.11	1.2	100%	6.4%	0.06	0.68	100%	10%
* The percent change at the measurement location is based on the measured value of 1.78 fc (19.2 lux) during an Event.								
** The percent change at Receptor 3 is based on the predicted value of 0.66 fc (7.1 lux) during an Event.								

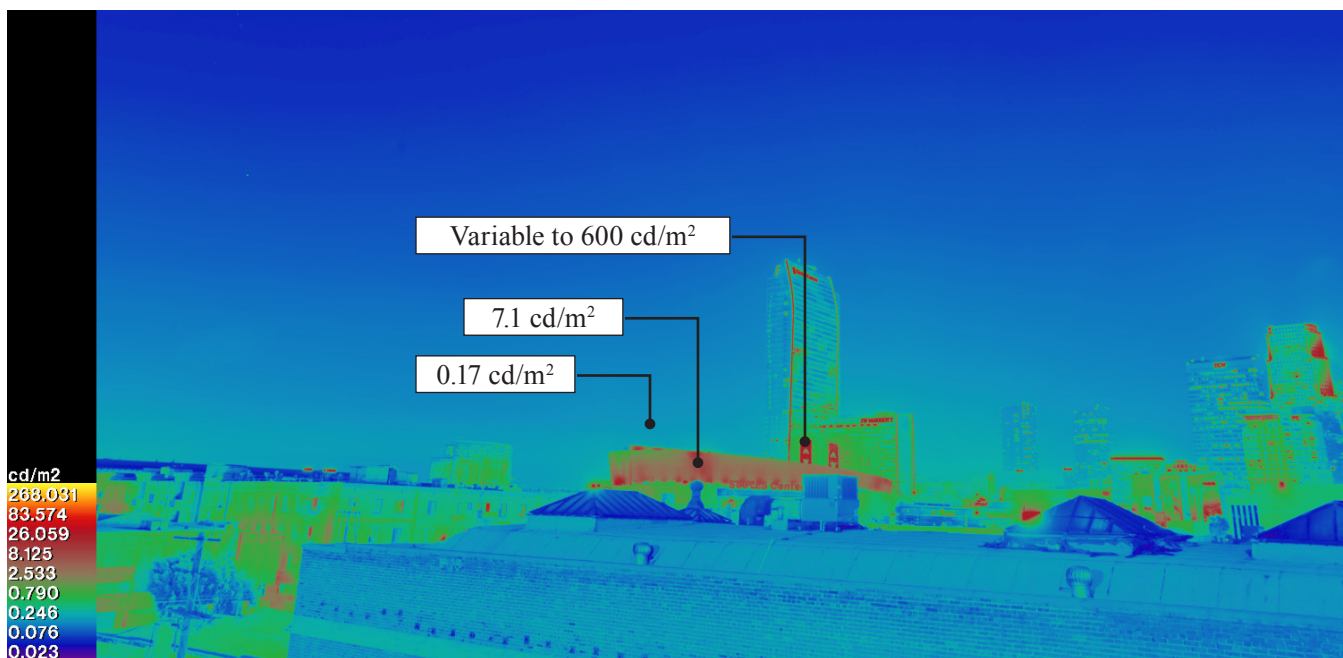


Figure 6.4.3.2 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated.

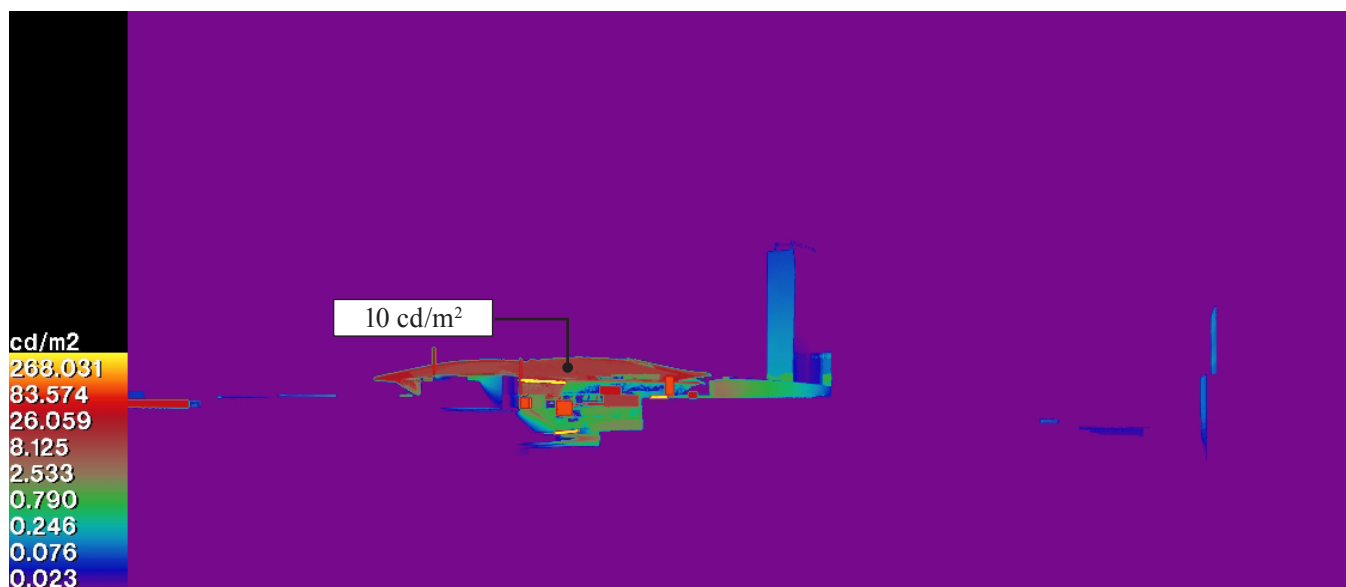


Figure 6.4.3.3 - Radiance analysis showing luminance values from Receptor 3 for the Proposed Project with Project Design Features applied.



Figure 6.4.3.4 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Self Illuminated

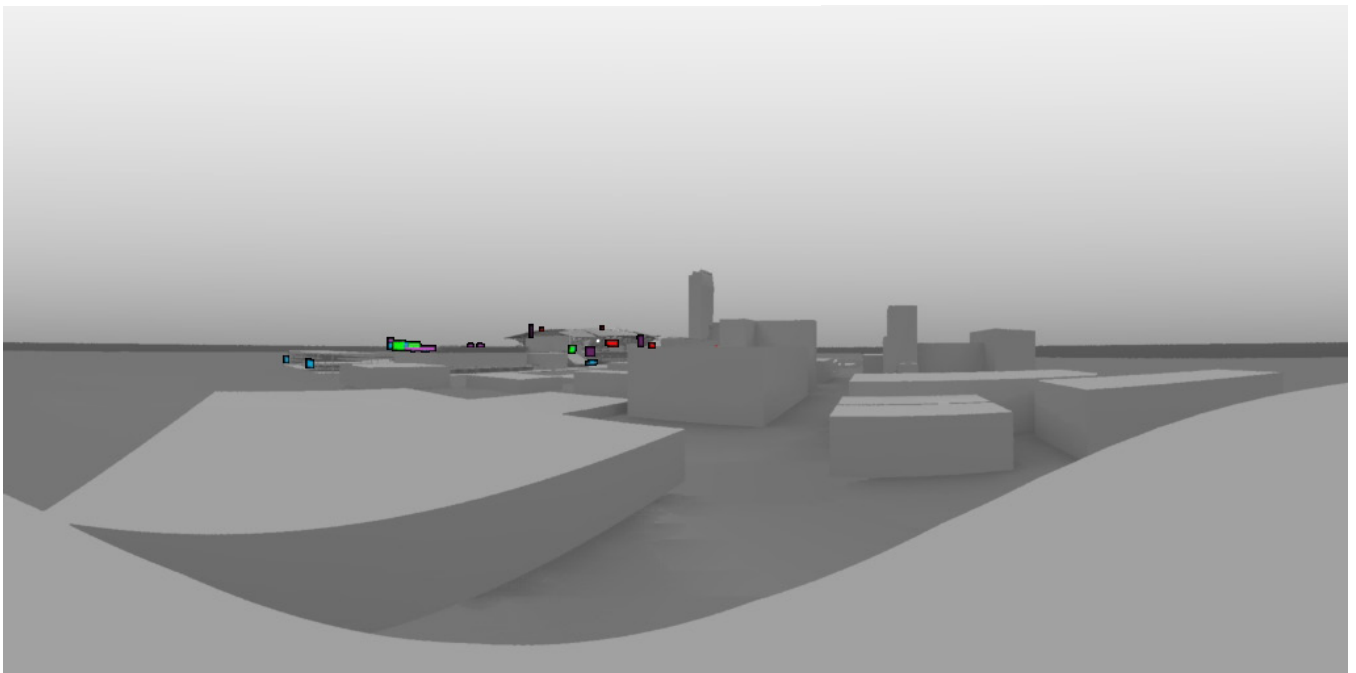


Figure 6.4.3.5 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.4 Receptor 4 Assessment

Receptor 4 measurements were taken at Nokia Plaza, which is located at 777 Chick Hearn Court. Figure 6.4.4.1 shows the Receptor location.

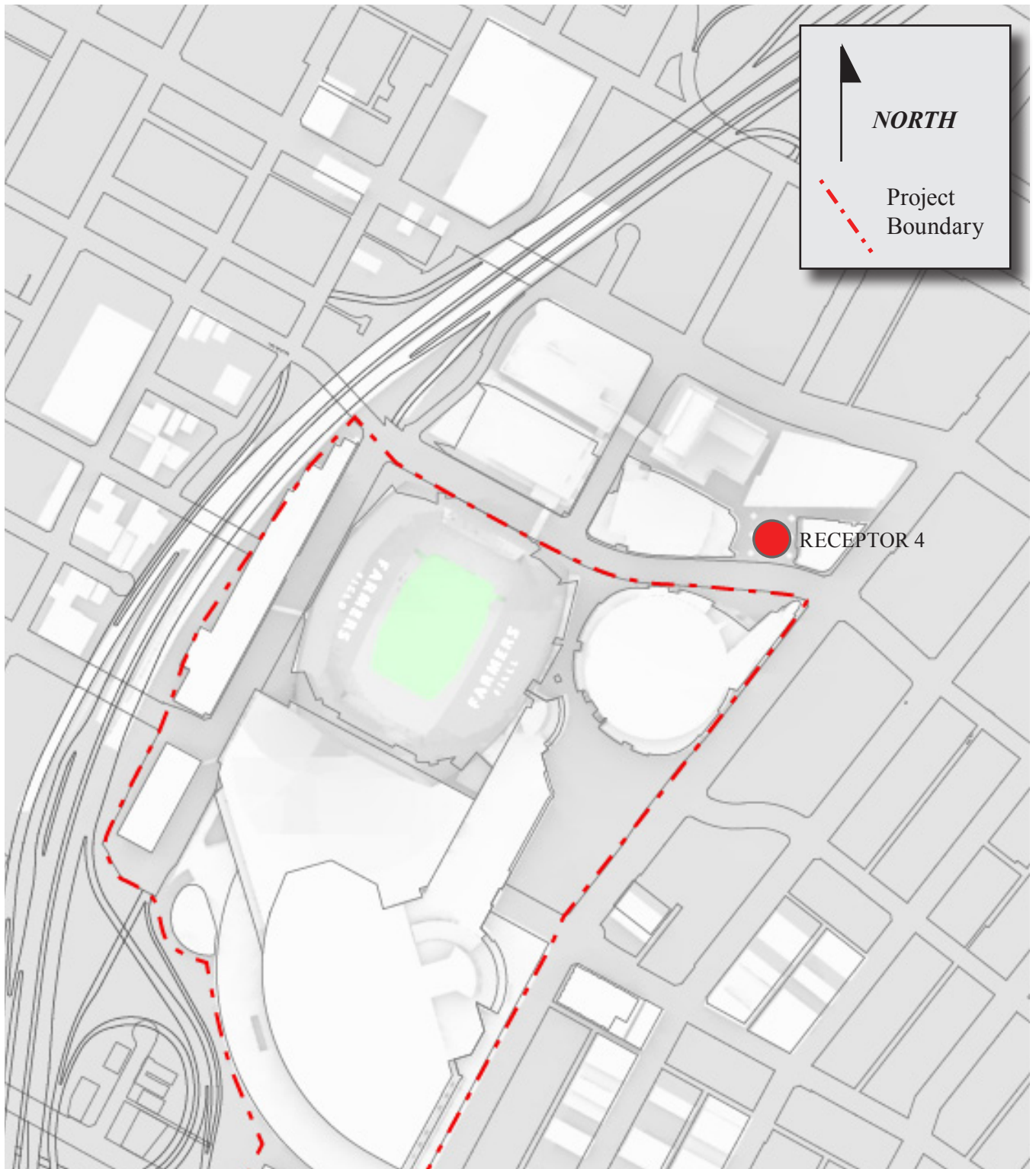


Figure 6.4.4.1 - Plan diagram showing location of Receptor 4.

Location Classification

Receptor 4 is not considered a light sensitive use based on the Los Angeles CEQA Thresholds Guide.

Predicted Illuminance Values

Table 6.4.4.1 shows the data for the calculated illuminance values with the Project Design Features applied.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

Figures 6.4.4.2 and 6.4.4.3 show the luminance values measured and calculated.

Context and View

The Receptor view is not significantly increased due to the close proximity to the Project.

Figure 6.4.4.4 shows a plan diagram of the signage impact areas near Receptor 4 with the Project Design Features for Illuminated Signage applied. Figure 6.4.4.5 shows a perspective view of visible signage for reference.

Table 6.4.4.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Receptor 4 Location			
	Illuminance		% of	% Δ of
	fc	lux	total	measured*
Event Center Architectural Lighting	0.00	0.0	0%	0.0%
Event Center Field Event Lighting	0.00	0.0	0%	0.0%
New Hall Architectural Lighting	0.00	0.0	0%	0.0%
Garages (Bond, LA Live Way) Lighting	0.00	0.0	0%	0.0%
LED Illuminated Changeable Signage	1.05	11.3	99%	2.6%
Static Illuminated Signage	0.00	0.0	0%	0.0%
Total Illuminance at Receptor	1.06	11.40	100%	3%
* The percent change at Receptor 4 is based on the measured value of 40.15 fc (432 lux) during an Event.				

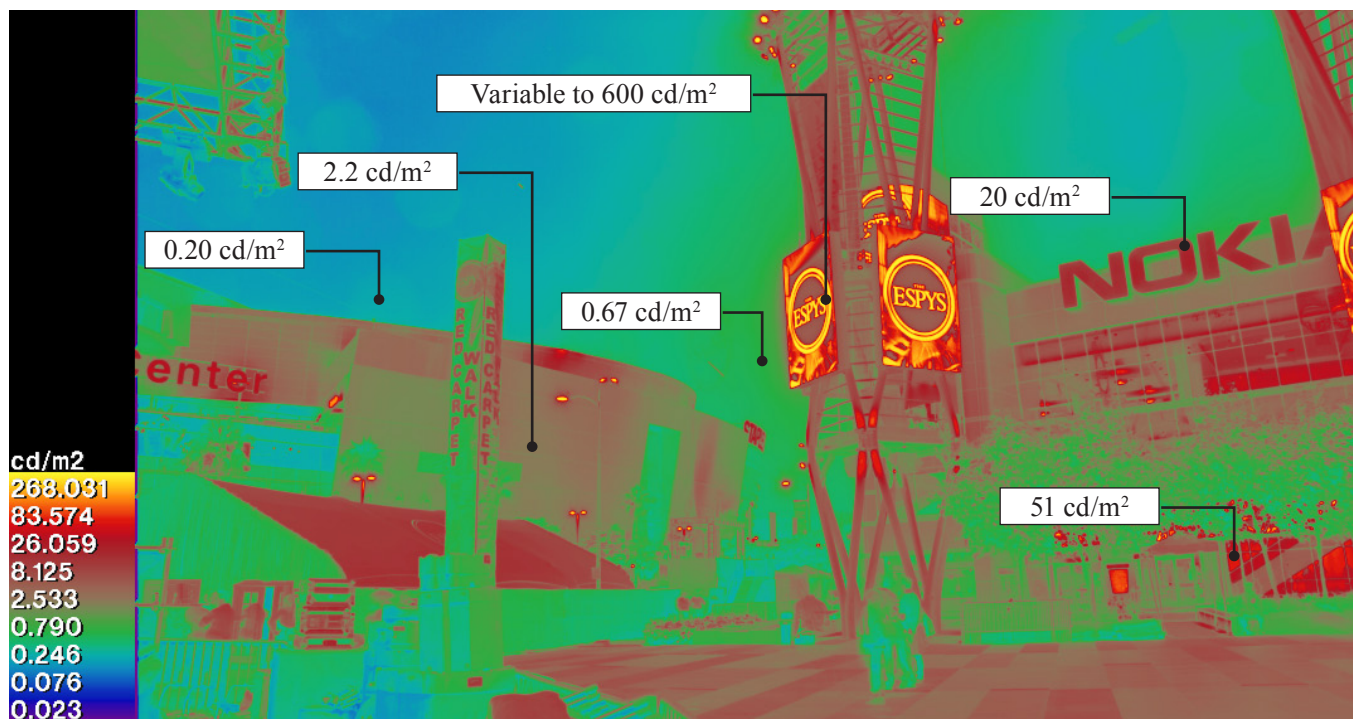


Figure 6.4.4.2 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated.

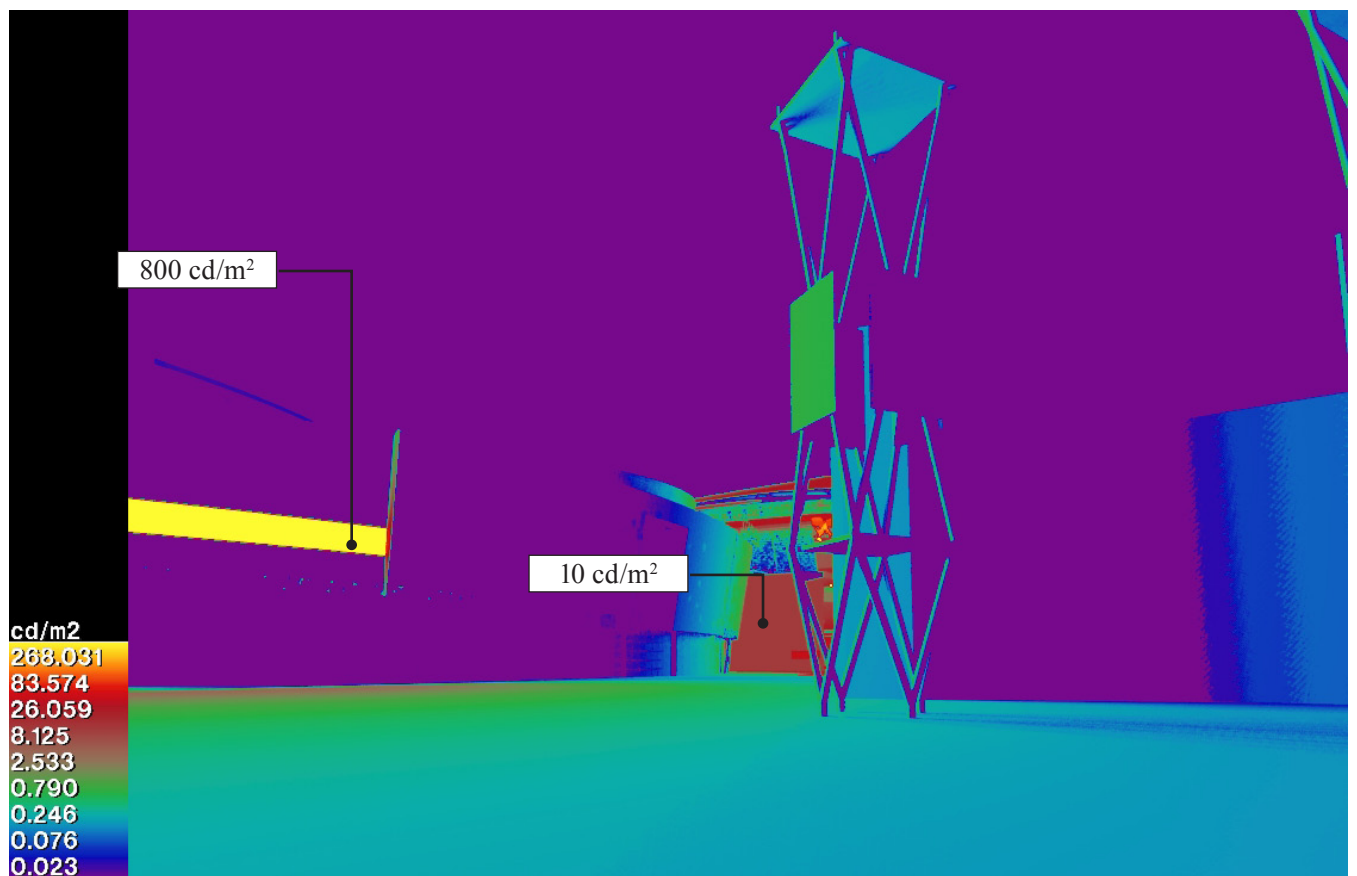


Figure 6.4.4.3 - Radiance analysis showing luminance values from Receptor 4 for the Proposed Project with Project Design Features applied.

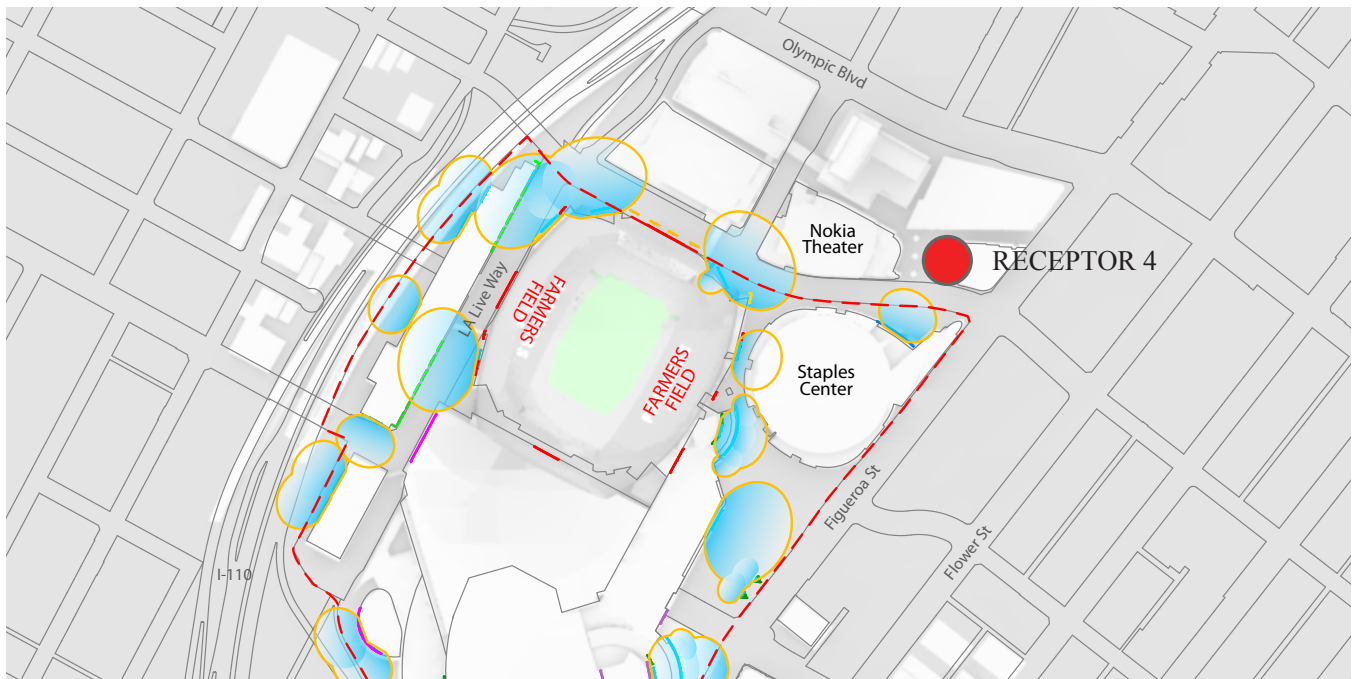


Figure 6.4.4.4 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Front Lit ■ Self Illuminated

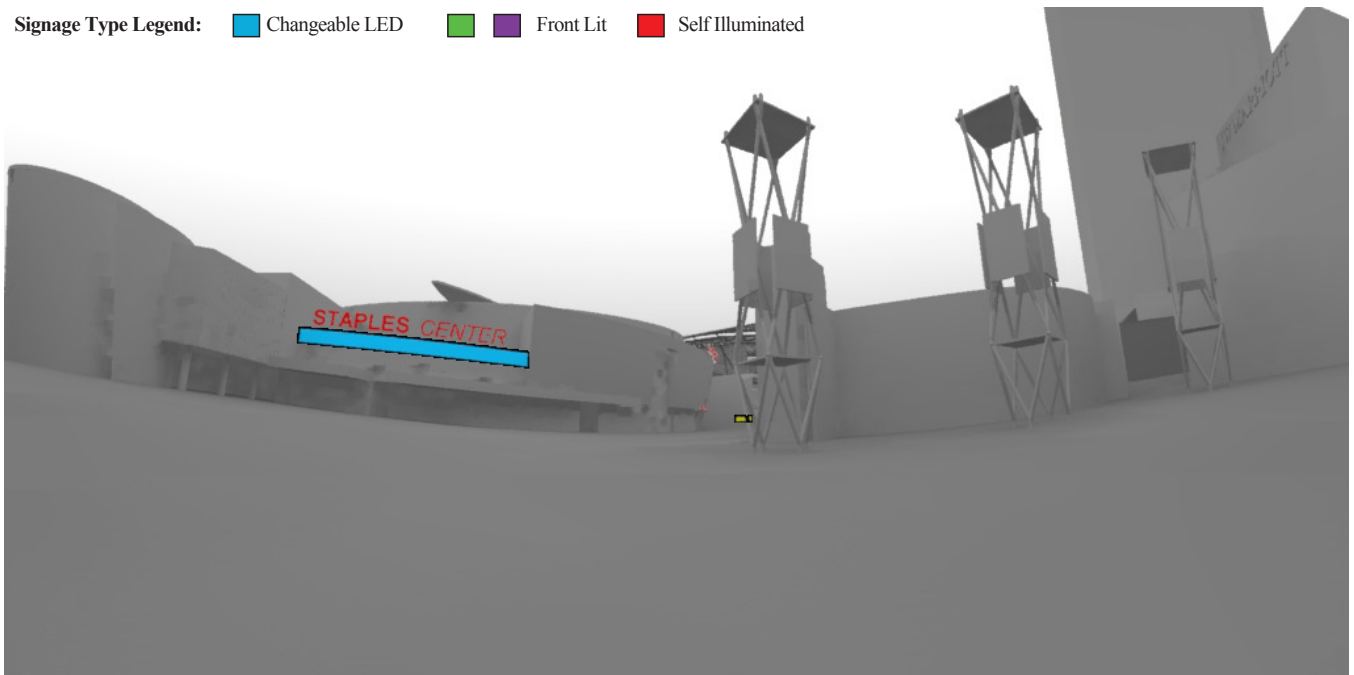


Figure 6.4.4.5 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.5 Receptor 5 Assessment

Receptor 5 measurements were taken at the Interstate 10 eastbound to the Interstate 110 north connector ramp. Figure 6.4.5.1 shows the Receptor location.

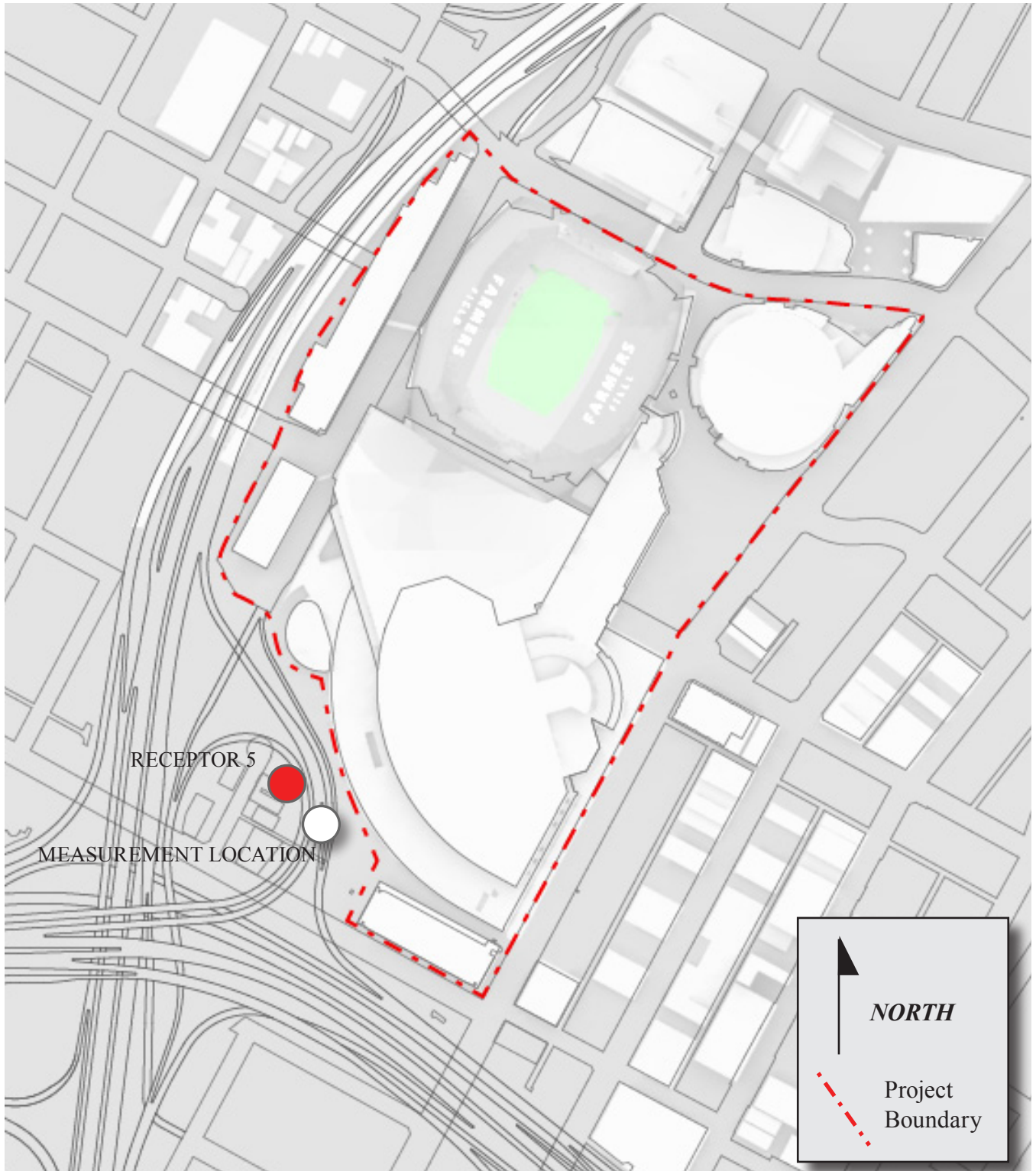


Figure 6.4.5.1 - Plan diagram showing the location of Receptor 5.

Location Classification

Receptor 5 is assessed as both a residence and a roadway. Receptor 5 is considered to be light sensitive per the Los Angeles CEQA Thresholds Guide for the residences. The Motor Vehicle Code applies to the roadway.

Predicted Illuminance Values

The illuminance values from architectural elements of the Proposed Project do not exceed the 21.5 lux (2 footcandle) threshold at this Receptor.

The illuminance values from signage elements of the Proposed Project do not exceed the 32.3 lux (3 foot-candle) threshold at this Receptor.

Table 6.4.5.1 shows the data for the calculated illuminance values with the Project Design Features applied.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

With the Project Design Features applied, the visible luminances are less than 500 foot-lamberts, comply with the restrictions of the California Motor Vehicle Code, and do not have sufficient brightness to impair drivers' vision.

Figure 6.4.5.2 shows a view from the receptor during the day. Figure 6.4.5.3 shows the luminance values calculated.

Context and View

The receptor view is primarily inclusive of new signage. Views to the Project illuminated signage is increased by 5:1. Views of the architecture will be largely obstructed by Pico Hall and the existing South Hall.

Figure 6.4.5.4 shows a plan diagram of the signage impact areas near Receptor 5 with the Project Design Features for Illuminated Signage applied. Figure 6.4.5.5 shows a perspective view of visible signage for reference.

Table 6.4.5.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Measurement Location				Receptor 5 Location			
	Illuminance		% of	% Δ of	Illuminance		% of	% Δ of
	fc	lux	total	measured*	fc	lux	total	measured**
Event Center Architectural Lighting	0.00	0.0	0%	0.0%	0.01	0.1	0%	0%
Event Center Field Event Lighting	0.00	0.0	0%	0.0%	0.00	0.0	0%	0%
New Hall Architectural Lighting	0.01	0.1	0%	0.1%	0.01	0.1	0%	0%
Garages (Bond, LA Live Way) Lighting	0.01	0.1	0%	0.1%	0.01	0.1	0%	0%
LED Illuminated Changeable Signage	2.38	25.6	88%	23.8%	1.76	22.0	85%	19%
Static Illuminated Signage	0.30	3.2	11%	3.0%	0.29	3.2	14%	3%
Total Illuminance at Location	2.70	29.09	100%	27%	2.07	26.6	100%	23%
* The percent change at the measurement location is based on the measured value of 9.99 fc (107.5 lux) during an Event.								
** The percent change at Receptor 5 is based on the predicted value of 9.19 fc (98.8 lux) during an Event.								



Figure 6.4.5.2 - Photograph of daytime view from Receptor 5. (Photo courtesy Google: google.maps.com)

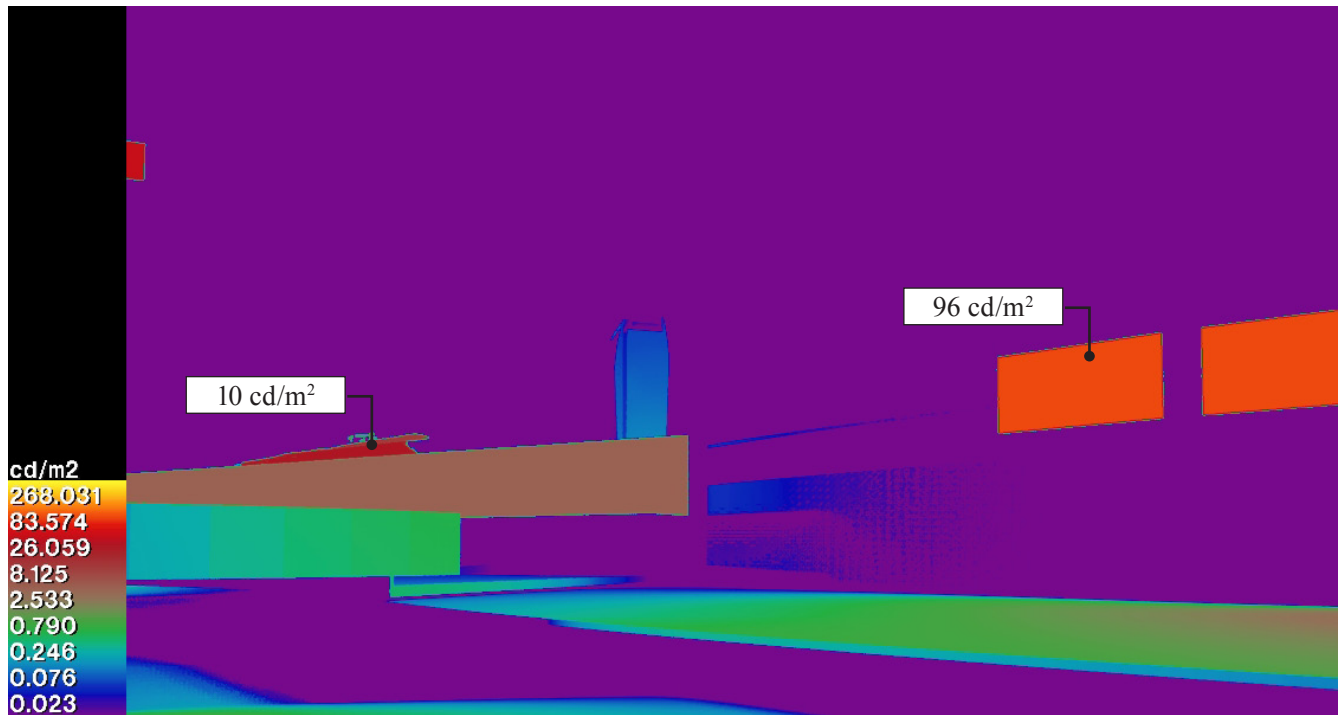


Figure 6.4.5.3 - Radiance analysis showing luminance values from Receptor 5 for the Proposed Project with Project Design Features applied.

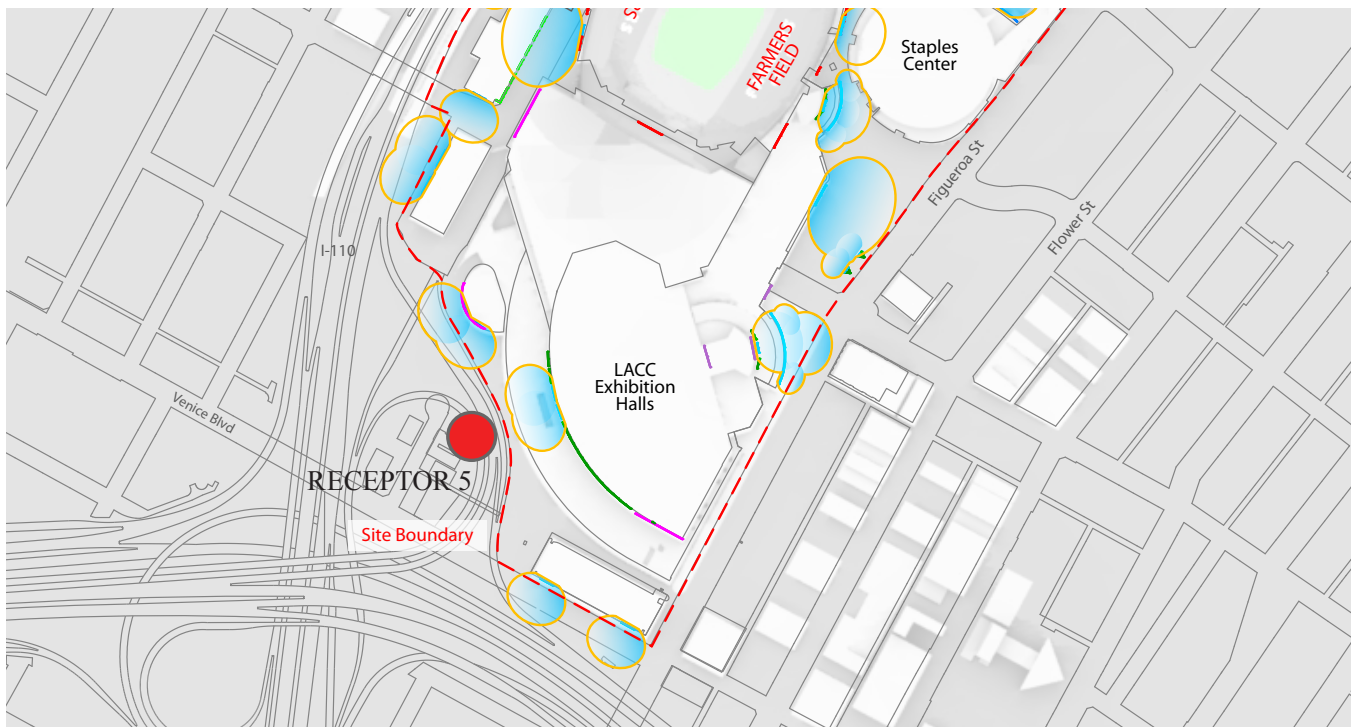


Figure 6.4.5.4 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Self Illuminated

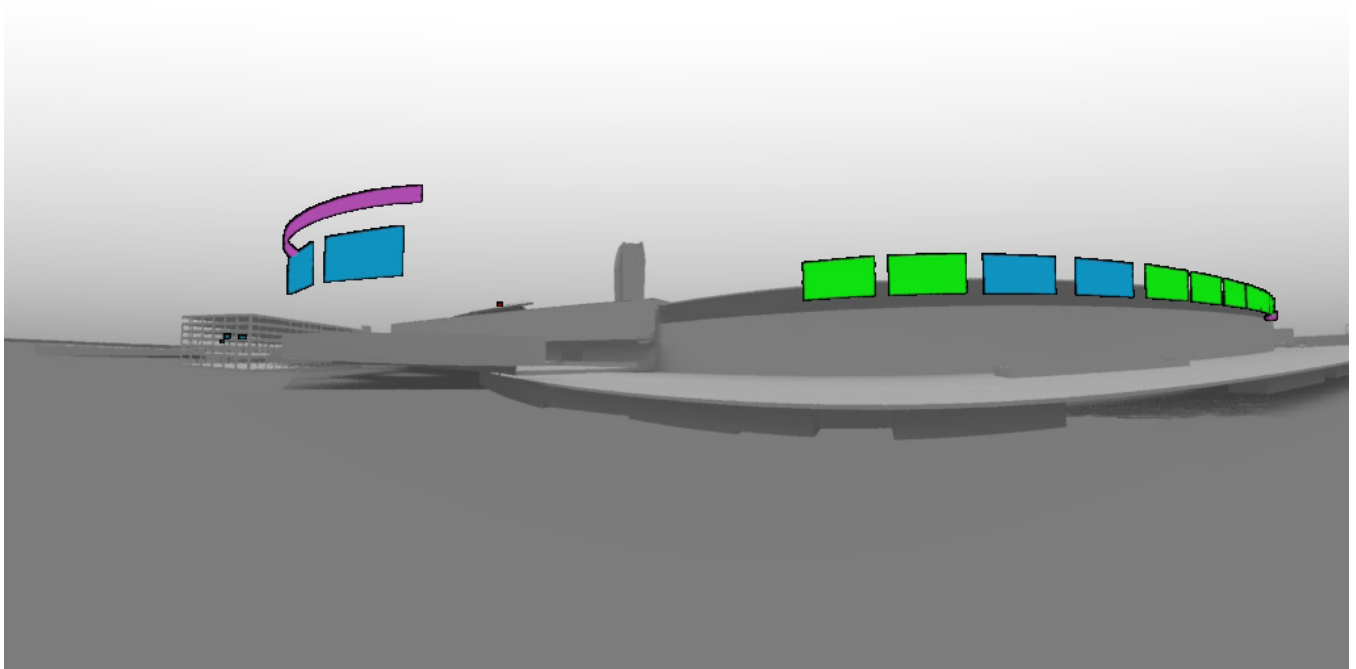


Figure 6.4.5.5 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.6 Receptor 6 Assessment

The ground level on the east side of Highway 110 (at 11th Street) was selected as Receptor 6. Figure 6.4.2.1 shows the location of the Receptor 6.

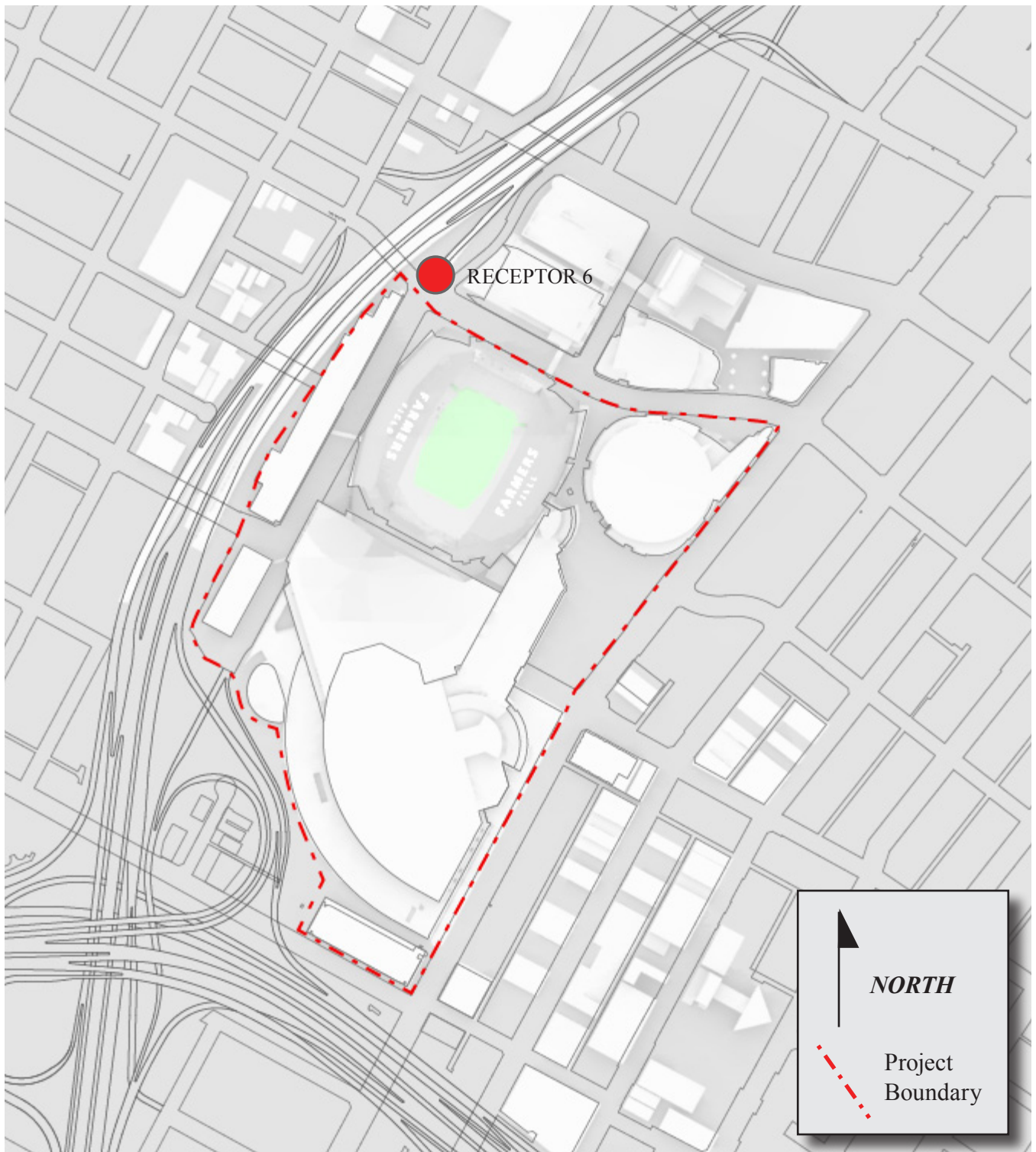


Figure 6.4.2.1 - Plan diagram showing location of Receptor 6.

Location Classification

Receptor 6 is not considered a light sensitive use based on the Los Angeles CEQA Thresholds Guide. Receptor 6 is a roadway location, and the Motor Vehicle Code does apply.

Predicted Illuminance Values

Table 6.4.6.1 shows the data for the calculated illuminance values with the Project Design Features applied.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

With the Project Design Features applied, the visible luminances are less than 500 foot-lamberts, and comply with the restrictions of the California Motor Vehicle Code, and do not have sufficient brightness to impair drivers' vision.

Figures 6.4.6.2 and 6.4.6.3 show the luminance values measured and calculated.

Context and Views

The receptor view to the Project architectural lighting is increased by > 15:1, while views to the Project illuminated signage is increased by > 15:1.

Views to field event lights are unimpeded and seen through clear ETFE. This is not a sensitive receptor, but it is a roadway location, and may impact motorists. This does not constitute a significant impact if the Glare Rating of 45 is not exceeded.

Figure 6.4.6.4 shows a plan diagram of the signage impact areas near Receptor 6 with the Project Design Features for Illuminated Signage applied. Figure 6.4.6.5 shows a perspective view of visible signage for reference.

Table 6.4.6.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Receptor 6 Location			
	Illuminance		% of	% Δ of
	fc	lux	total	measured*
Event Center Architectural Lighting	0.28	3.0	8%	6.0%
Event Center Field Event Lighting	0.17	1.9	5%	3.7%
New Hall Architectural Lighting	0.00	0.0	0%	0.0%
Garages (Bond, LA Live Way) Lighting	0.03	0.4	1%	0.7%
LED Illuminated Changeable Signage	2.79	30.1	81%	59.1%
Static Illuminated Signage	0.15	1.6	4%	3.1%
Total Illuminance at Receptor	3.43	36.92	100%	73%
* The percent change at Receptor 6 is based on the measured value of 4.73 fc (50.9 lux) during an Event.				

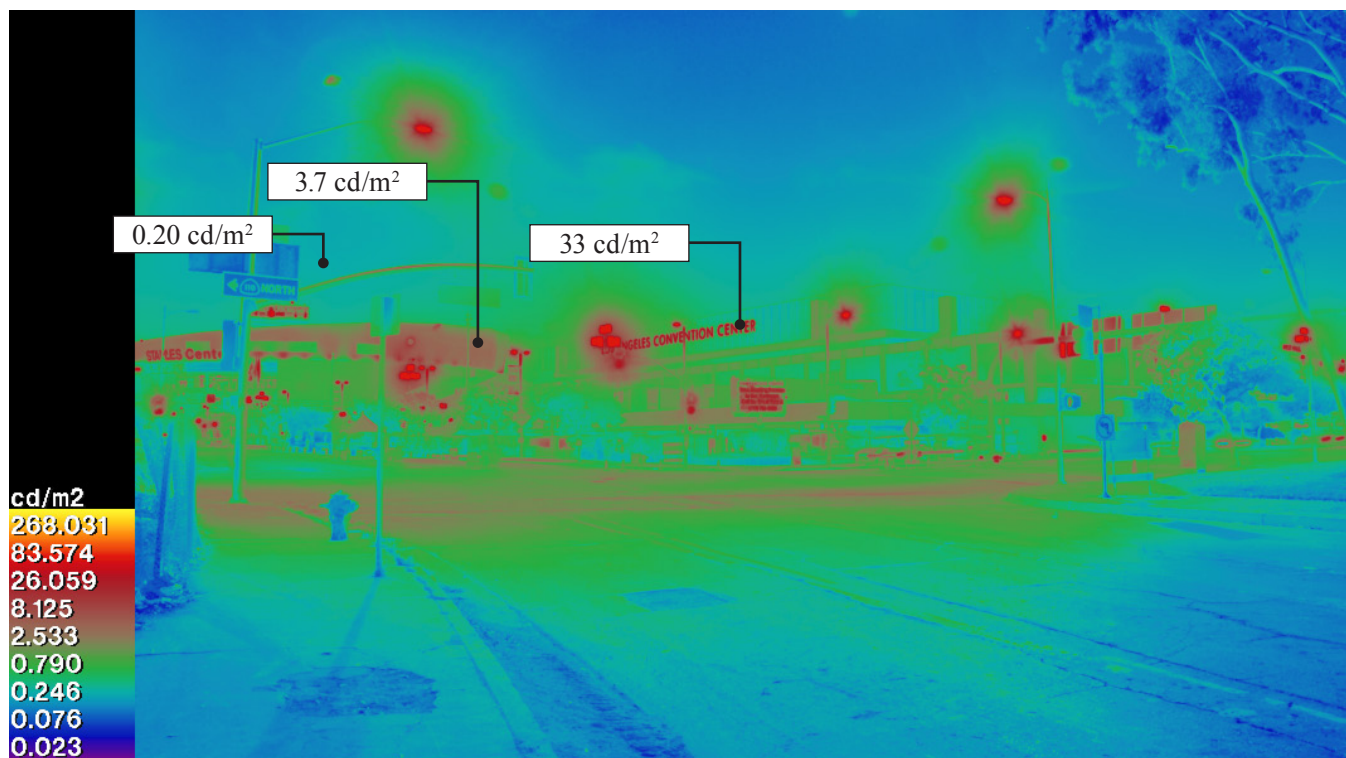


Figure 6.4.6.2 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated.

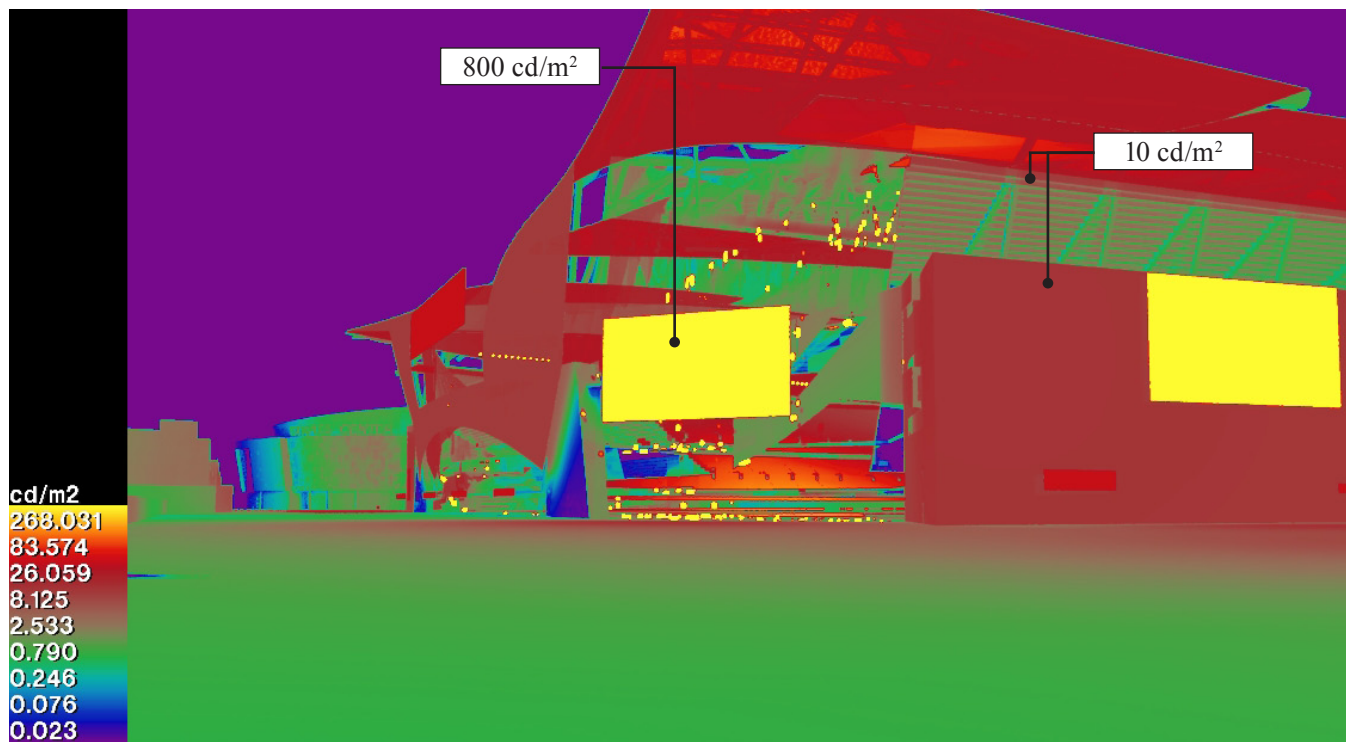


Figure 6.4.6.3 - Radiance analysis showing luminance values from Receptor 6 for the Proposed Project with Project Design Features applied.

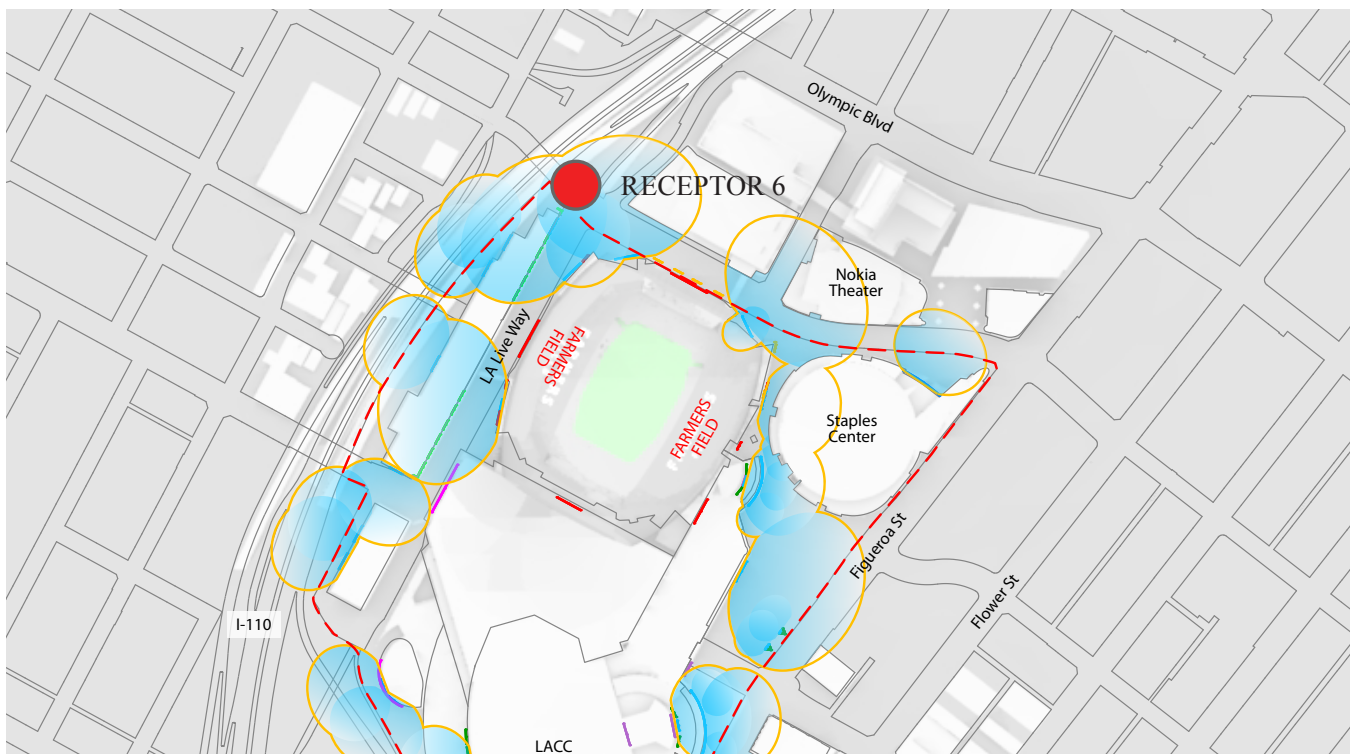


Figure 6.4.6.4 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value. As this Receptor is not considered a light sensitive use, the 3 footcandle threshold does not apply.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Front Lit ■ Self Illuminated

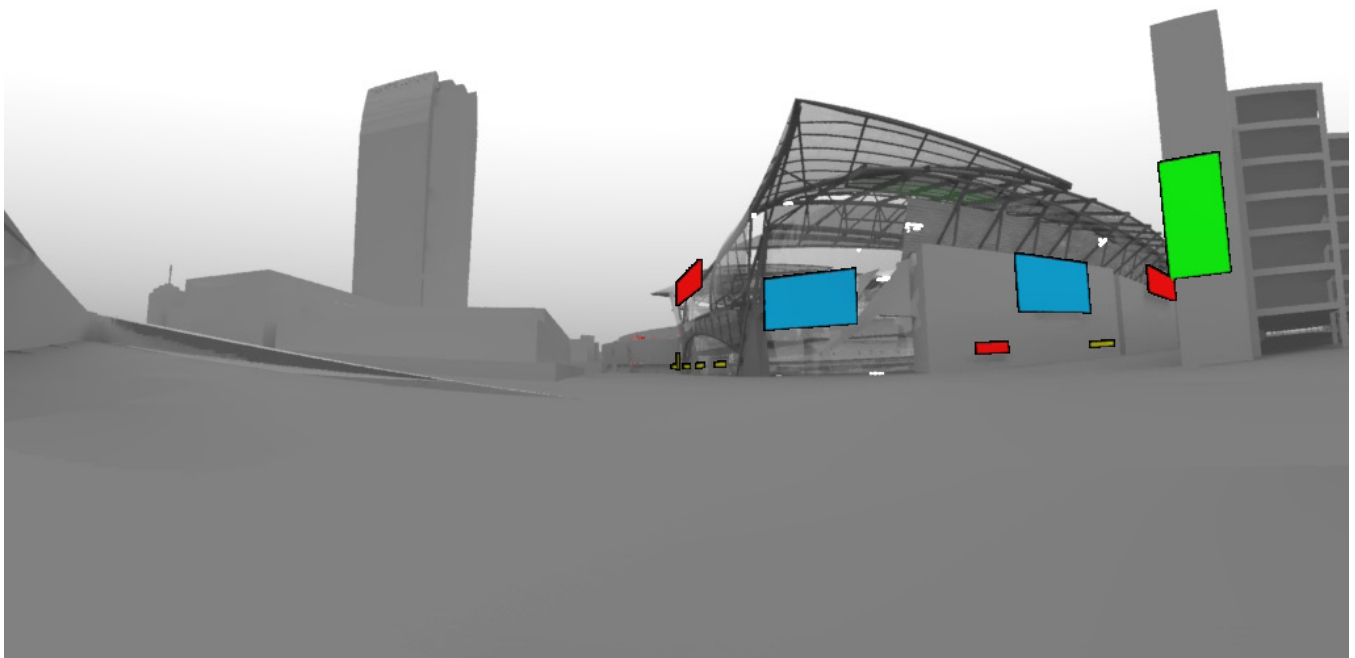


Figure 6.4.6.5 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.7 Receptor 7 Assessment

The center of road on 12th Street, west of Albany street, was selected as Receptor 7. Figure 6.4.7.1 shows the location of Receptor 7 with respect to the Project site.

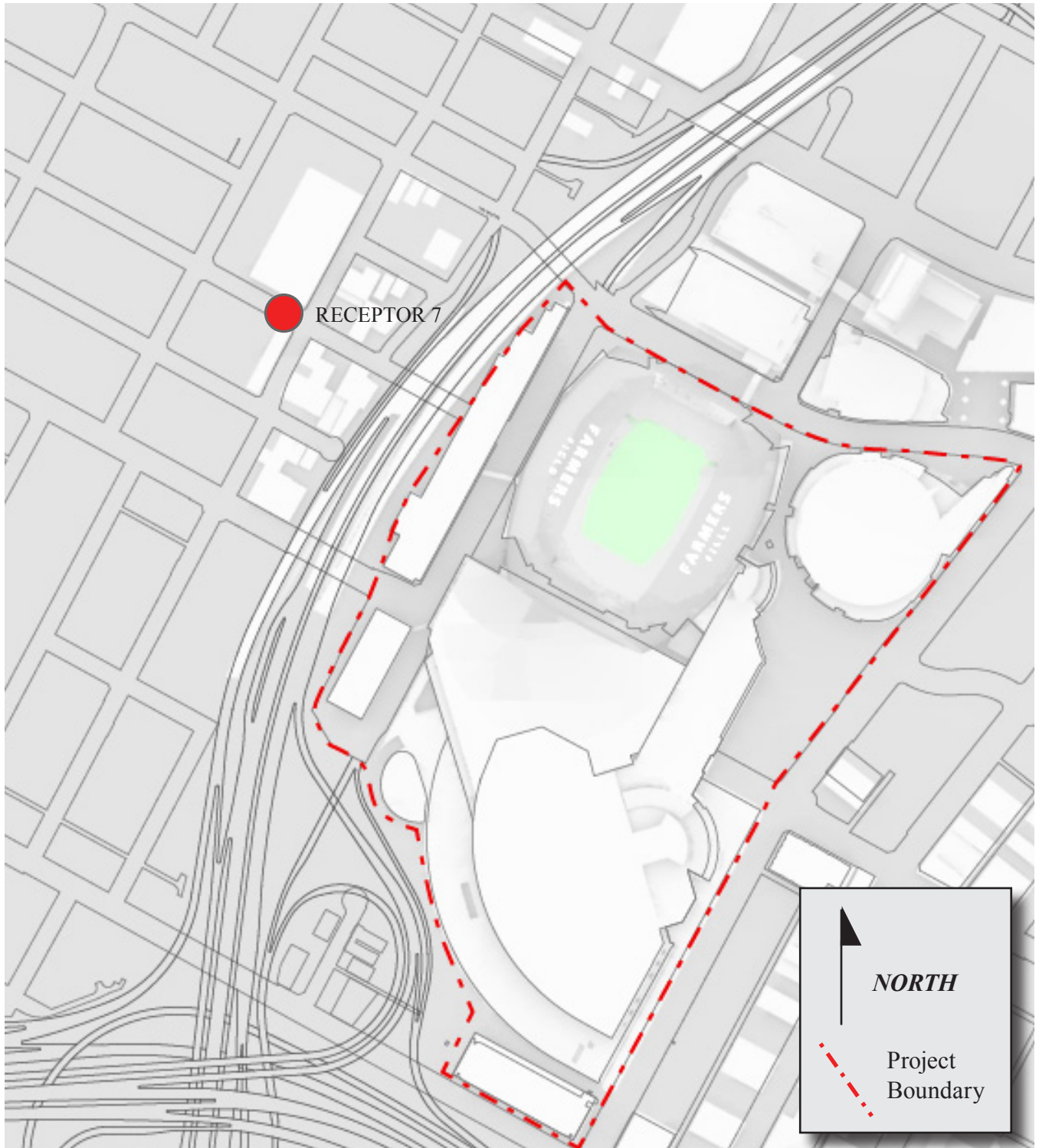


Figure 6.4.2.1 - Plan diagram showing the location of Receptor 7.

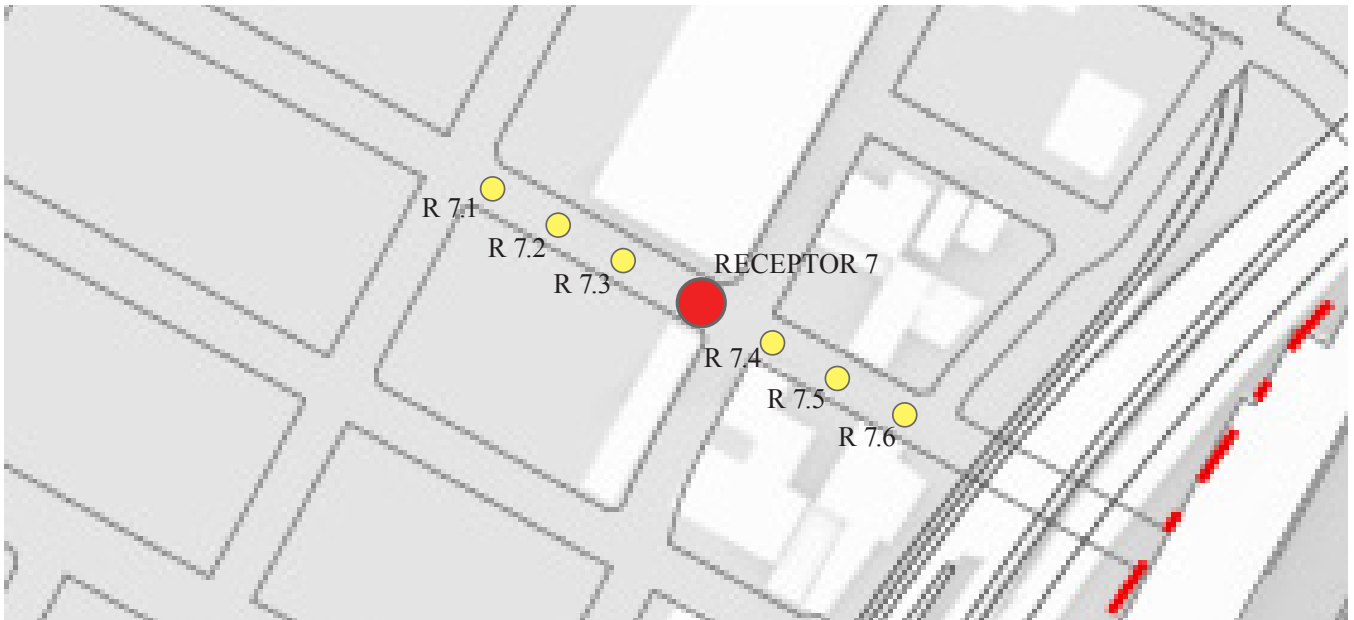


Figure 6.4.2.2 - Plan diagram showing the location of Receptor 7 with six additional locations analyzed to verify the illuminance contributions from the Proposed Project. Analysis is provided every 100 feet along 12th Street for 300 feet in either direction.

We believe that the location selected for receptor 7 is indicative of a “worst case” scenario for a residence in Pico Union when both view of the project and light trespass contributions are taken into consideration. If view is discounted, the spill light (light trespass) from the Proposed Project contributions increase as you move closer to freeway I-110 freeway. The illuminance intensity for architectural lighting increases 0.16 [fc] between receptor 7 and R 7.6 (Figure 6.4.2.2). This change in illuminance is approximately 3% of the existing illuminance intensity measured at receptor 7 and 1.7 [fc] below the threshold. The margin of error for a standard illuminance meter, used to verify illuminance levels in the field, is expected to be larger than the difference in intensity between receptor 7 and the Proposed Projects architectural lighting contribution at R 7.6.

The relationship between illuminated signage intensities is higher at locations R 7.3 than it is at Receptor 7 because the interstate freeway I-110 increasing obscures views of the signage as the viewer moves closer to the interstate.

The illuminance intensity for signage is highest at R7.6 when the adjacent buildings no longer obscure signage. Figure 6.4.7.4 shows a plan diagram of the signage impact areas near Receptor 7.

Location Classification

Receptor 7 is a residential location and is considered a light sensitive use based on the Los Angeles CEQA Thresholds Guide.

Predicted Illuminance Values

The illuminance values from architectural elements of the Proposed Project do not exceed the 21.5 lux (2 footcandle) threshold at this Receptor.

The illuminance values from signage elements of the Proposed Project do not exceed the 32.3 lux (3 foot-candle) threshold at this Receptor.

Table 6.4.7.1 shows the data for the calculated illuminance values with the Project Design Features applied.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

Figures 6.4.7.2 and 6.4.7.3 show the luminance values measured and calculated.

Context and Views

The receptor view to the Project architectural lighting is increased by 8:1, while views to the Project illuminated signage is increased by 2:1.

Figure 6.4.7.4 shows a plan diagram of the signage impact areas near Receptor 7 with the Project Design Features for Illuminated Signage applied. Figure 6.4.7.5 shows a perspective view of visible signage for reference.

Table 6.4.7.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Receptor 7 Location									
					R7.1	R7.2	R7.3	R7.4	R7.5	R7.6
	Illuminance fc	lux	% of total	% Δ of measured*						
Event Center Architectural Lighting	0.01	0.1	20%	0.4%	0.01	0.01	0.01	0.00	0.01	0.02
Event Center Field Event Lighting	0.00	0.0	1%	0.0%	0.0	0.0	0.0	0.0	0.0	0.0
New Hall Architectural Lighting	0.00	0.0	0%	0.0%	0.0	0.0	0.0	0.0	0.0	0.00
Garages (Bond, LA Live Way) Lighting	0.05	0.5	73%	1.4%	.02	.02	.03	.07	.13	.19
LED Illuminated Changeable Signage	0.00	0.0	4%	0.1%	0.0	0.0	.14	0.0	0.32	1.06
Static Illuminated Signage	0.00	0.0	2%	0.0%	0.0	0.0	0.0	0.0	0.0	0.0
Total Illuminance at Receptor	0.06	0.69	100%	2%	0.03	0.04	0.18	0.08	0.47	1.28
* The percent change at Receptor 7 is based on the measured value of 3.43 fc (36.9 lux) during an Event.										

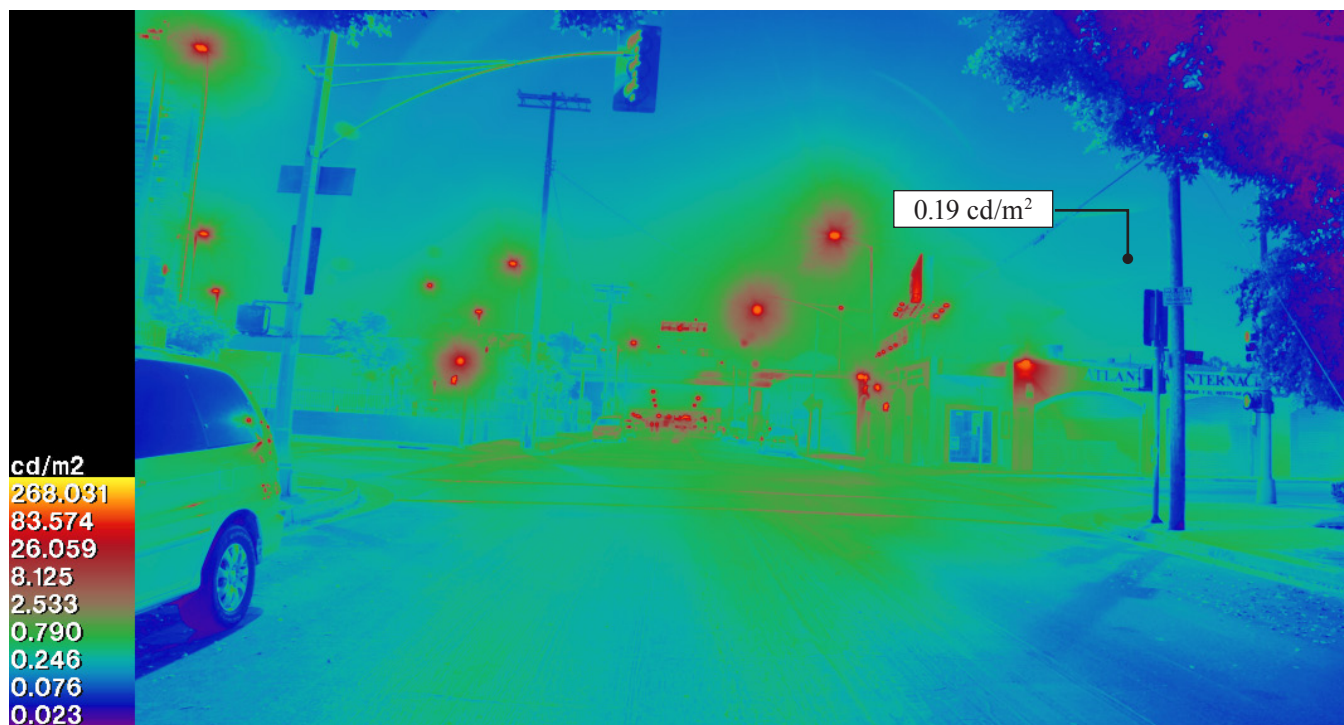


Figure 6.4.7.2 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated.

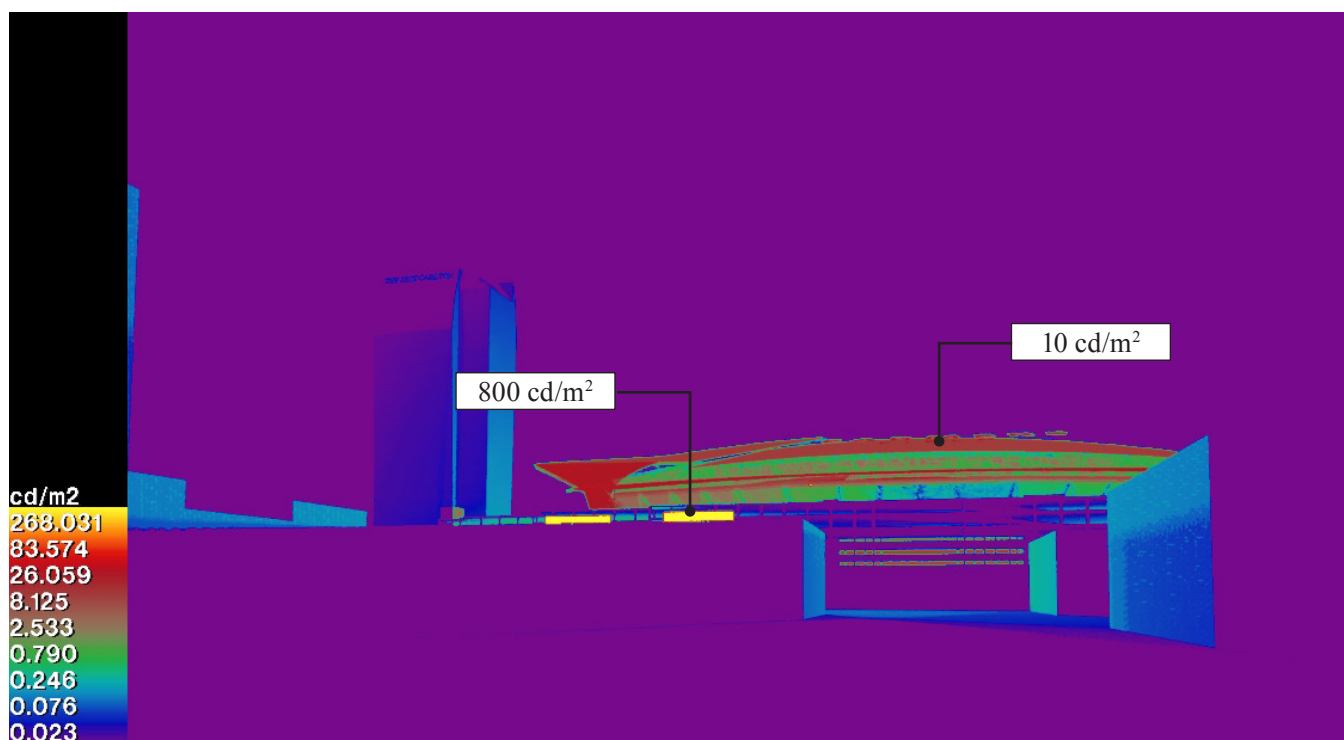


Figure 6.4.7.3 - Radiance analysis showing luminance values from Receptor 7 for the Proposed Project with Project Design Features applied.

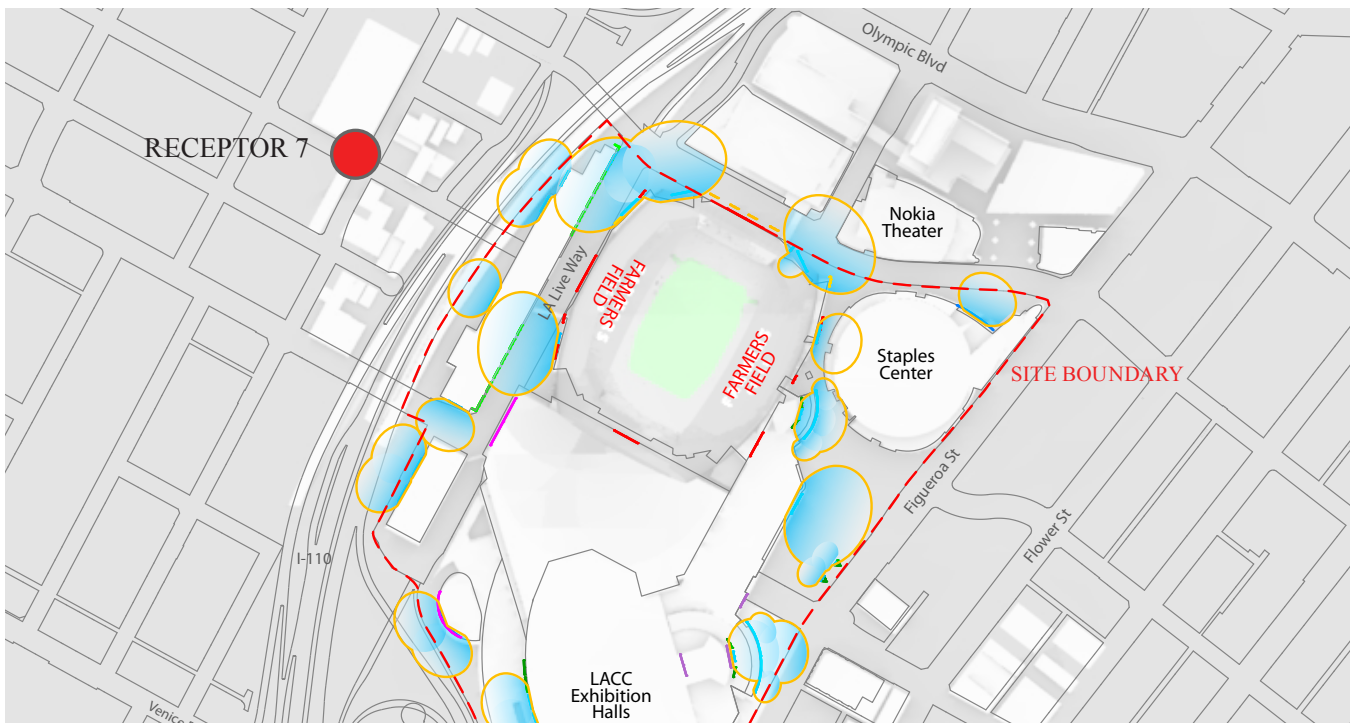


Figure 6.4.7.4 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Self Illuminated

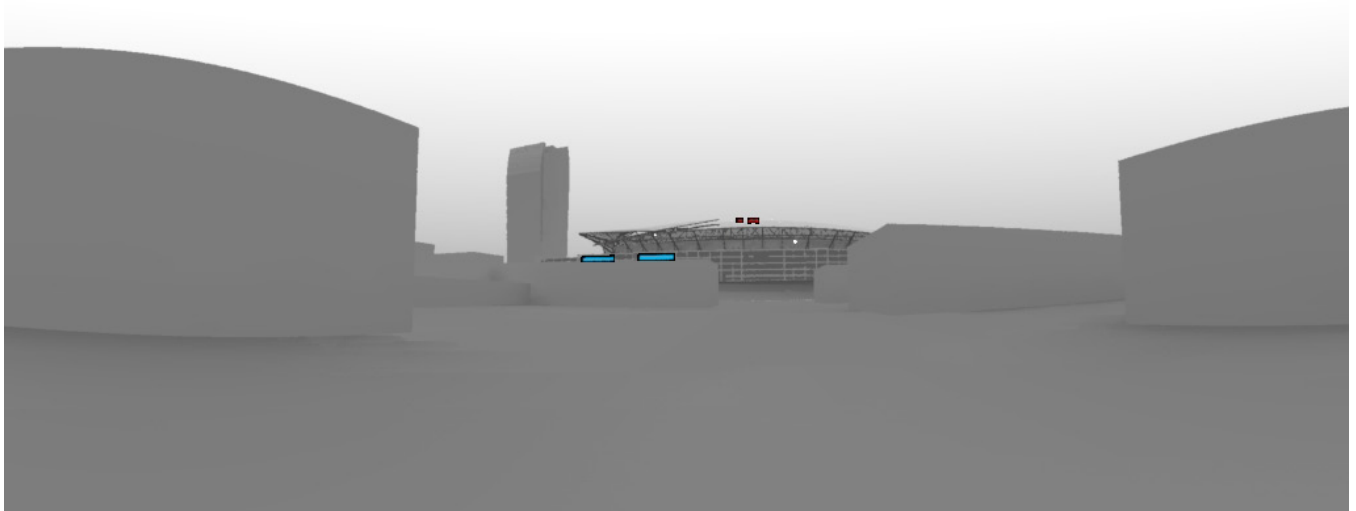


Figure 6.4.7.5 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.8 Receptor 8 Assessment

Receptor 8 measurements were taken at the edge of the mechanical level at the Ritz Carlton Residences and Hotel on 900 West Olympic Boulevard. Figure 6.4.8.1 shows the receptor location.

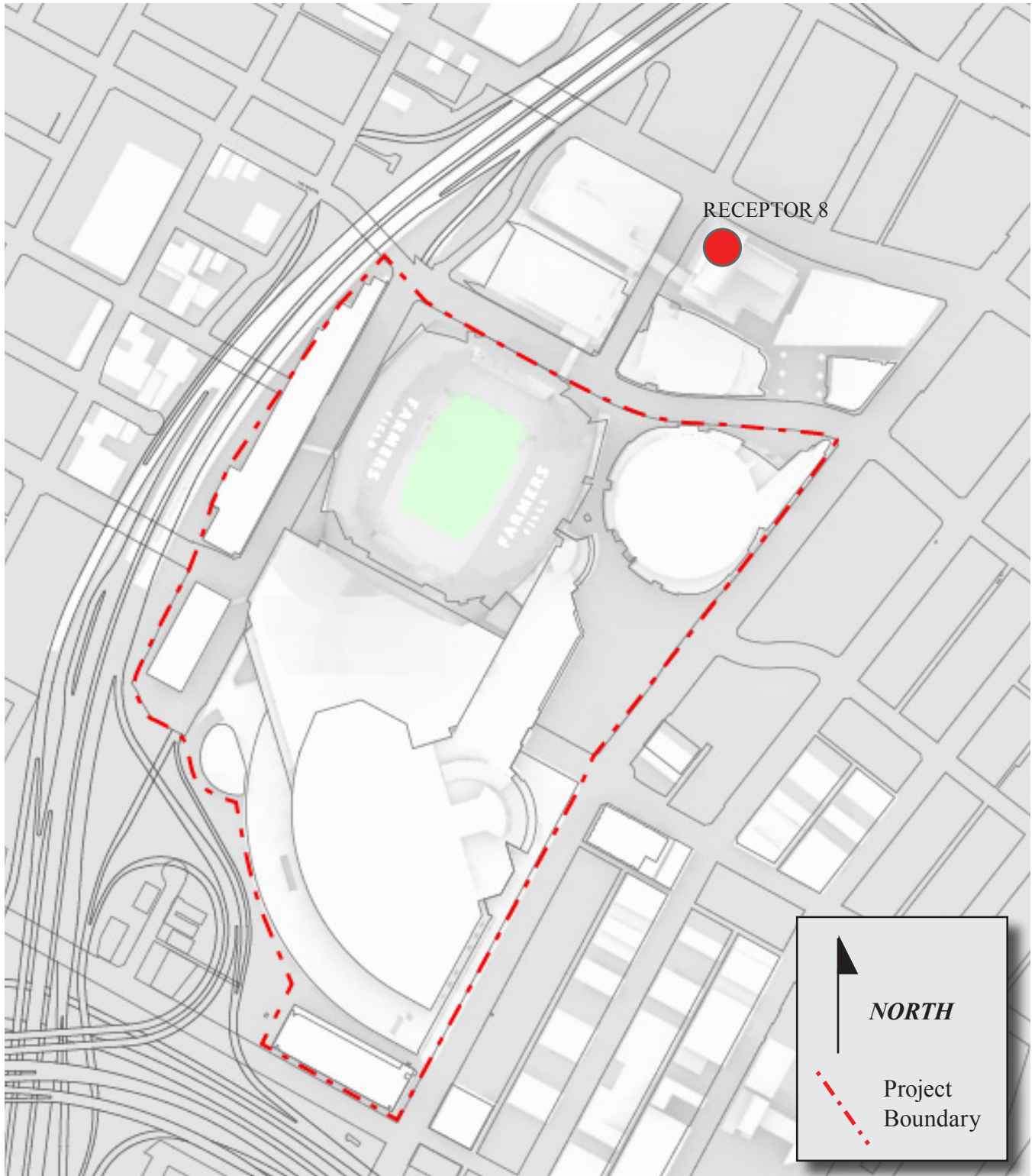


Figure 6.4.8.1 - Plan diagram showing the location of Receptor 8.

Location Classification

Receptor 8 is a residential and hotel location. The residences are considered to be a light sensitive use based on the Los Angeles CEQA Thresholds Guide.

Predicted Illuminance Values

The illuminance values from architectural elements of the Proposed Project do not exceed the 21.5 lux (2 footcandle) threshold at this Receptor.

The illuminance values from signage elements of the Proposed Project do not exceed the 32.3 lux (3 foot-candle) threshold at this Receptor.

Table 6.4.8.1 shows the data for the calculated illuminance values with the Project Design Features applied. Figure 6.4.8.2 shows the location of additional calculation points. Refer to Table 6.4.8.2 for calculated illuminance values for these points with the Project Design Features applied to the Proposed Project.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

Figures 6.4.8.3 through 6.4.8.5 show the luminance values measured and calculated.

Context and Views

The Receptor view to the Project architectural lighting is increased by >15:1, while views to the Project illuminated signage is increased by 7:1. Sky-tracker spot lights used during events may cause elevated illuminance levels, and must be aimed to avoid doing so. Section 6.5.2 discusses the Sky-Tracker lights in more detail.

Views to field event lights are unimpeded and seen through clear ETFE and/or with no architectural element to filter the brightness. **This is a sensitive receptor, and such lighting does constitute a significant impact with respect to glare**, as the threshold of a Glare Rating of 55 is not anticipated to be feasible at this location. Figure 6.4.8.3 shows the view of the field event lights from the hotel.

Figure 6.4.8.6 shows a plan diagram of the signage impact areas near Receptor 8 with the Project Design Features for Illuminated Signage applied. Figure 6.4.8.7 shows a perspective view of visible signage for reference.

Table 6.4.8.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Receptor 8 Location			
	Illuminance		% of	% Δ of
	fc	lux	total	measured*
Event Center Architectural Lighting	0.16	1.7	10%	4.0%
Event Center Field Event Lighting	0.93	10.0	62%	24.1%
New Hall Architectural Lighting	0.00	0.0	0%	0.0%
Garages (Bond, LA Live Way) Lighting	0.00	0.0	0%	0.0%
LED Illuminated Changeable Signage	0.35	3.8	24%	9.2%
Static Illuminated Signage	0.05	0.5	3%	1.3%
Total Illuminance at Receptor	1.49	16.00	100%	39%
* The percent change at Receptor 8 is based on the measured value of 3.85 fc (41.4 lux) during an Event.				

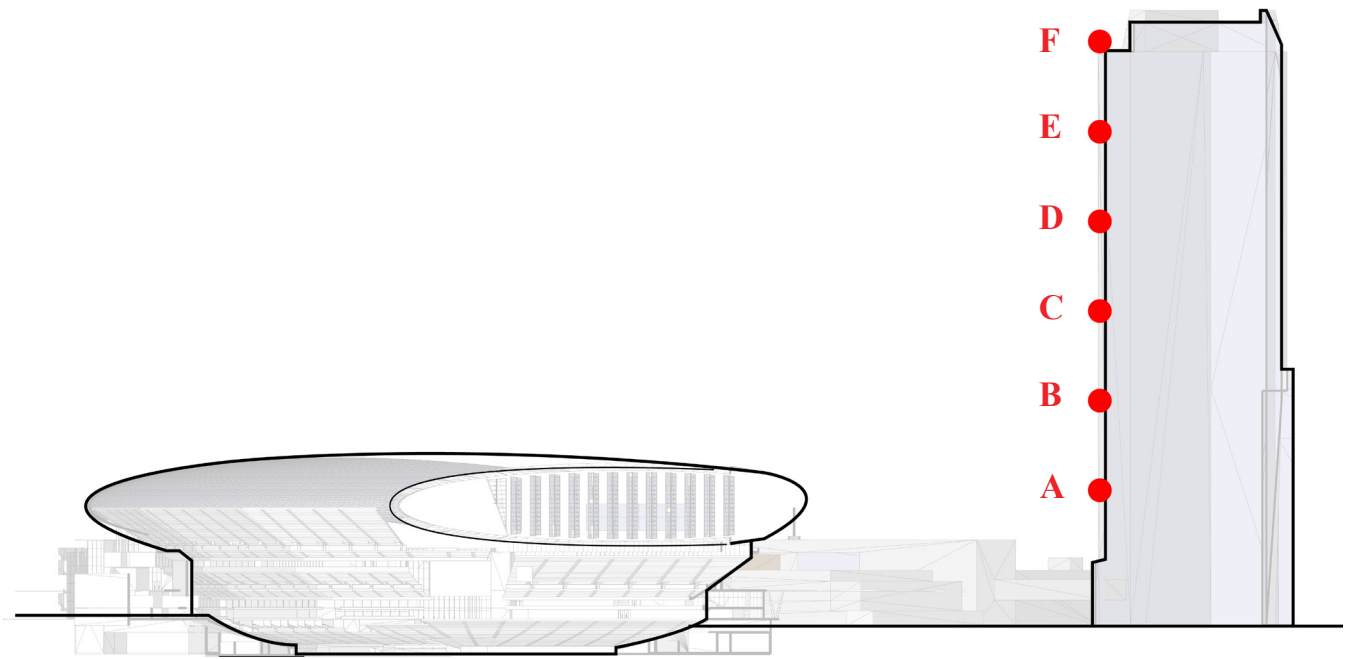


Figure 6.4.8.2 - Section diagram showing additional calculation locations for Receptor 8.

Table 6.4.8.2 - Predicted illuminance values from computational analysis for additional calculation locations with Project Design Features. All illuminance values are calculated aimed at the light sources.

Receptor Location	Elevation (ft)	Architectural Illuminance		Signage Illuminance	
		fc	lux	fc	lux
A	148	0.50	5.4	0.93	10.0
B	248	0.55	5.9	0.84	9.0
C	348	0.69	7.4	0.73	7.8
D	448	0.95	10.2	0.60	6.4
E	548	1.13	12.2	0.49	5.2
F	648	1.23	13.3	0.40	4.3

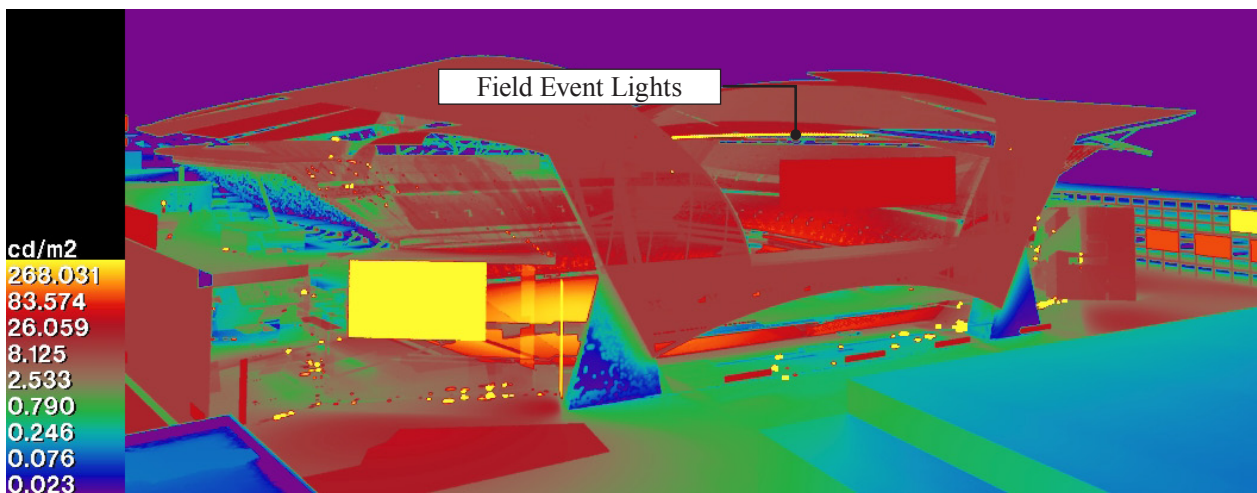


Figure 6.4.8.3 - Radiance analysis showing luminance values from Receptor 8 Point A for the Proposed Project showing the potential view of Field Event lights. Direct views to these luminaires constitute a potentially significant impact due to the likelihood that the luminaires will exceed the threshold of a Glare Rating of 55.

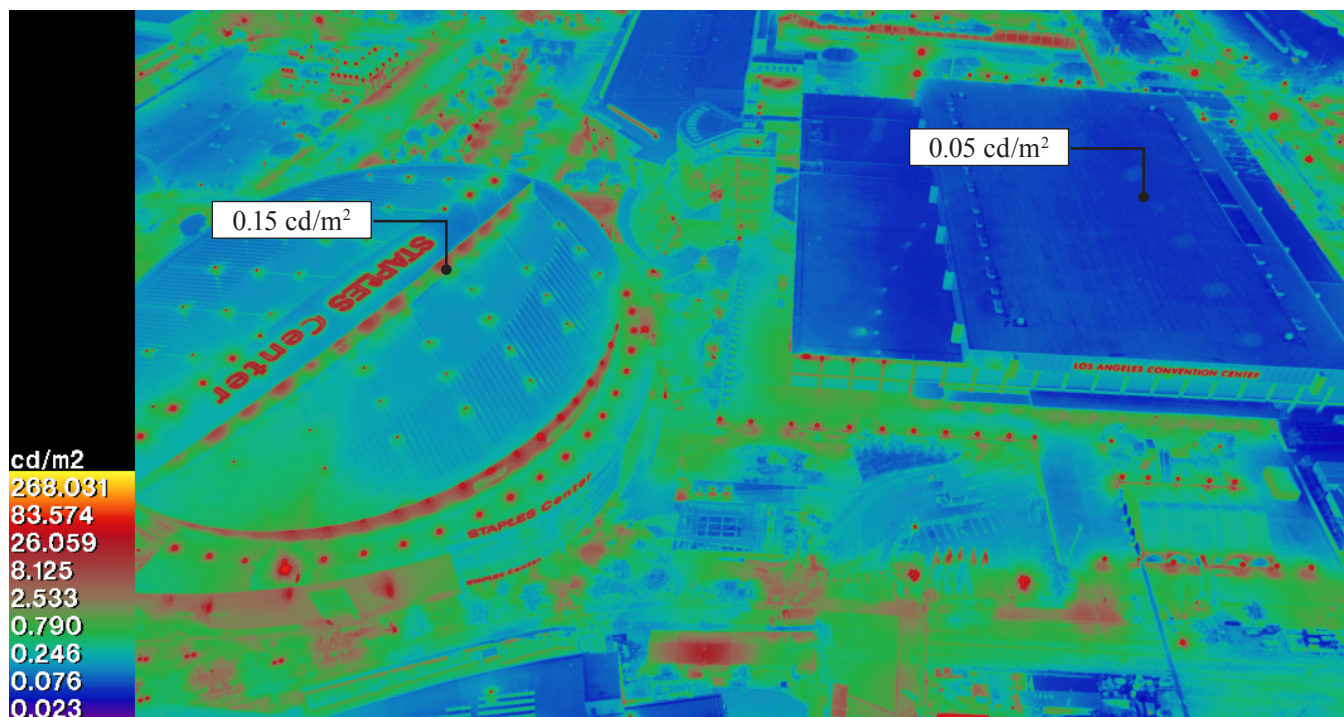


Figure 6.4.8.4 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated.

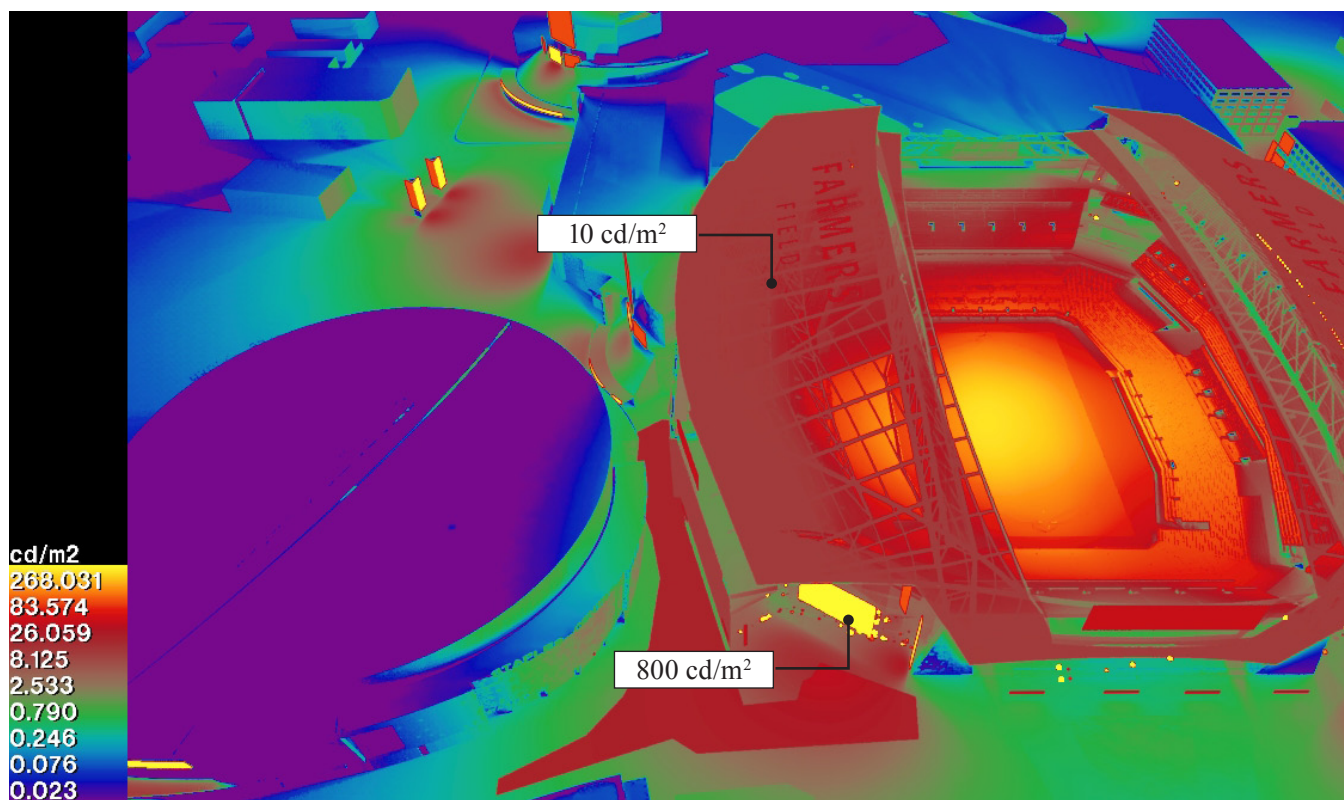


Figure 6.4.8.5 - Radiance analysis showing luminance values from Receptor 8 for the Proposed Project with Project Design Features applied.

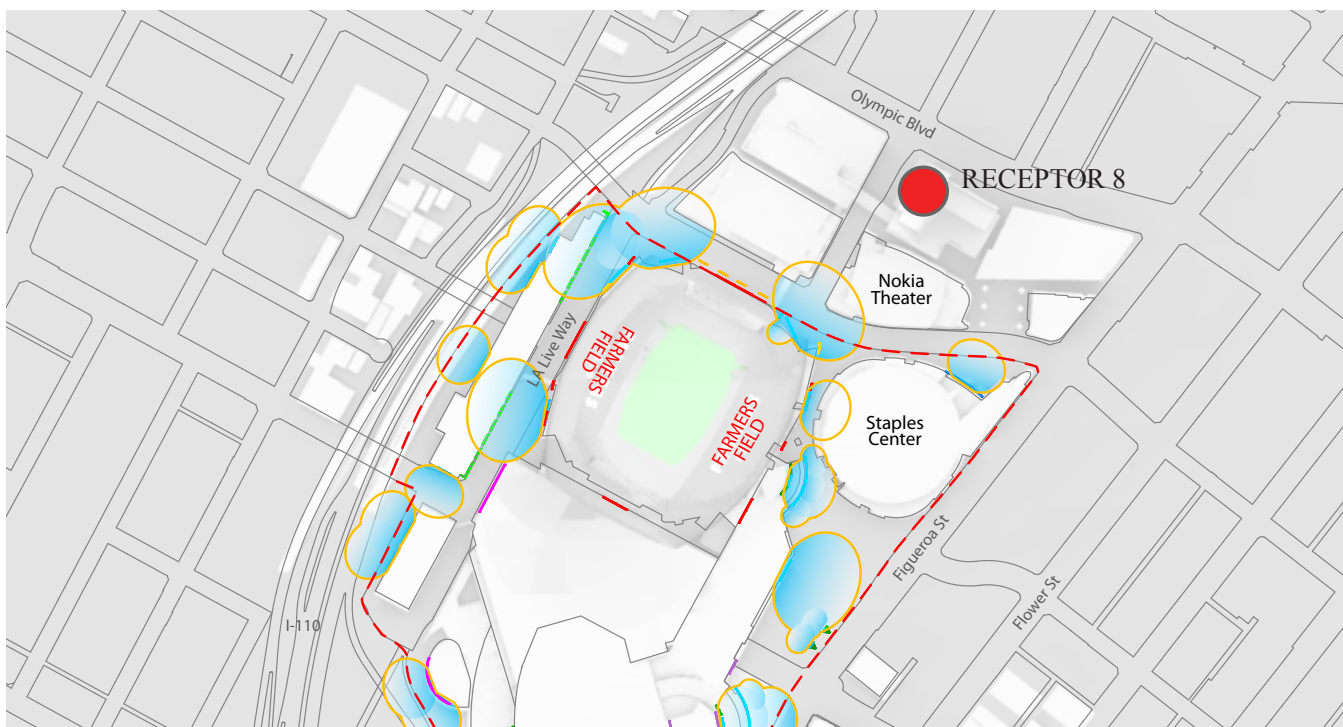


Figure 6.4.8.6 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Front Lit ■ Self Illuminated

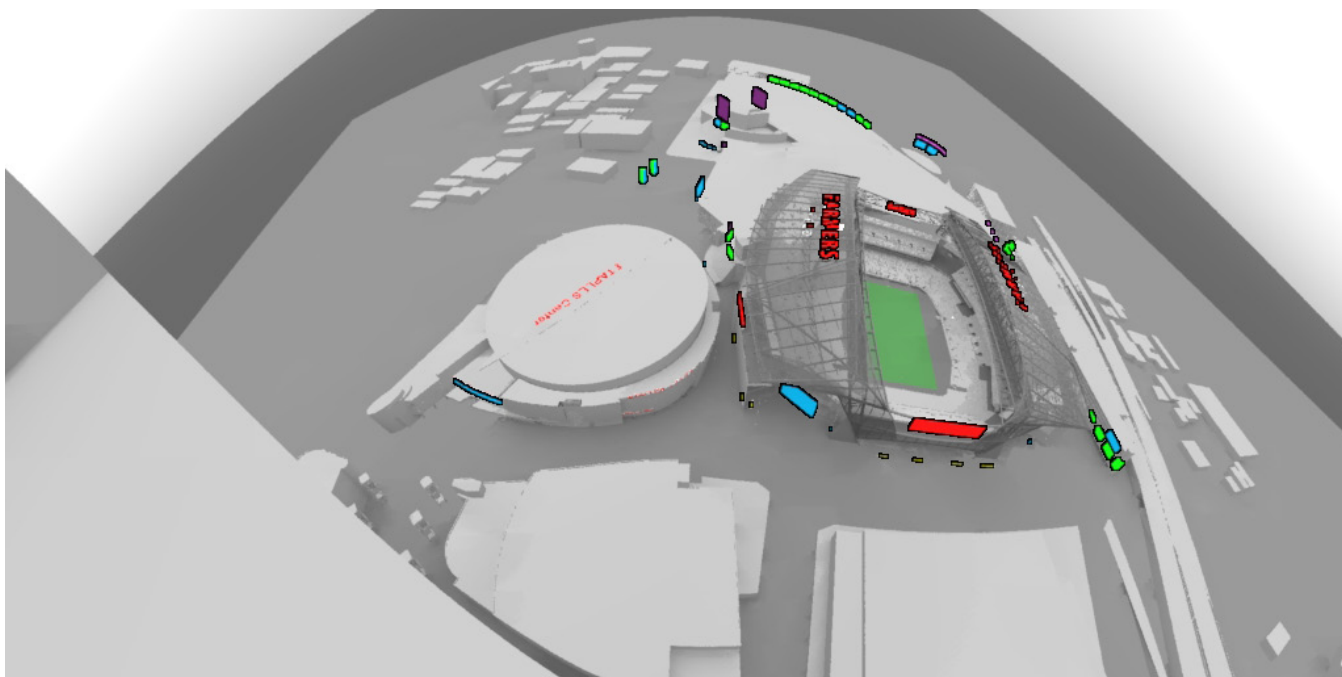


Figure 6.4.8.7 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.9 Receptor 9 Assessment

The southeast corner of the Olympic Primary Center at the sidewalk was selected as Receptor 9. Figure 6.4.9.1 shows the location of the Receptor 9 with respect to the Project Site.

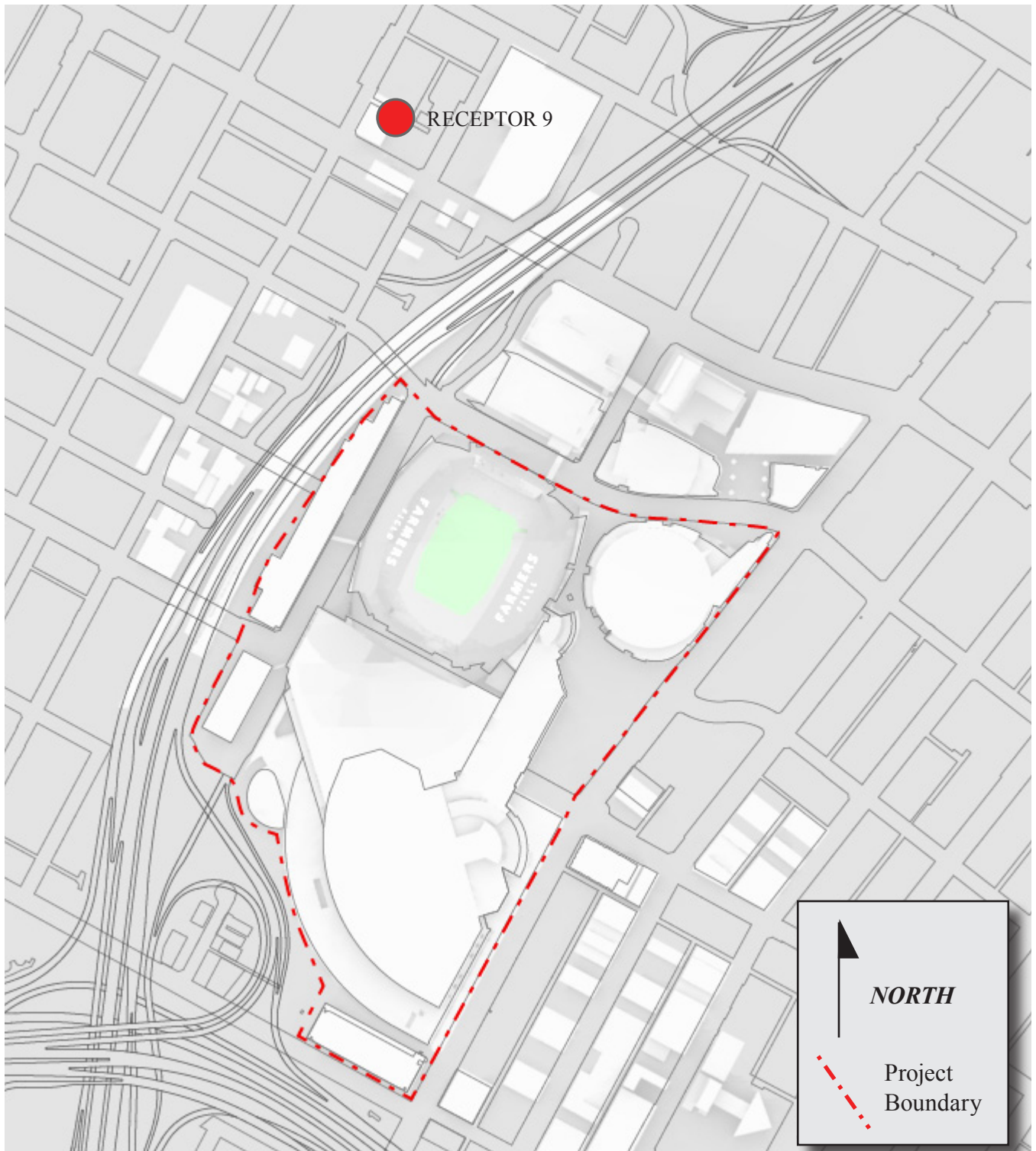


Figure 6.4.2.1 - Plan diagram showing the location of Receptor 9.

Location Classification

Receptor 9 is an educational use that operates primarily during the daytime hours and thus is not considered a light sensitive use based on the Los Angeles CEQA Thresholds Guide.

Predicted Illuminance Values

Table 6.4.9.1 shows the data for the calculated illuminance values with the Project Design Features applied.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

Figures 6.4.9.2 and 6.4.9.3 show the luminance values measured and calculated.

Context and Views

The receptor view to the Project architectural lighting is not increased, while views to the Project illuminated signage is increased by 2:1. At lower levels the views remain largely obstructed.

Views to field event lights are unimpeded and seen through clear ETFE. This is not a sensitive receptor, and does not constitute a significant impact with respect to glare.

Figure 6.4.9.4 shows a plan diagram of the signage impact areas near Receptor 9 with the Project Design Features for Illuminated Signage applied. Figure 6.4.9.5 shows a perspective view of visible signage for reference.

Table 6.4.9.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Receptor 9 Location			
	Illuminance fc	lux	% of total	% Δ of measured*
Event Center Architectural Lighting	0.03	0.3	11%	0.6%
Event Center Field Event Lighting	0.04	0.4	15%	0.9%
New Hall Architectural Lighting	0.00	0.0	0%	0.0%
Garages (Bond, LA Live Way) Lighting	0.00	0.0	0%	0.0%
LED Illuminated Changeable Signage	0.18	1.9	71%	3.9%
Static Illuminated Signage	0.01	0.1	3%	0.1%
Total Illuminance at Receptor	0.26	2.75	100%	6%
* The percent change at Receptor 9 is based on the measured value of 4.6 fc (49.5 lux) during an Event.				

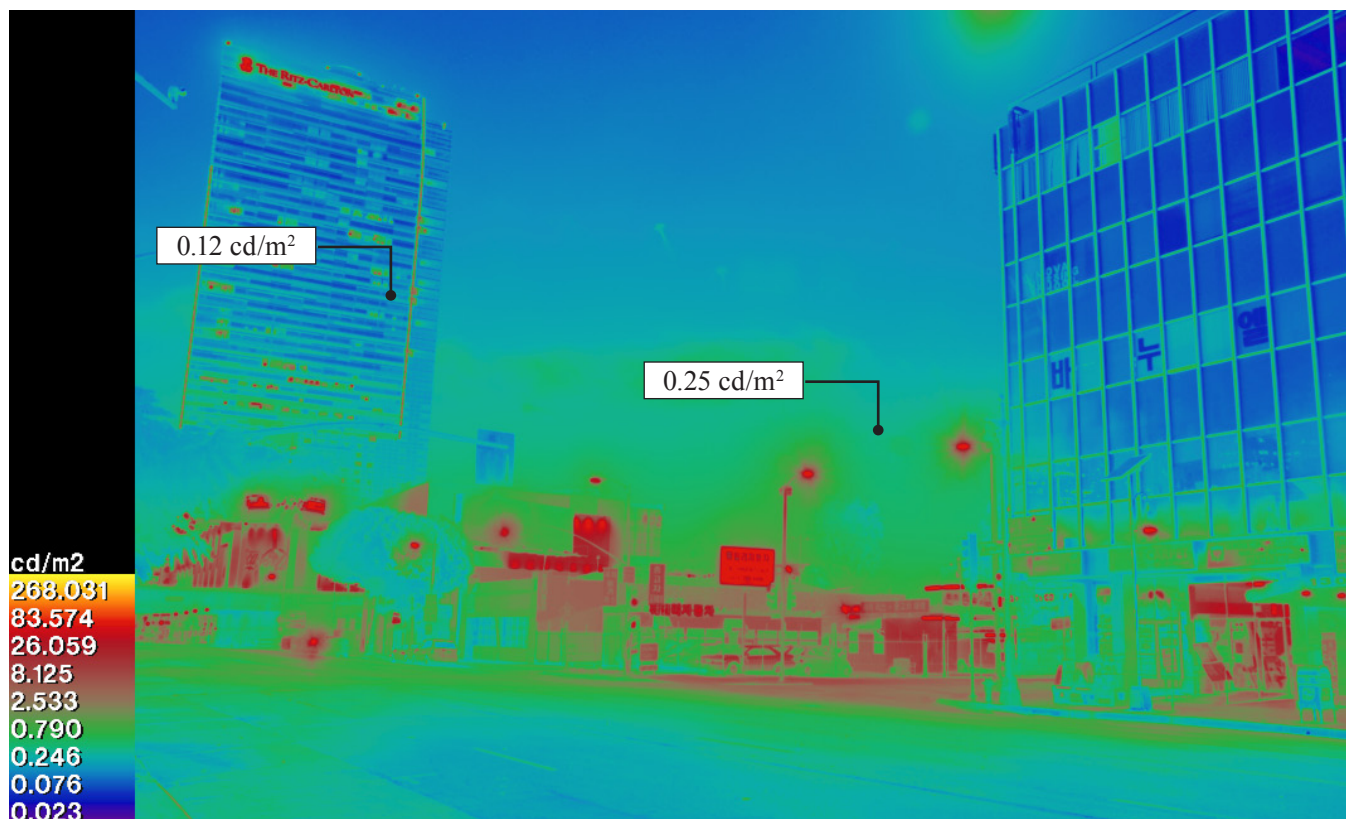


Figure 6.4.9.2 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated.

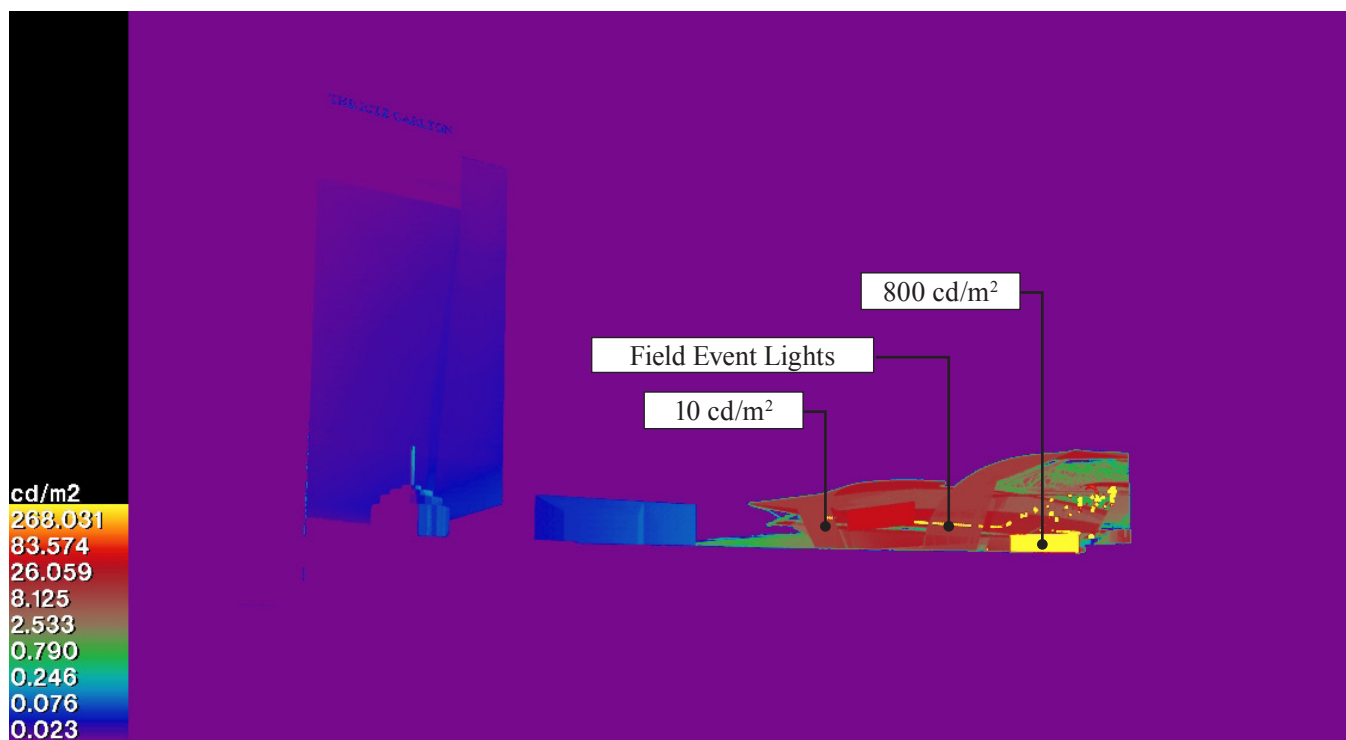


Figure 6.4.9.3 - Radiance analysis showing luminance values from Receptor 9 for the Proposed Project with Project Design Features applied.

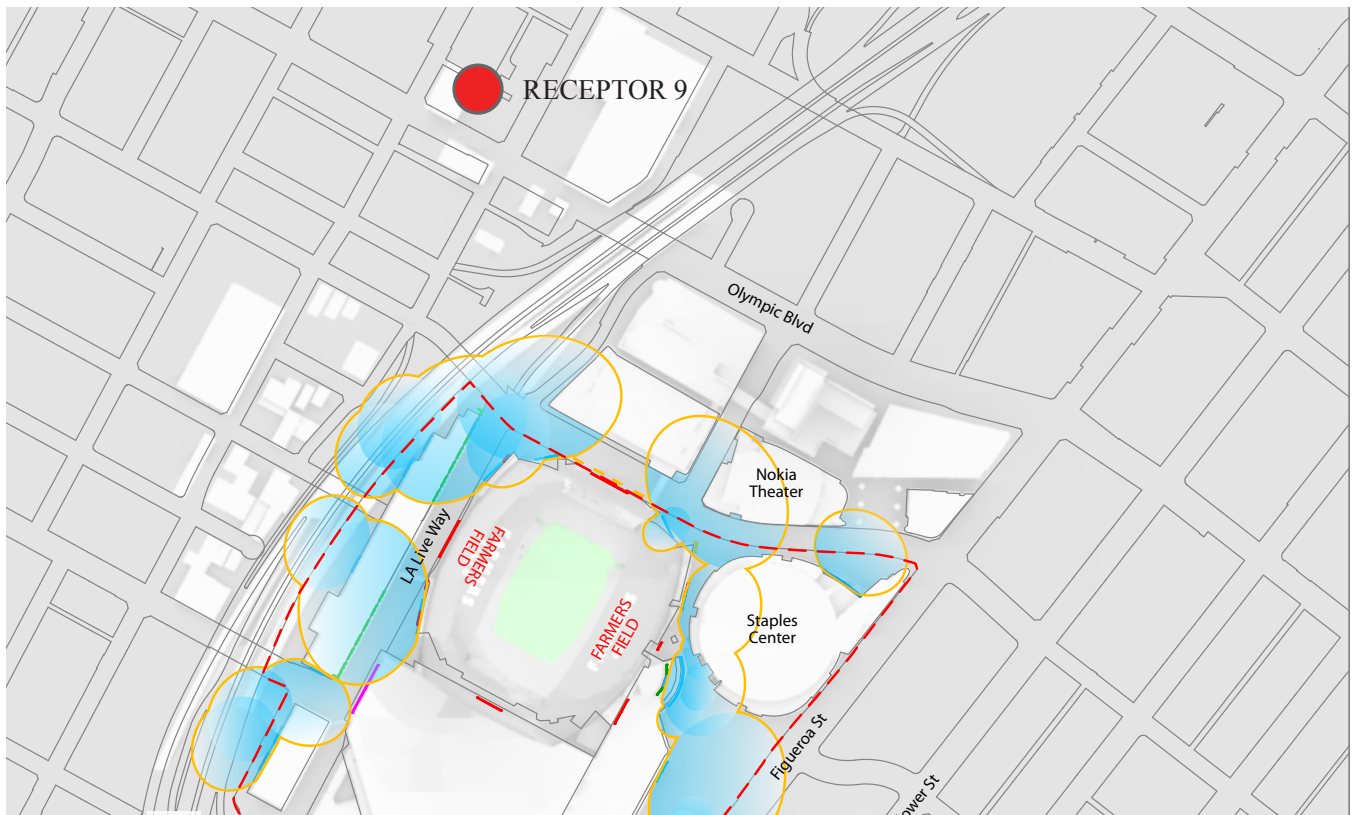


Figure 6.4.9.4 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Self Illuminated

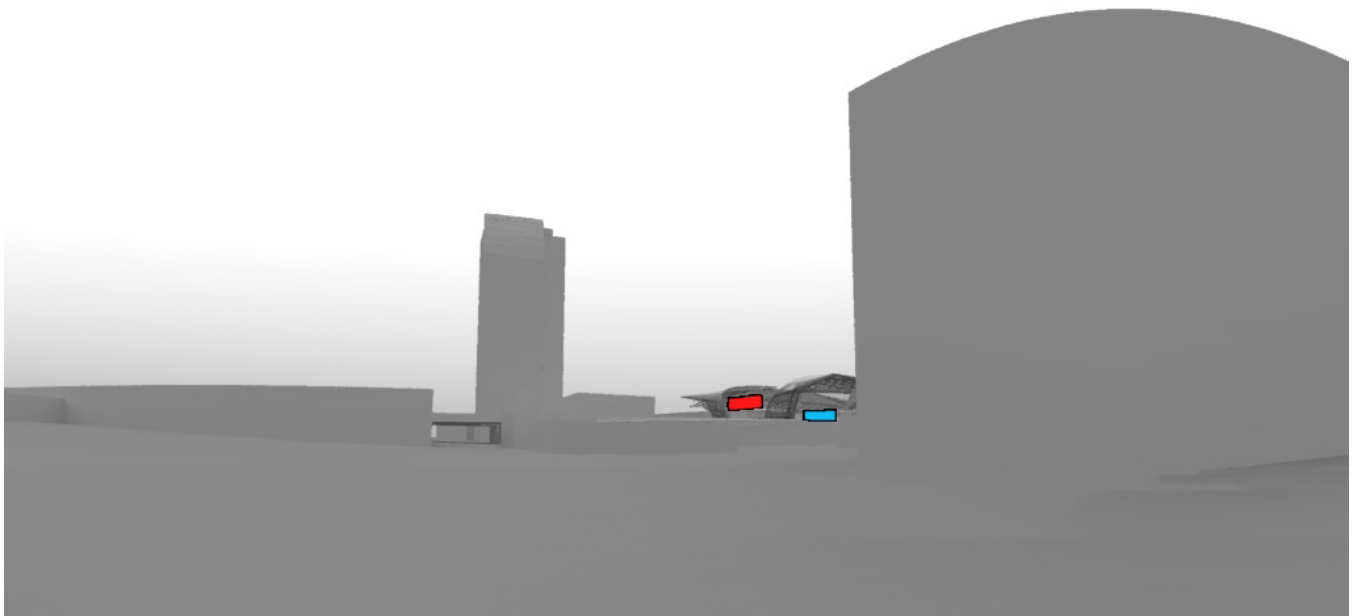


Figure 6.4.9.5 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.4.10 Receptor 10 Assessment

The southeast corner of Figueroa Street and Pico Boulevard, near the residential building on the sidewalks was selected as Receptor 10.

Figure 6.4.1.1 shows the location of Receptor 10 with respect to the Project site.

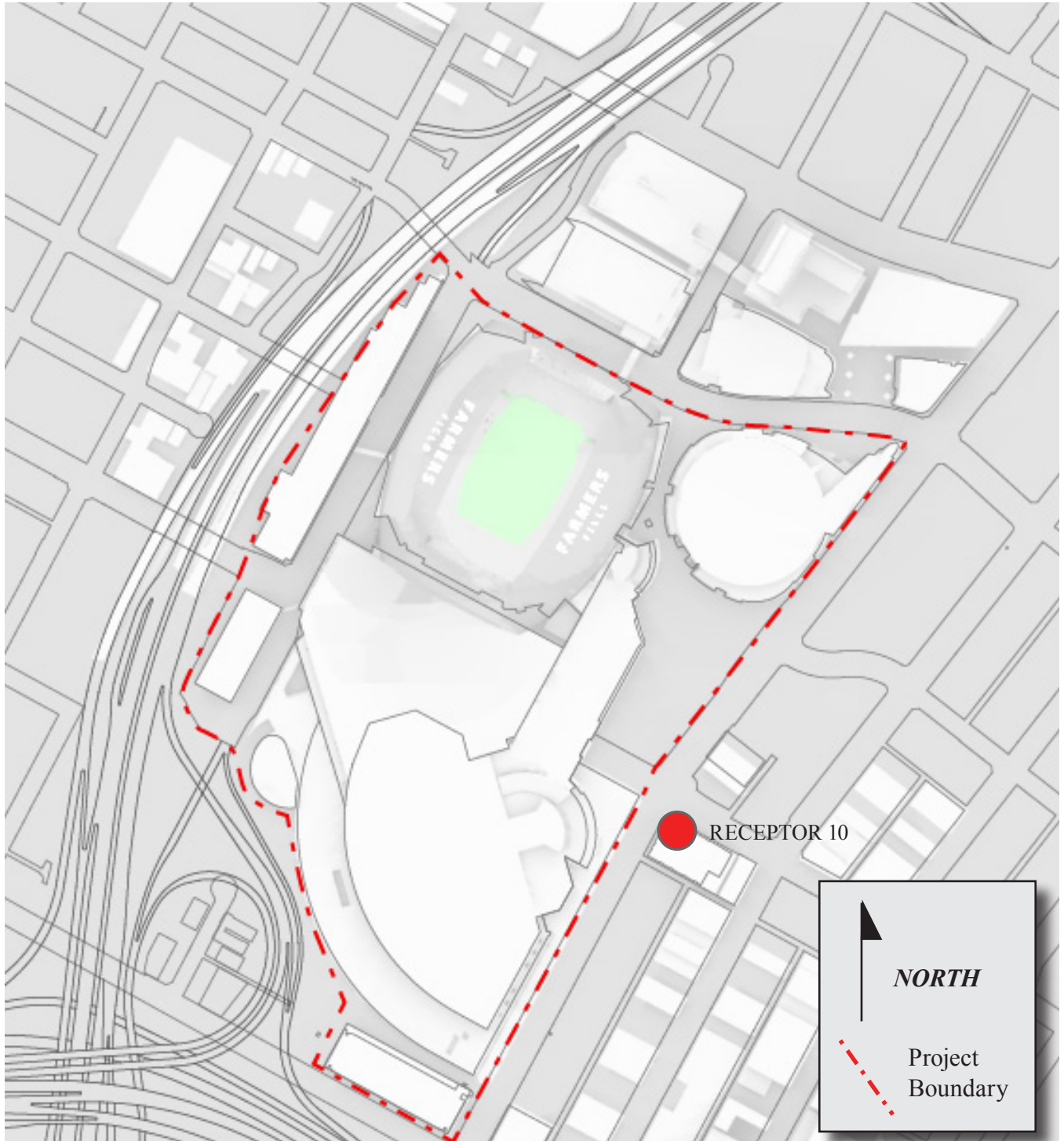


Figure 6.4.2.1 - Plan diagram showing the location of Receptor 10.

Location Classification

Receptor 10 is a residential location and is considered a light sensitive use based on the Los Angeles CEQA Thresholds Guide.

Predicted Illuminance Values

The illuminance values from architectural elements of the Proposed Project do not exceed the 21.5 lux (2 footcandle) threshold at this Receptor.

The illuminance values from signage elements of the Proposed Project do not exceed the 32.3 lux (3 foot-candle) threshold at this Receptor.

Table 6.4.10.1 shows the data for the calculated illuminance values with the Project Design Features applied. Variation in light levels due to elevation at Receptor 10 are negligible due to the overall building height representing less than 1% variation in distance from the majority of project light sources.

Luminance and Contrast

With the Project Design Features applied, the facade luminances visible from this receptor do not exceed 10 cd/m².

With the Project Design Features applied, illuminated signage luminances visible from this receptor do not exceed 800 cd/m².

Figures 6.4.10.2 and 6.4.10.3 show the luminance values measured and calculated.

Context and Views

The receptor view to the Project architectural lighting is not increased significantly, while views to the Project illuminated signage is increased by 9:1.

Figure 6.4.10.4 shows a plan diagram of the signage impact areas near Receptor 10 with the Project Design Features for Illuminated Signage applied. Figure 6.4.10.5 shows a perspective view of visible signage for reference.

Table 6.4.10.1 - Predicted illuminance values from computational analysis with Project Design Features. All illuminance values are calculated aimed at the light sources.

Contributing Components	Receptor 10 Location			
	Illuminance		% of	% Δ of
	fc	lux	total	measured*
Event Center Architectural Lighting	0.01	0.1	1%	0.4%
Event Center Field Event Lighting	0.00	0.0	0%	0.0%
New Hall Architectural Lighting	0.00	0.0	0%	0.0%
Garages (Bond, LA Live Way) Lighting	0.00	0.0	0%	0.0%
LED Illuminated Changeable Signage	0.63	6.8	66%	16.4%
Static Illuminated Signage	0.31	3.3	32%	8.0%
Total Illuminance at Receptor	0.95	10.22	100%	25%
* The percent change at Receptor 10 is based on the measured value of 3.84 fc (41.3 lux) during an Event.				

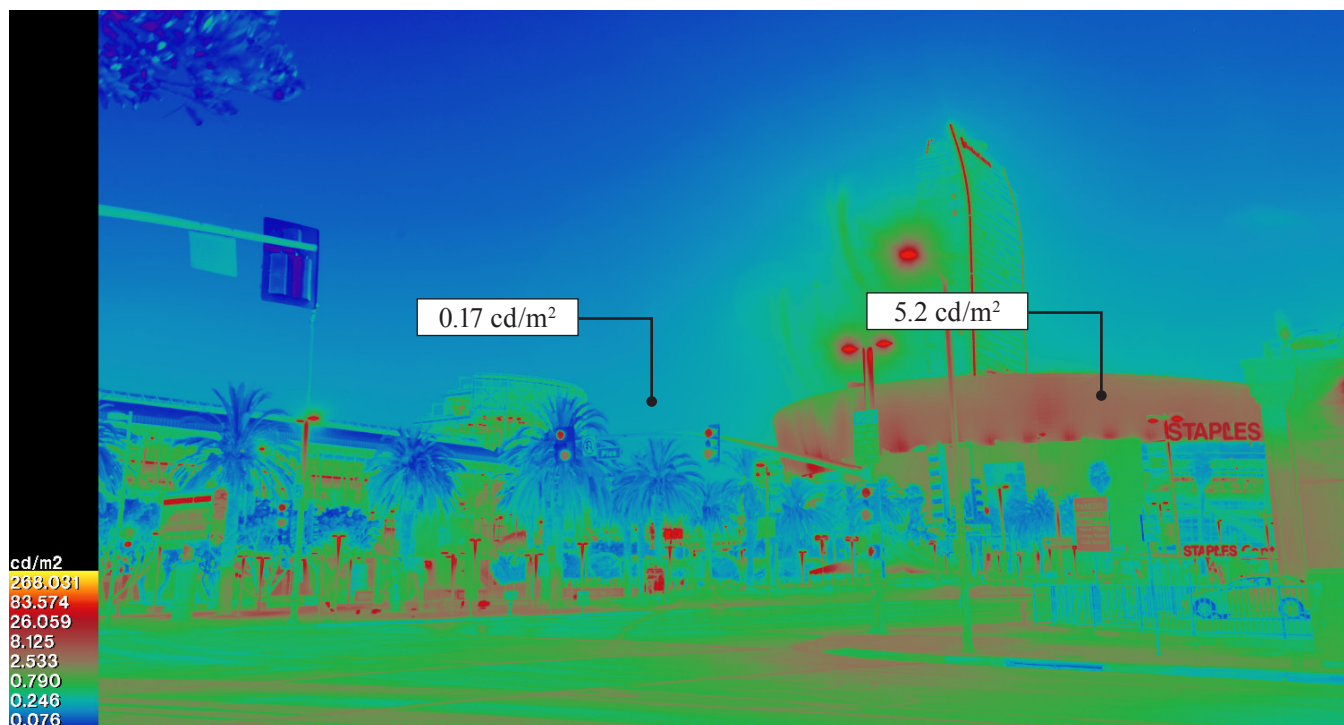


Figure 6.4.10.2 - Image from measurement location calibrated with luminance and scaled to color (pseudo-color) with specific luminance values indicated.

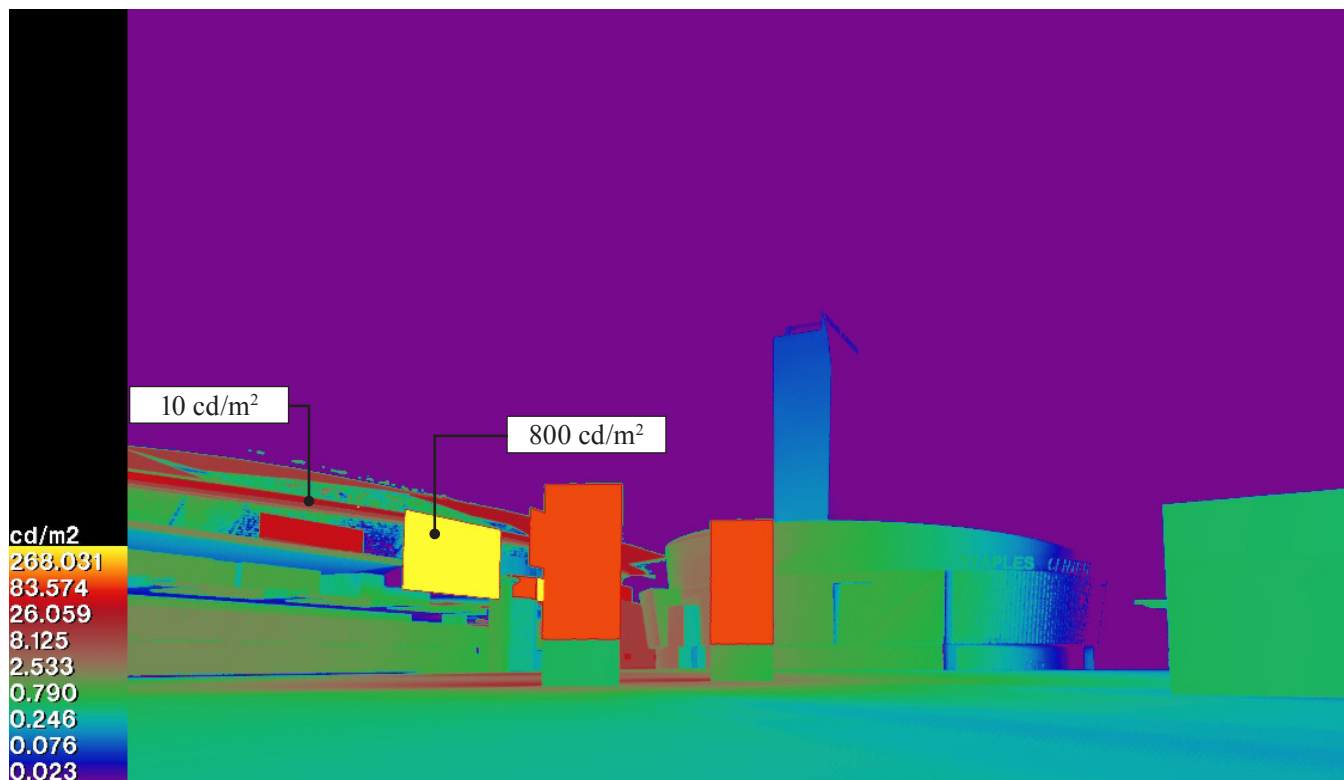


Figure 6.4.10.3 - Radiance analysis showing luminance values from Receptor 10 for the Proposed Project with Project Design Features applied.

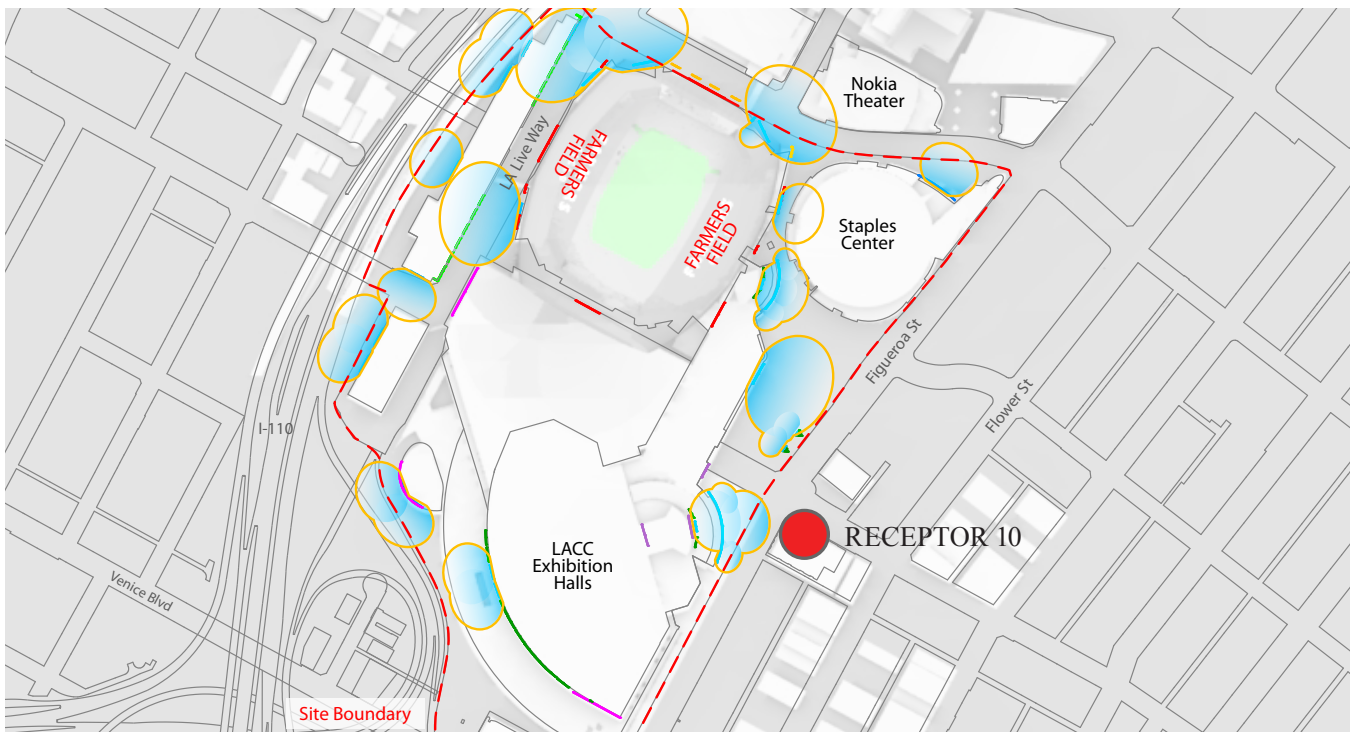


Figure 6.4.10.4 - Plan view of the Proposed Project site showing the estimated potential extent of 32.3 lux (3 footcandle) light levels from the LED signs emitting 800 cd/m². The orange outline designates the limit of the threshold light level, and the blue area exceeds this value.

Signage Type Legend: ■ Changeable LED ■ Front Lit ■ Self Illuminated

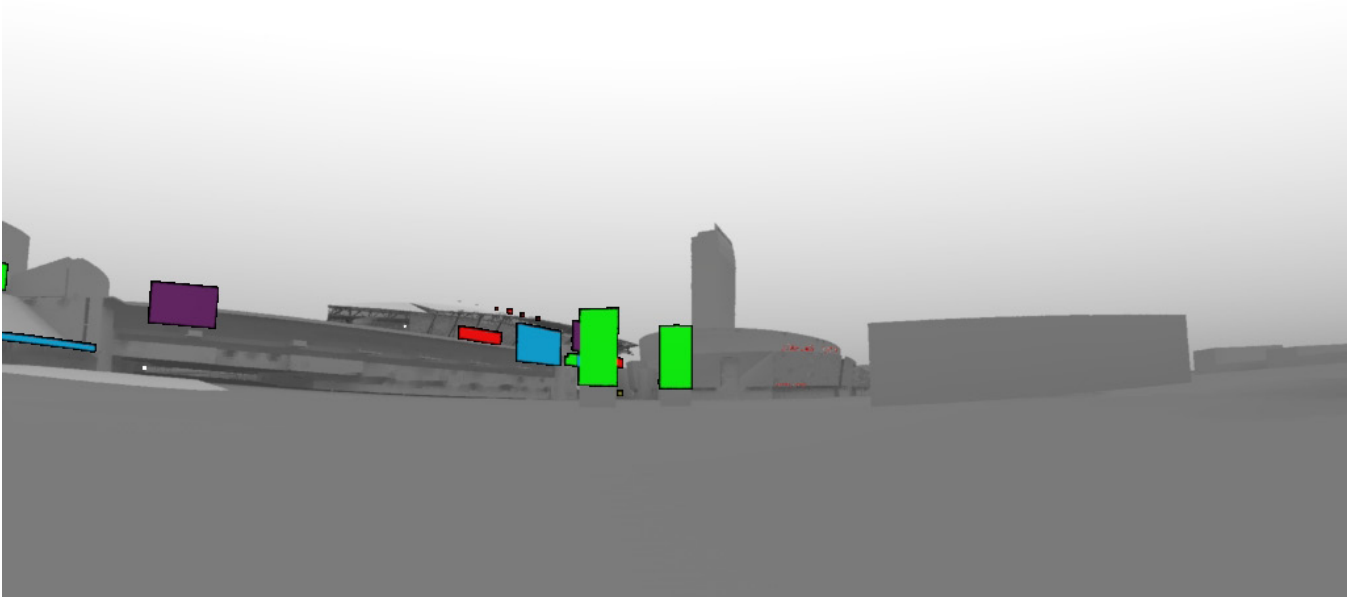


Figure 6.4.10.5 - Perspective view of the Project Site from the Receptor showing the visible signage.

6.5 Impacts of Other Lighting Consideration

The previous sections addressed impacts of the architectural lighting and signage illumination as part of the Project, however, other lighting sources may create potential impacts. This section will provide an overview of the potential impacts from the following:

- Temporary lighting internal and external to the Event Center
- Cloud cover and atmospheric conditions that increase ambient light levels, by reflecting more light toward the ground.
- Sky-tracker ‘searchlights’ when used temporarily during events emit high intensity focused beams.
- Increased motor vehicle presence creates more opportunities for headlight sources to be visible to surrounding areas.
- Construction lighting.
- Sky Glow

6.5.1 Special Event Lighting

Temporary lighting associated with special events occurring on the Proposed Project Site and within the Event Center, as outlined in Section 5.5, represent potential sources of light that constitute an unknown lighting condition, that is unique to individual events. This section outlines the potential impacts with respect to spill light (illuminance at Receptors and beyond the Project Boundary) as well as glare.

Special Event Lighting Spill Light Consideration

Special event lighting associated with productions internal to the Event Center can increase the illuminance levels experienced throughout the Project Site and beyond the Project boundary. Receptor 8 and the hotel below the Ritz Carlton residences, are most susceptible to these temporary installations due to their proximity to the site. The south and south-west faces of the Ritz Carlton are most susceptible to increases in illumination from the Project site due to their orientation and their elevated vantage point of a production, or exhibition, sporting event.

Special event lighting external to the stadium is likely to be set up in Gilbert Lindsey Plaza. In this instance, Receptor 8 and Receptor 10 will be most impacted by increased illuminance levels due to their proximity to the Project Site.

In both instances (internal or external to the Event Center) it is unlikely that the illuminance intensities associated with temporary special events would exceed a thresholds of significance, with the exception of the limits applicable to the Project Boundary. Temporary luminaires in close proximity to the Project boundary have the potential to cause spill light conditions in excess of the 8 lux threshold of significance. Pyrotechnics also have the possibility of exceeding the thresholds for spill light, despite the temporary and intermittent nature of the light emission. Therefore, it is conservatively concluded that temporary special event lighting could result in significant impacts with respect to spill light.

Special Event Lighting Glare Consideration

Special event lighting associated with productions occurring within the Event Center may be projected or aimed such that light is directed out of the Event Center. These lights represent possible sources of light that constitute a variable light emission condition that is unique to individual events. These sources represent a possible source of glare that can create a significant impact when viewed directly by Receptors beyond the Project Boundary. The foreseeable duration of these events is expected to be limited to a fraction of an evening. Pyrotechnics has the possibility of creating a significant impact with respect to glare, despite the brief and intermittent nature of the light emission. Therefore, it is conservatively concluded that temporary special event lighting could result in significant impacts with respect to glare.

6.5.2 Cloud Cover Impact on Receptor Points

Cloud cover will influence light emissions from the site by scattering upward directed light. Upward directed light from the site includes the sports lighting reflected off the stadium field, backlighting of the stadium roof, rotating sky-tracker lights, facade lighting, and general site lighting that reflects off the ground. The scattered light from these sources is proportional to the the height of the cloud layer (see cloud ceiling definition below) and the albedo, or reflectance, of the cloud due to moisture content.

Analysis was undertaken to determine the sensitivity of the cloud ceiling on receptor point illuminance calculations. The cloud ceiling is the height above the ground of the base of the lowest layer of cloud that covers more than half the sky (International Civil Aviation Organization definition¹). For the purpose of this analysis, cloud albedo was assumed to be 80 percent (most sourced indicate cloud albedo ranges from 10 percent to 90 percent) while the cloud ceiling height was varied from 0 to 7,000 feet above ground level. Only the stadium lighting (field lighting and roof lighting) was included in the analysis, as these are the primary potential sources of upward illumination at the Proposed Project site.

The analysis indicates that cloud cover can cause up to a 1.2 fc increase at the receptor points, above and beyond what is measured on a clear night. Each receptor point experiences a maximum delta at different cloud ceiling heights, but most peak for 400 to 1,000 feet cloud ceilings. The increased illuminance intensity experienced at all receptors is increasingly negligible at cloud heights at or exceeding 5,000 feet. This analysis is summarized in Figure 6.5.1.1.

Event lighting at full output, in combination with low-ceiling clouds, has the potential to create a significant impact, but only under specific climatic conditions.

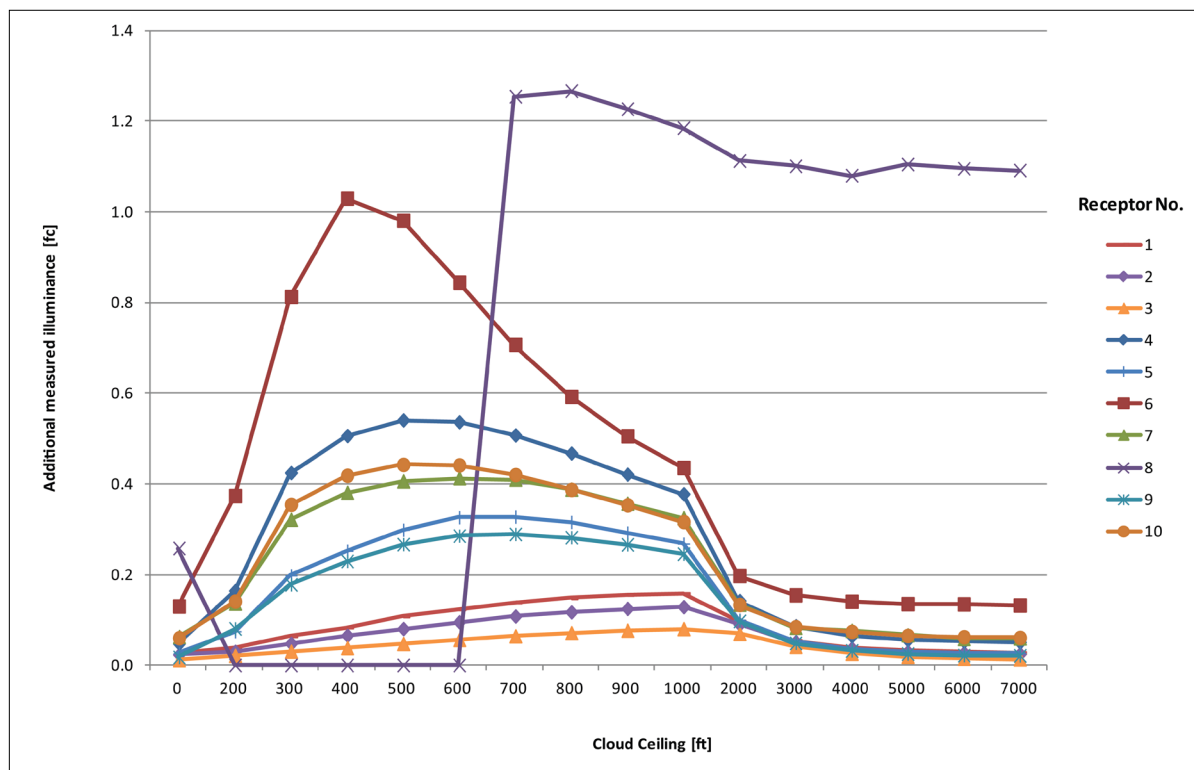


Figure 6.5.1.1 - Incremental change to illuminance levels resulting from varying cloud ceiling heights. The line types are designated on the right side of the Figure, with each number representing a Receptor.

¹ As defined by the International Civil Aviation Organization. Reference: Aerodrome Meteorological Observation And Forecast Study Group (AMOFSG) Eighth Meeting, Melbourne Australia, 15-18 February 2010 (AMOFSG.8.IP.005.5.en.doc).

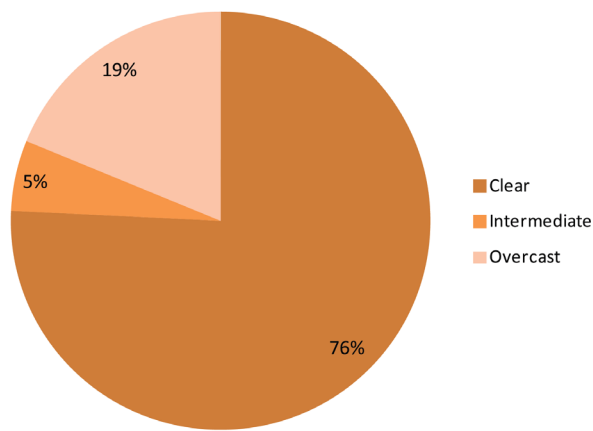


Figure 6.5.1.2 - Frequency of sky condition in Los Angeles during night time only (source: US Department of Energy climate data for the Los Angeles International Airport)

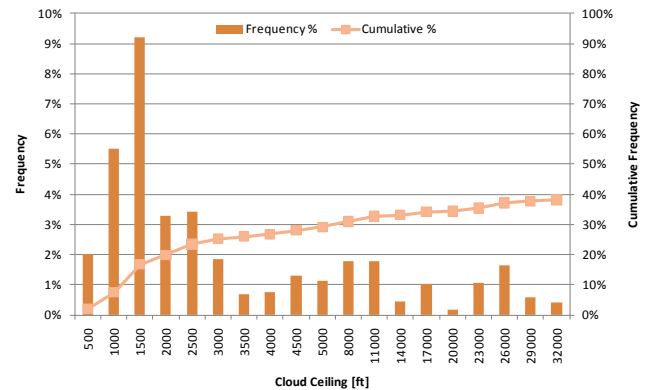


Figure 6.5.1.3 - Frequency of varying cloud ceiling heights during night time only (source: US Department of Energy climate data for Los Angeles Airport)

Climate analysis for Los Angeles was undertaken to determine the most frequent sky condition and cloud ceiling height for the project site. According to the Los Angeles climate data, skies are mostly clear for the majority of time (approximately 75 percent) and partly cloudy to overcast 25 percent of the time. This climate data is shown in Figure 6.5.1.2. The 1,000 to 1,500 feet elevations are the most frequent cloud ceiling heights in Los Angeles, occurring 5.5 percent and 9 percent of night time hours, respectively. At the most common cloud ceiling height (1,000 feet to 1,500 feet), most receptor points are below their maximum delta as shown in the Figure 6.5.1.3.

6.5.3 Sky-tracker ‘Searchlights’ Impact Assessment and Project Design Feature

The Sky-tracker luminaires that may potentially be used during events at the Project Site have center beam candlepower intensities that exceed 10,000 candelas. These luminaires must be controlled such that they are not aimed at the Ritz Carlton Residences and hotel tower. This high intensity beam would exceed the threshold of significance if aimed at the tower.

To avoid the potential for a significant impact, strict regulation on the aiming of these luminaires is required to prevent the high intensity beam from striking any building facades. The aiming constraints presented here are recommended for use as a **Project Design Feature** and are outlined in Section 5.3.2 of this document.

The aiming constraints are shown diagrammatically in Figure 6.5.3.1. and Figure 6.5.3.2.

6.5.4 Assessment of Headlight Nuisance Glare in Parking Garages

Headlights associated with vehicular traffic can be a source of discomfort and potential disability glare when viewed from elevated adjacencies. The new LA Live Way and Bond Garages are multi-story structures that will have vehicles at elevations that may be visible from Project adjacencies.

The most intense headlights on vehicles use controlled optics to reduce glare while driving. When automobiles are elevated in the Project garages, these intense headlights can produce over 3,000 lumens of output that are directed laterally. Most vehicle headlights are located at 24” above the ground. Any project features between an elevated driving surface and 30” above that surface can address the majority of glare associated with headlights. The **Project Design Feature** outlined in Section 5.3.1 of this document will require that the proposed parking structures be designed to shield headlights from views external to the Bond Street and LA Live Way garages for the facades adjacent to Interstate 110.

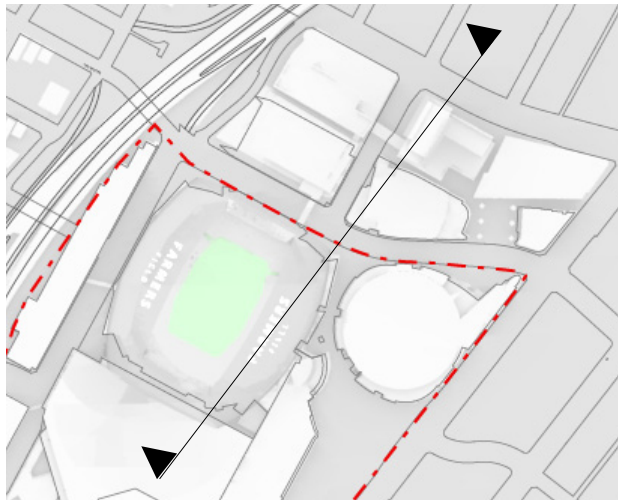


Figure 6.5.3.1 - Key plan diagram showing section cut for Figure 6.5.2.2.

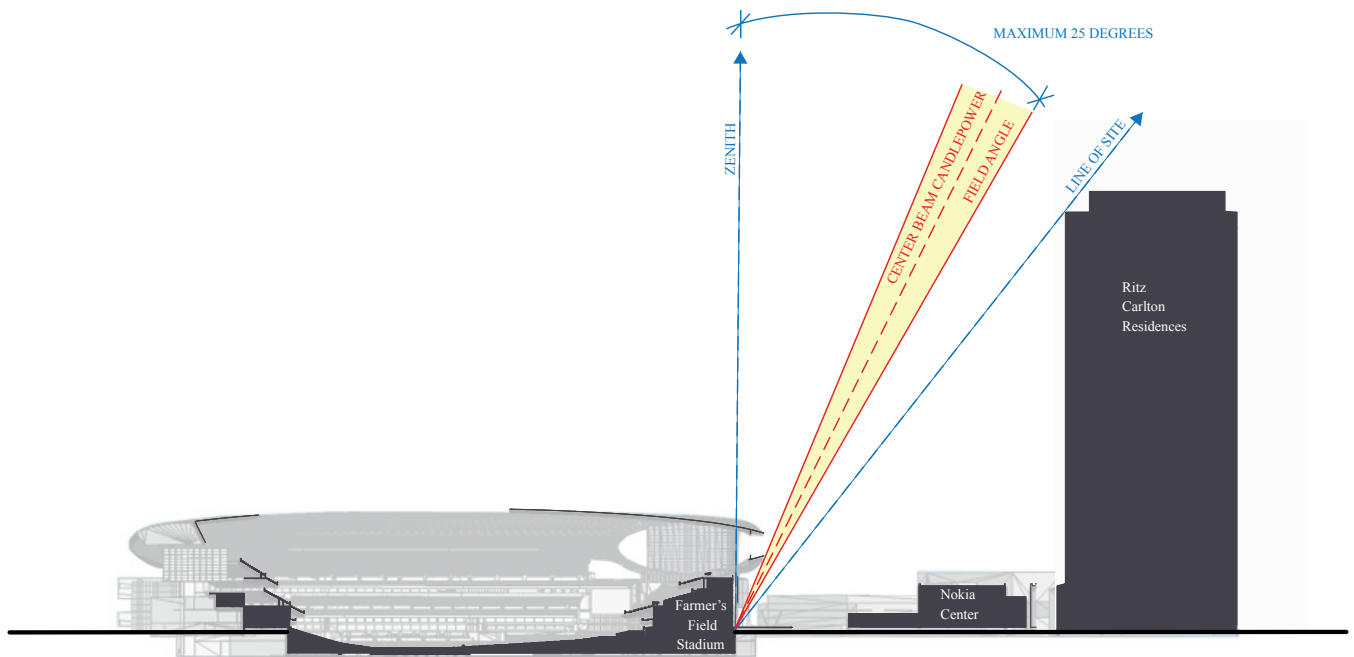


Figure 6.5.3.2 - Skytracker 'Searchlight' aiming diagram shown in section.

6.5.5 Sky Glow

The night time events that do occur within the Event Center are likely to be limited in duration and frequency to the extent that observations of the night sky can be made in the absence of Event lighting. The contribution of lighting emissions for the Project Site is less than significant given the urban context of the Project and the current levels of light pollution experienced in downtown Los Angeles. Additionally, permanent lighting equipment is aimed and shielded in an effort to limit contributions to the night sky. Refer to the Project Design Features denoted in Section 5 for proposed shielding and aiming requirements.

6.5.6 Construction Lighting

Temporary light sources associated with interim construction conditions, or Project construction, would be shielded and/or aimed so that no direct beam illumination is aimed outside of the Project Site. However, construction lighting would not be so limited to compromise the safety of workers involved in the construction, or the safe operation of equipment associated with construction activities. Due to this requirement for safety, significant impacts beyond the Project Boundary may occur. Foreseeable temporary lighting for the Proposed Project is as follows:

- Temporary lighting will be used for the construction and potential repair, of Project facilities, as required for safe construction at the Project site. Construction light sources provided for the safety of workers, when located at elevations of 80 feet or higher on the Event Center (above the parking garages), will be visible from beyond the Project boundary. These lights have the potential to create a significant impact with respect to glare, to sensitive receptors to the west and north of the Project site. Therefore, it is conservatively concluded that temporary lighting could result in significant impacts with respect to spill light and glare until construction activities are contained within the bowl of the Event Center.
- Emergency lighting, or temporary supplemental lighting may be used for repair or construction on the Project Site by City or government agencies. Construction light sources located at grade near the project boundary provided for the safety of workers may be required to illuminate areas that cause spill light beyond the project boundary. Therefore, it is conservatively concluded that these types of temporary lighting could result in significant impacts with respect to spill light and glare.
- Temporary supplemental lighting may be provided by public agencies for the purpose of directing or navigating vehicular traffic. Light sources located within the Project boundary, used to illuminate adjacent right-of-ways, are likely to spill light beyond the Project boundary. Therefore, it is conservatively concluded that these types of temporary lighting could result in significant impacts with respect to spill light and glare.

6.6 Mitigation Measure Recommendations

Based on the analysis above, this section provides an overview of the mitigation recommendations and evaluates the impact of these recommendations.

6.6.1 Field Event Lighting Glare Mitigation

Luminaires used for field lighting within the Event Center shall be aimed, shielded, or screened from view in an effort to prevent the Glare Rating from exceeding 55 at all residences that have a direct line of sight to the Event Center's Spectator Event luminaires located within a one-mile radius of the Project Site.

Prior to the issuance of the first building permit for the Event Center structure, the Applicant shall prepare a study of the Glare Ratings for all residences that have a direct line of sight to the Event Center's Spectator Event luminaires located within a one-mile radius of the Project Site.

For those residences located as specified above that exceed a Glare Rating of 55, the Applicant shall offer to install, at the Applicant's expense, window coverings that reduce the glare rating to a level of 55 or below. For those locations that elect not to implement this mitigation measure, a significant and unavoidable impact would occur during those times when the Field Event luminaires are in use.

Glare ratings shall be assessed per the requirements and recommendations contained within CIE 112:1994.

6.6.2 Construction Lighting Mitigation

Nighttime construction is required for the Proposed Project in order to achieve the Project Objectives. Thus, no feasible mitigation measures beyond the project design features exist to reduce the potential Proposed Project construction lighting impacts to a less than significant level.

7. Conclusion

This technical report has been provided to assess if, and where, future light emissions will be significant to properties and inhabitants surrounding the Proposed Project. A survey of the existing conditions was undertaken at specifically chosen receptors to fully understand the exterior lighting context of the Project site, and the surrounding neighborhoods. These receptors were then used to establish a benchmark for the analysis of the Proposed Project lighting emissions.

Project Design Features were developed and analyzed to validate that their implementation can prevent significant impacts from light emissions.

7.1 Overview of Project Design Features

The analysis results demonstrate that the Project Design Features provide a means to reduce impacts under clear sky conditions for light emissions from the Proposed Project. However, receptors that have unimpeded views to the field event luminaires would be required to demonstrate a Glare Rating assessment compliance with the Project Design Features, or will otherwise constitute a significant impact with respect to glare. In addition, given the range of potential temporary event lighting within and exterior to the Event Center, impacts from temporary event lighting are conservatively considered to be significant with respect to glare and spill light.

The following sections summarize the Project Design Features recommended for implementation.

7.1.1 Architectural Project Design Features

1. **Event Center Architecture:** The architectural design of the Event Center within the Proposed Project reduces the potential for glare and spill light.
2. **Screening on Parking Garages:** Architecture will minimize the spill light from luminaires within open structure buildings, and reduce views of automobile headlights from vantage points external to the garage.
3. **Building Facade Lighting Limitations:** The maximum measurable luminance of the illuminated building facade will not exceed 40 cd/m². An area weighted average of field measurements will not exceed 10 cd/m² for any single contiguous facade area greater than 7,500 square feet in area.
4. **Plaza Lighting Limitation:** Architectural lighting shall be designed to not exceed 10 fc (average, horizontal at the ground) within Gilbert Lindsey Plaza and other outdoor plaza areas on the within the Proposed Project.

7.1.2 Luminaire Project Design Features

1. **Illuminance Restriction:** Illuminance from specified light sources shall not exceed 21.5 lux (2.0 footcandles) at the property line of the nearest residentially zoned property.
2. **Facade Luminaire Restrictions:** Luminaires illuminating the building facade, with intensities greater than 10,000 candelas shall be shielded from view beyond the Project site boundary.
3. **Exterior Luminaire Restrictions:** Luminaires not illuminating the building facade, with intensities greater than 10,000 candela, shall be shielded or rated as cut-off per the IESNA.
4. **Field Event Luminaire Restrictions:** Luminaires used for field event lighting within the Event Center shall be aimed, shielded, or screened from view so that the Glare Rating shall not exceed 45 for motorists and vehicles operated on roadways.
5. **Luminaires in Exposed Structures:** Luminaires within the Bond Street & LA Live Way garages

shall be equipped with screening measures that reduce light spill.

6. **Restrictions for Drivers' Visibility:** Luminaires shall be shielded, reduced in intensity, or otherwise protected from view to comply with the California Motor Vehicle Code.
7. **Sky-Tracker "Searchlights":** The regulation on the aiming of these luminaires is required to prevent the high intensity beam from striking any building facades.

7.1.3 Illuminated Signage Project Design Features

The following list of illuminated signage design and specification constraints would be implemented and would ensure that no significant impacts result from illuminated signs.

1. **Illuminance Restriction:** Illuminance from signage shall not exceed 32.3 lux (3.0 footcandles) at the property line of the nearest residentially zoned property.
2. **Luminance Restriction:** Changeable, or animated, LED signs shall be permitted so long as the measurable luminance does not exceed 800 cd/m².
3. **Restrictions for Drivers' Visibility:** Self-illuminated signs and/or luminaires intended to illuminate signs shall be shielded, or reduced in intensity, or otherwise protected from view to comply with the California Motor Vehicle Code.

7.1.4 Temporary Construction Lighting Project Design Feature

Temporary light sources associated with interim construction conditions, or Project construction, would be shielded and/or aimed so that no direct beam illumination is aimed outside of the Project Site. However, construction lighting would not be so limited to compromise the safety of workers involved in the construction, or the safe operation of equipment associated with construction activities.

7.1.5 Special Event Lighting Within the Event Center

Special event lighting utilizing a Sky-tracker luminaire, that is aimed out of the open roof structure shall be aimed within 25 degrees of zenith to minimize the potential for a significant impact.

7.1.6 Special Event Lighting External to the Event Center

All luminaires installed for special events on a temporary basis on the Project Site must be aimed such that the direct beam illuminance is directed at the activity or object within the Project boundary that requires illumination.

7.1.7 Interior Lighting Project Design Feature

Interior lighting shall be designed, specified, and installed such that the maximum candela direct beam illuminance (from luminaires) is not directed out of the building envelope.

7.2 Special Considerations

In addition to the Project Design Features listed above, some additional special considerations for lighting were addressed in the analysis. Temporary lighting, climatic variability and the operation of Sky-tracker luminaires are addressed by these considerations.

7.2.1 Special Lighting

Additional lighting not provided for as part of the Proposed Project, but associated with installation requirements of temporary special events creates possible conditions where light emissions can create significant impacts with respect to glare and spill light. Shielding of light sources, and aiming luminaires within the

Project site is recommended to limit the potential for significant impacts associated with glare and light trespass.

7.2.2 The Ritz-Carlton at LA Live and Climatic Variability

The Hotel and lower floors of the Residences at the Ritz-Carlton are likely to exceed the significant threshold for lighting when low cloud ceilings with high albedo (+50%) are present. This condition assumes that the stadium field is illuminated to +250 (fc) average for an event. Event lighting at full output, in combination with low-ceiling clouds, has a potential to create a significant impact. Upon review of typical atmospheric conditions for Los Angeles, these climatic conditions are likely to occur, in conjunction with the sports lighting being turned on, less than 5% of the year. Nonetheless, these infrequent possible occurrences would be considered significant and unavoidable.

7.2.3 The Ritz-Carlton at LA Live and Potential Glare Associated with Sky-Tracker Luminaires

The Ritz-Carlton Hotel, and Residences, would be subject to glare if the Sky-tracker luminaire sources are not operated in a specific and controlled manner. These luminaires, which are used during major events, must not be aimed at the building. This design consideration constitutes an additional Project Design Feature, that would address the potential for glare from these luminaires and ensure that impacts would be less than significant.

7.3 Mitigation Measures

An overview of the mitigation recommendations are outlined below.

7.3.1 Field Event Lighting Glare Mitigation

Prior to the issuance of the first building permit for the Event Center structure, the Applicant shall prepare a study of the Glare Ratings for all residences that have a direct line of sight to the Event Center's Spectator Event luminaires located within a one-mile radius of the Project Site.

For those residences located as specified above that exceed a Glare Rating of 55, the Applicant shall offer to install, at the Applicant's expense, window coverings that reduce the glare rating to a level of 55 or below. For those locations that elect not to implement this mitigation measure, a significant and unavoidable impact would occur during those times when the Field Event luminaires are in use.

7.3.2 Construction Lighting Mitigation

Nighttime construction is required for the Proposed Project in order to achieve the Project Objectives. Thus, no feasible mitigation measures beyond the project design features exist to reduce the potential Proposed Project construction lighting impacts to a less than significant level.

7.4 Levels of Significance After Mitigation

With the implementation of the proposed project design features and mitigation measure identified above, Proposed Project lighting impacts would be less than significant with regard to light trespass and lighting levels at the analyzed receptors (from both architectural and signage lighting sources); whereas less than significant glare impacts would occur during Project operations from the use of skytrackers, illuminated signage, driver visibility/distraction, building/façade lighting, plaza lighting, headlights within the parking garages, and sky glow.

Significant Proposed Project lighting impacts would occur during construction, and during Project opera-

tions from special event lighting, pyrotechnics, and unusual atmospheric conditions. In addition, while the recommended mitigation would reduce potentially significant impacts with respect to Event Center lighting used to light the playing field, it may not be feasible to achieve a Glare Rating of 55 or less at all locations, and it is possible that some of these locations would not elect to have window covering installed to reduce the Glare Rating. For those locations at which the Glare Rating exceeds 55 that do not elect to have window coverings installed, glare impacts would be significant and unavoidable during those times when the Event Center's luminaires are in use.

Construction lighting impacts would only be significant when Event Center construction lighting occurs at elevations of 80 feet or higher (i.e., above the proposed parking garages) for locations to the west and north of the Event Center. Nighttime construction cannot be avoided in order to complete the Project within the timeframe identified in the Project Objectives.

Temporary lighting during Project operations for productions and special events, including but not limited to traveling shows, concerts, and performances, represents a variety of temporary installations of lighting. The type, intensity, aiming, and distribution of these temporary lights are not able to be clearly identified for all types of events due to the uniqueness of each event and the myriad of different lighting configurations that could be required. Thus, it is not possible to identify with certainty specific mitigation measures that would mitigate impacts from all types of special events that could occur. As such, no feasible mitigation measures beyond the project design features exist that could reduce this impact to a less than significant level.

Light impacts related to pyrotechnic and firework events could only be reduced by eliminating such events. However, the elimination of pyrotechnics and fireworks is not feasible as such features are integral to the fan experience as set forth in the Project Objectives. As such, no feasible mitigation measures exist that could reduce this impact to a less than significant level.

Significant spill light impacts would occur at Receptor Location 8 when low cloud ceilings with high albedo (+50 percent) are present in conjunction with the sports lighting being turned on. These specific conditions are likely to occur less than 5 percent of the year. No feasible mitigation measures have been identified that could reduce this impact to a less than significant level during these infrequent weather events.

Appendix A

IESNA 10th Edition Lighting Handbook excerpts for reference:

Page 26.13

Applications | Lighting for Exteriors

Table 26.4 | Nighttime Outdoor Lighting Zone Definitions

Zone	Outdoor Lighting Situation	Definition
LZ4	High Ambient Lighting	Areas of human activity where the vision of human residents and users is adapted to high light levels. Lighting is generally considered necessary for safety, security and/or convenience and it is mostly uniform and/or continuous. After curfew, lighting may be extinguished or reduced in some areas as activity levels decline.
LZ3	Moderately High Ambient Lighting	Areas of human activity where the vision of human residents and users is adapted to moderately high light levels. Lighting is generally desired for safety, security and/or convenience and it is often uniform and/or continuous. After curfew, lighting may be extinguished or reduced in most areas as activity levels decline.
LZ2	Moderate Ambient Lighting	Areas of human activity where the vision of human residents and users is adapted to moderate light levels. Lighting may typically be used for safety and convenience but it is not necessarily uniform or continuous. After curfew, lighting may be extinguished or reduced as activity levels decline.
LZ1	Low Ambient Lighting	Areas where lighting might adversely affect flora and fauna or disturb the character of the area. The vision of human residents and users is adapted to low light levels. Lighting may be used for safety and convenience but it is not necessarily uniform or continuous. After curfew, most lighting should be extinguished or reduced as activity levels decline.
LZ0	No Ambient Lighting	Areas where the natural environment will be seriously and adversely affected by lighting. Impacts include disturbing the biological cycles of flora and fauna and/or detracting from human enjoyment and appreciation of the natural environment. Human activity is subordinate in importance to nature. The vision of human residents and users is adapted to the darkness, and they expect to see little or no lighting. When not needed, lighting should be extinguished.

Page 26.14

Table 26.5 | Recommended Light Trespass Illuminance Limits

Lighting Zone	Limit in lux ^a	
	Pre-curfew	Post-curfew
LZ4	15	6
LZ3	8	3
LZ2	3	1
LZ1	1	0
LZ0	0.1	0

- a. Maximum initial illuminance on a plane perpendicular to the line of sight to the luminaire(s). Plane located at observer position where light trespass is under review. [7]

Table 26.2 | Exterior Illuminance Recommendations

Applications and Tasks ^a	Notes	Recommended Maintained Illuminance Targets (lux) ^{b, c, d}					
		Horizontal (E _h) Targets			Vertical (E _v) Targets		
		Visual Ages of Observers (years) where at least half are			Visual Ages of Observers (years) where at least half are		
		<25	25-65	>65	<25	25-65	>65
		Category			Gauge	Category	Gauge
ACCENTING	Accenting influences observers' overall brightness perceptions and provides visual relief. Accenting is also used for visual attraction and wayfinding. See 15.1.1.3 Accent Lighting. These are criteria for consideration in any application. Extinguish at curfew.						
• Art	On artwork plane (typically vertical)						see Table 15.2 (typically "Moderate" or "Soft")
• Feature	On wall plane or trees						see Table 15.2 (typically "Moderate")
• Important Focal Point	On focal point plane (typically vertical)						see Table 15.2 (typically "Strong" to "Moderate")
• Performance Areas	E _h @pavement; E _v @5' AFG	see Table 15.2 (typically "Moderate")			see Table 15.2 (typically "Strong" to "Moderate")		
• Perimeter	On wall plane or trees						see Table 15.2 (typically "Soft")
BUILDING ENTRIES	See 22 LIGHTING FOR COMMON APPLICATIONS						
FACADES							
• Facade Details or Features	Key elements or details. Apply strategically to ≤25% of area of building facade. Uniformity ratios are cited here as guides when relatively uniform appearance is desired over the area of application.						
• With Surface Reflectance ≥0.5	Lighter-toned facade materials						
• High Activity ^j							
• LZ4 ⁱ	Apply strategically to ≤25% of area of building facade.	O	100	200	400	Max	
• LZ3 ⁱ (and LZ4 curfew)	Apply strategically to ≤20% of area of building facade.	N	75	150	300	Max	
• LZ2 ⁱ (and LZ3 curfew)	Apply strategically to ≤15% of area of building facade.	M	50	100	200	Max	
• LZ1 ⁱ (and LZ2 curfew)	Apply strategically to ≤10% of area of building facade.	L	37.5	75	150	Max	
• LZ0 ⁱ (and LZ1 curfew)		-	0	0	0		
• Medium Activity ^j							
• LZ4 ⁱ	Apply strategically to ≤25% of area of building facade.	M	50	100	200	Max	
• LZ3 ⁱ (and LZ4 curfew)	Apply strategically to ≤20% of area of building facade.	L	37.5	75	150	Max	
• LZ2 ⁱ (and LZ3 curfew)	Apply strategically to ≤15% of area of building facade.	K	25	50	100	Max	
• LZ1 ⁱ (and LZ2 curfew)	Apply strategically to ≤10% of area of building facade.	J	20	40	80	Max	
• LZ0 ⁱ (and LZ1 curfew)		-	0	0	0		
• Low Activity ^j							
• LZ4 ⁱ	Apply strategically to ≤25% of area of building facade.	K	25	50	100	Max	
• LZ3 ⁱ (and LZ4 curfew)	Apply strategically to ≤20% of area of building facade.	J	20	40	80	Max	
• LZ2 ⁱ (and LZ3 curfew)	Apply strategically to ≤15% of area of building facade.	I	15	30	60	Max	
• LZ1 ⁱ (and LZ2 curfew)	Apply strategically to ≤10% of area of building facade.	H	10	20	40	Max	
• LZ0 ⁱ (and LZ1 curfew)		-	0	0	0		
• With Surface Reflectance <0.5	Darker-toned facade materials						
• LZ4 ⁱ	Apply strategically to ≤25% of area of building facade.	Q	200	400	800	Max	
• LZ3 ⁱ (and LZ4 curfew)	Apply strategically to ≤20% of area of building facade.	P	150	300	600	Max	
• LZ2 ⁱ (and LZ3 curfew)	Apply strategically to ≤15% of area of building facade.	O	100	200	400	Max	
• LZ1 ⁱ (and LZ2 curfew)	Apply strategically to ≤10% of area of building facade.	N	75	150	300	Max	
• LZ0 ⁱ (and LZ1 curfew)		-	0	0	0		
• Medium Activity ^j							
• LZ4 ⁱ	Apply strategically to ≤25% of area of building facade.	O	100	200	400	Max	
• LZ3 ⁱ (and LZ4 curfew)	Apply strategically to ≤20% of area of building facade.	N	75	150	300	Max	
• LZ2 ⁱ (and LZ3 curfew)	Apply strategically to ≤15% of area of building facade.	M	50	100	200	Max	
• LZ1 ⁱ (and LZ2 curfew)	Apply strategically to ≤10% of area of building facade.	L	37.5	75	150	Max	
• LZ0 ⁱ (and LZ1 curfew)		-	0	0	0		

Table 26.2 | Exterior Illuminance Recommendations continued next page

The following calculation is used to determine maximum allowable luminance for facade illumination. This calculation assumes that the facade is a lambertian emitter and that the maximum reflectance of the building facade does not exceed 85%. The maximum illuminance is obtained from Table 26.2 of the IESNA Handbook.

Per Table 26.2

Luminance = L (cd/m ²)	Exitance = M
Reflectance = ρ	Illuminance = E

$L = M/\pi$	$1 \text{ cd/m}^2 = \pi \text{ lms/m}^2$ (*)
$M = E\rho$	(* only for a lambertian surface)

$$L = M/\pi = (E\rho)/\pi = [(150 \text{ lux})(0.85)]/\pi = \mathbf{40 \text{ cd/m}^2}$$

Appendix B

City of Los Angeles Municipal Code excerpts for reference:

- 1. Chapter 9, Article 3, Section 93.0117, Part (b)** (Amended by Ord. No. 171,858, Eff. 1/23/98.) No person shall construct, establish, create, or maintain any stationary exterior light source that may cause the following locations to be either illuminated by more than two footcandles (21.5 lx) of lighting intensity or receive direct glare from the light source:

1. Any exterior glazed window or sliding glass door on any other property containing a residential unit or units.
2. Any elevated habitable porch, deck or balcony on any other property containing a residential unit or units.
3. Any ground surface intended for uses such as recreation, barbecue, or lawn areas on any other property containing a residential unit or units.

EXCEPTIONS: This subsection shall not apply to:

1. Any frosted light source emitting 800 lumens or less.
2. Any other light source emitting more than 800 lumens where the light source is not visible to persons on other residential property.
3. Any new or existing tennis or paddle tennis court exterior light source which conforms to the following:

A. Tennis courts shall be lighted by a maximum of eight horizontally mounted, rectilinear-type, sharp cut-off fixtures shielded in such a manner that the light source cannot be viewable from abutting residential properties. Lamps shall be of the metal halide type of not more than 1,000 watts each, mounted at a height of 20 feet (6096 mm) or less above the court surface and produce not more than 50 footcandles (538 lx) of lighting intensity on the court surface.

B. Paddle Tennis Courts shall be subject to all the provisions of Subparagraph 3A, except that the number of fixtures shall be limited to four.

C. Tennis or Paddle Tennis Court lights shall not be turned on or left on between the hours of 10:00 p.m. and 7:00 a.m., Monday through Friday, and between the hours of 10:00 p.m. and 8:00 a.m., Saturday and Sunday.

D. The light source intensity at locations indicated in this subsection shall not exceed three footcandles (32.3 lx).

4. Decorative lights with individual light sources emitting 300 lumens or less and temporarily installed between November 25 and January 15 of the next year.

5. Emergency lights or temporary lighting sources used for repair or construction as required by governmental agencies.

6. Lighting sources owned or controlled by any public agency for the purpose of directing or controlling navigation, traffic or for highway or street illumination.

7. Aircraft warning lights.

8. Any other light source which is a minimum of 2,000 feet (609.6 m) in distance from any other property with a residential unit or units.

9. Lights that are provided in compliance with Sections 12.21 A.5.(k), 91.6305.2 and 91.8607 of the LAMC. (Amended by Ord. No. 176,775, Eff. 8/1/05, Oper. 8/1/05.)

2. Sec. 14.4.4 General Provisions, Part (e) Sign Illumination Limitations. No sign shall be arranged and illuminated in a manner that will produce a light intensity of greater than three foot candles above ambient lighting, as measured at the property line of the nearest residentially zoned property.

3. Section 12.21 General Provisions, paragraph A, Section 5, Part (k) Lighting. (Amended by Ord. No. 171,858, Eff. 1/23/98.) All lights used to illuminate a parking area shall be designed, located and arranged so as to reflect the light away from any street and any adjacent premises.

EXCEPTION: (Amended by Ord. No. 177,103, Eff. 12/18/05.)

Lights in compliance with Sections 91.6305 and 91.8607 of the Code.

All parking areas and garages provided for three or more dwelling units or guest rooms shall have an average surface illumination of not less than 0.2 footcandles (2.15 lx).

All parking areas and garages provided for three or more dwelling units or guest rooms shall have an average surface illumination of not less than 0.2 footcandles (2.15 lx).

Appendix C

International Commission on Illumination (CIE) 150-2003 excerpts for reference:

Table 2.1 Environmental lighting zone.

Zone	Surrounding	Lighting Environment	Examples
E1	Natural	Intrinsically dark	National parks or protected sites
E2	Rural	Low district brightness	Industrial or residential rural areas
E3	Suburban	Medium district brightness	Industrial or residential suburbs
E4	Urban	High district brightness	Town Centres and commercial areas

Table 2.3 Maximum values for intensity of luminaires in designated directions.

Limits apply to each luminaire 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, i.e. not where momentary or short-term viewing is involved.

Light Technical Parameter	Application Conditions	Environmental Zones			
		E1	E2	E3	E4
Luminous intensity emitted by luminaires (I)	Pre-curfew:	2,500 cd	7,500 cd	10,000 cd	25,000 cd
	Post-curfew hours:	0 cd*	500 cd	1,000 cd	2,500 cd

*Note: If the luminaire is for public (road) lighting then this value may be up to 500 cd.

Table 2.6 Maximum permitted values of average surface luminance.

Light Technical Parameter	Application Conditions	Environmental Zones			
		E1	E2	E3	E4
Building Façade Luminance (L_b)	Taken as the product of the design average illuminance and reflectance factor divided by π .	0 cd/m ²	5 cd/m ²	10 cd/m ²	25 cd/m ²
Sign Luminance (L_s)	Taken as the product of the design average illuminance and reflectance factor divided by π , or for self-luminous signs, it's average luminance.	50 cd/m ²	400 cd/m ²	800 cd/m ²	1000 cd/m ²

NOTE: The values apply to both pre- and post-curfew except that in Zone 1 the value shall be zero post-curfew. The values for signs do not apply to signs for traffic control purposes; these values are given in CIE 74-1988.

The use of signs incorporating lighting which is cyclic or flashing in nature is deprecated in Zones 1 and 2. In any zones such signs should not be positioned close to windows of habitable rooms.

Appendix C

International Commission on Illumination (CIE) 112-1994 excerpts for reference:

Table 3.1

Nine-point glare assessment scale

glare control mark <i>GF</i>		glare rating <i>GR</i>
1	unbearable	90
2		80
3	disturbing	70
4		60
5	just admissible	50
6		40
7	noticeable	30
8		20
9	unnoticeable	10

The scale is reproduced here, not with the purpose of specifying glare restriction limits, but merely to offer, for glare evaluation purposes, insight in the practical meaning of differences in glare ratings. With the aid of the *GR* concept it is possible to find out how much better or worse, as far as glare is concerned, one situation compares with another. For practical reasons *GR* values should only be given between 10 and 90 with two digits and not with decimal fractions. A variation of $\pm 0,5$ in glare rating is equivalent to an experimental accuracy of $\pm 5\%$ in the luminance ratio.

Table 6.1

Area Lighting

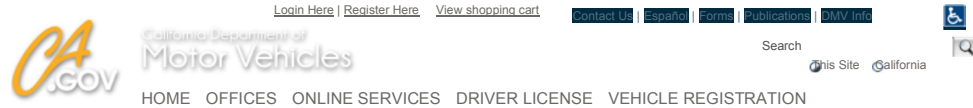
Type of application		<i>GR</i> _{max}
Lighting for		
Safety and Security	Low Risk	55
	Medium Risk	50
	High Risk	45
Movement and Safety	Pedestrians only	55
	Slow Moving Traffic	50
	Normal Traffic	45
Work (*)	Very Rough	55
	Rough - Medium	50
	Fine	45

Table 6.2

Sports Lighting

Type of application	<i>GR</i> _{max}
Lighting for Training Purposes	55
Lighting for Competition Purposes (including CTV broadcasting)	50

(*) For viewing tasks of decisive importance on working areas it may be advisable to use maximum glare rating values of *GR*_{max} 5 units lower than those specified.



V C Section 21466.5 Light Impairing Driver s Vision

Light Impairing Driver's Vision

21466.5. No person shall place or maintain or display, upon or in view of any highway, any light of any color of such brilliance as to impair the vision of drivers upon the highway. A light source shall be considered vision impairing when its brilliance exceeds the values listed below.

The brightness reading of an objectionable light source shall be measured with a 1/2-degree photoelectric brightness meter placed at the driver's point of view. The maximum measured brightness of the light source within 10 degrees from the 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 that when the minimum measured brightness in the field of view is 10 foot-lamberts or less, the measured brightness of the light source in foot-lambert shall not exceed 500 plus 100 times the angle, in degrees, between the driver's line of sight and the light source.

The provisions of this section shall not apply to railroads as defined in Section 229 of the Public Utilities Code.

Added Ch. 968, Stats. 1970. Effective September 14, 1970.

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**FINDING OF EMERGENCY
OF THE
DIVISION OF THE STATE ARCHITECT – STRUCTURAL SAFETY (DSA-SS)
REGARDING THE CALIFORNIA GREEN BUILDING STANDARDS CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11**

The adoption of these regulations or is necessary for the immediate preservation of the public peace, health and safety, or general welfare, as follows:

FINDING OF EMERGENCY:

California Building Standards Commission (CBSC) has received and accepted a petition concerning modifications to mandatory Section 5.106.8, Light Pollution Reduction, in the 2010 California Green Building Standards (CAL Green) Code. The petitioner alleges that compliance with the section would reduce nighttime illumination of building sites to a level that does not meet minimum safety requirements. The petitioner contends that the regulations are unreasonable, arbitrary and capricious and likely to result in muggings and rapes, with victims seeking legal redress from CBSC and individual commissioners. Despite the exceptions for emergency and security lighting in the section, DSA and CBSC staff are in agreement that modifications are needed, and that they should be considered on an emergency basis to avert any danger to public safety that the petitioner has claimed.

BACKGROUND:

The section in question contains mandatory provisions for reducing light pollution from nighttime nonresidential building and site lighting. It makes reference to outdoor lighting regulations of the California Energy Commission, requires additional measures including prohibition of light trespass beyond site boundaries, and provides exceptions for security and emergency lighting. It underwent review by the CBSC Green Building Focus Group, the Green Building Code Advisory Committee, and the public during its development and rulemaking in the 2009 code adoption cycle.

Despite the exposure, the regulations were contested initially by the petitioner to CBSC staff informally and only late in 2010, and staff made changes to language in errata it believed were editorial in nature and would offer temporary mitigation of problems the petitioner identified. CBSC staff has also proposed the regulations for further improvement in this proposed emergency, including making them voluntary now and mandatory for the 2010 code adoption cycle. The Green Building Code Advisory Committee recommended that DSA and CBSC work with the petitioner on the proposal, and subsequent drafts were reviewed by California Energy Commission staff.

At the January 19, 2011 CBSC hearing and in the petition, the petitioner also alleged that the errata published for the code provision were regulatory in nature and thus should be considered “underground regulations.” Issued only this month by the publisher, the errata will be rendered moot by the emergency adoption and publication of the modifications proposed in this rulemaking.

AUTHORITY AND REFERENCE

The California Building Standards Commission proposes to adopt these building standards on behalf of DSA-SS under the authority granted by Health and Safety Code Section 18928. The purpose of these building standards is to implement, interpret, and make specific the provisions of Education Code Sections 17280-17317 and 81130-81147.

The Division of the State Architect is proposing this regulatory action based on Education Code Sections 17310 and 81142.

INFORMATIVE DIGEST

Summary of Existing Laws

Education Code, Section 17310 and 81142 authorize the State Architect to establish building standards for the design, construction and inspection of public elementary and secondary schools, and community colleges.

Government Code 14617 authorizes CBSC and the Division of State Architect to establish a standard of lighting for parking lots at the University of California, California State University, and California Community Colleges.

Summary of Existing Regulations

California Code of Regulations (CCR), Title 24, also referred to as the 2010 California Building Standards Code incorporates the following:

- Part 1, the California Administrative Code, with administrative regulations for CBSC and the California Energy Commission (CEC)
- Part 2, the California Building Code, includes standards for lighting for campus parking lots pursuant to Government Code 14617
- Part 6, the California Energy Code, which contains minimum energy efficiency standards for buildings in California promulgated by the CEC

Appendix E

- Part 11, the California Green Building Standards Code (CGBSC), also known as the CAL Green Code, which contains mandatory and voluntary green building standards for residential, nonresidential, and medical facilities

Summary of Effect

This proposed action will make effective, upon adoption and approval by the commissioners, emergency modifications to mandatory Section 5.106.8 in Title 24, Part 11 for buildings within DSA-SS authority, with necessary amendments in the interest of public safety as claimed in a recent petition to CBSC.

Comparable Federal Statute or Regulations

There currently are no federal laws or regulations for light pollution reduction, but the EPA has been petitioned to consider "atmospheric discoloration" caused by nighttime lighting in regulations related to the Clean Air Act.

Small Business Effect

DSA has made an initial determination of no adverse impact on small business, because the modifications to the code are proposed for facilitation of understanding and compliance by the code user.

Plain English Policy Statement:

In 2009, DSA, among other things, adopted mandatory standards for light pollution reduction, incorporating public comments received in the last code cycle as well as during the 2009 code development process. The standards, published in the 2010 California Green Building Standards (CAL Green) Code, apparently did not come to the attention of the petitioner during public participation in code development. The petitioner only now is raising potential public safety issues that DSA cautions should be addressed immediately.

MATTERS PRESCRIBED BY STATUTE APPLICABLE TO THE AGENCY OR TO ANY SPECIFIC REGULATION OR CLASS OF REGULATIONS

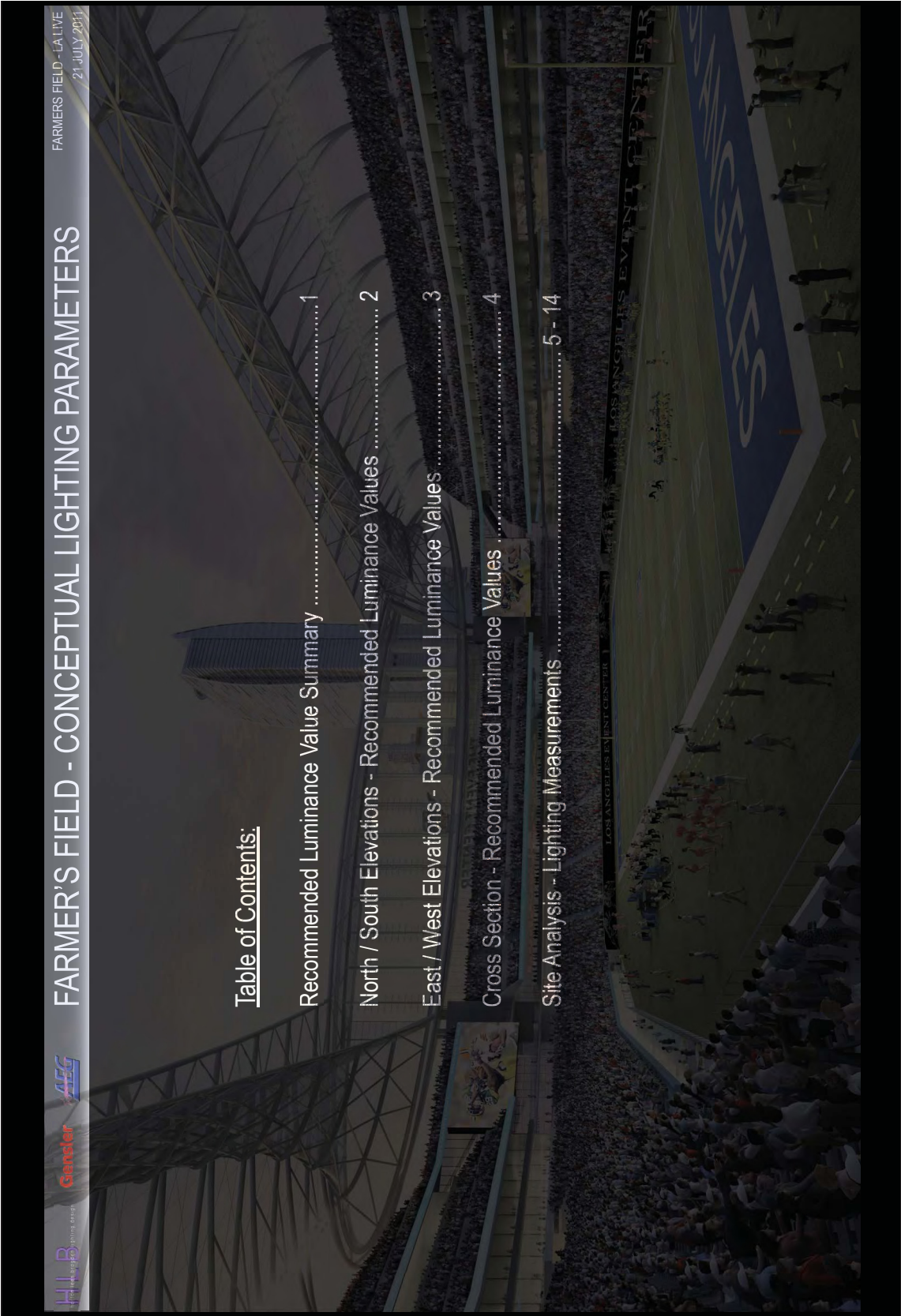
DSA has determined that there are no other matters prescribed by statute applicable to the agency or to any specific regulation or class of regulations.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

DSA has determined that projects following this regulation would not impose any new mandate on school districts. Additionally, the mandate does not require reimbursement pursuant to Part 7 (commencing with section 17500) of Division 4, Government Code.

FISCAL IMPACT STATEMENT

- A. Cost or Savings to any state agency: **None**
- B. Cost to any local agency required to be reimbursed under Part 7(commencing with Section 17500) of Division 4: **Not Applicable**
- C. Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **None**
- D. Other nondiscretionary cost or savings imposed on local agencies: **None**
- E. Cost or savings in federal funding to the state: **None**

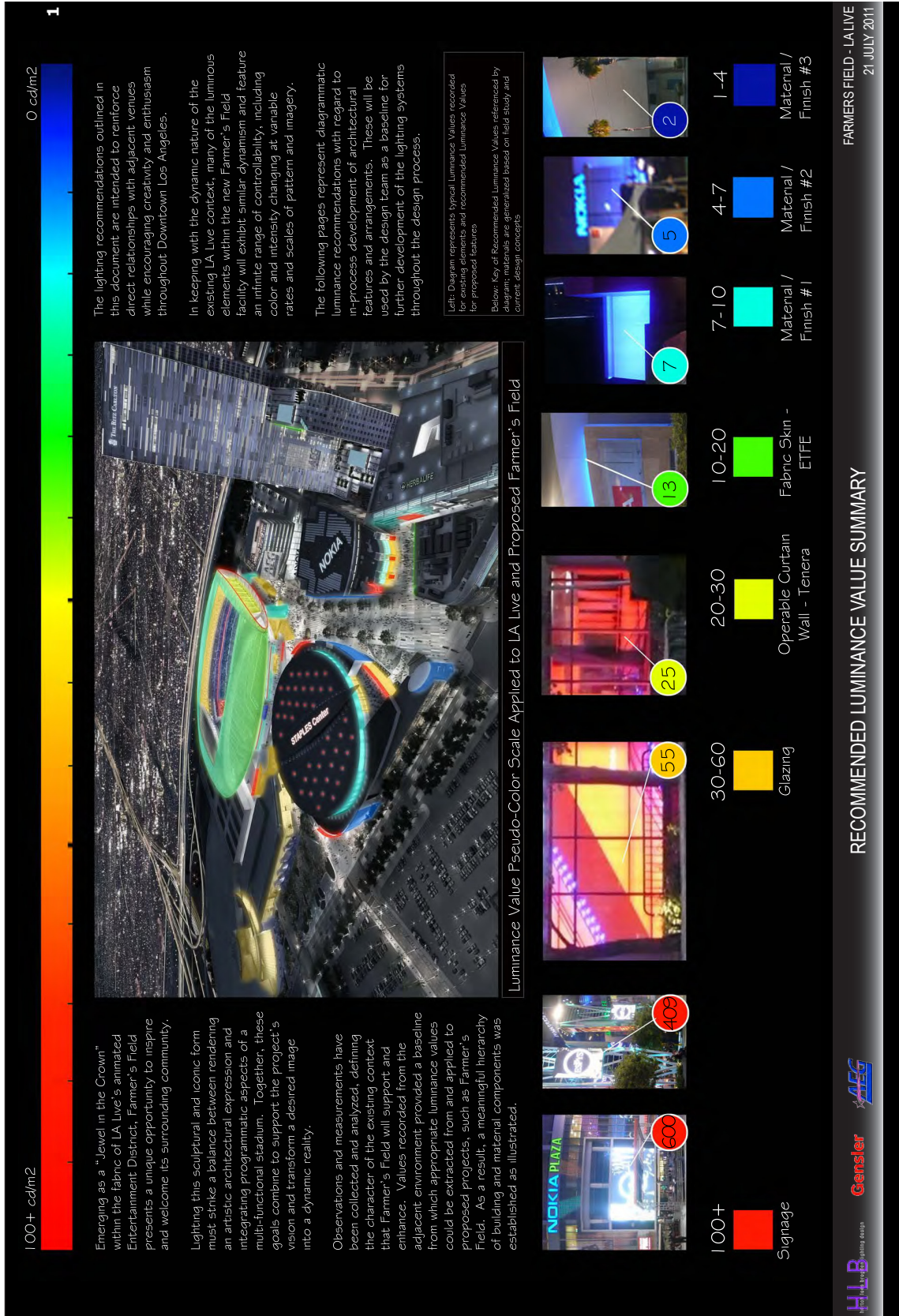


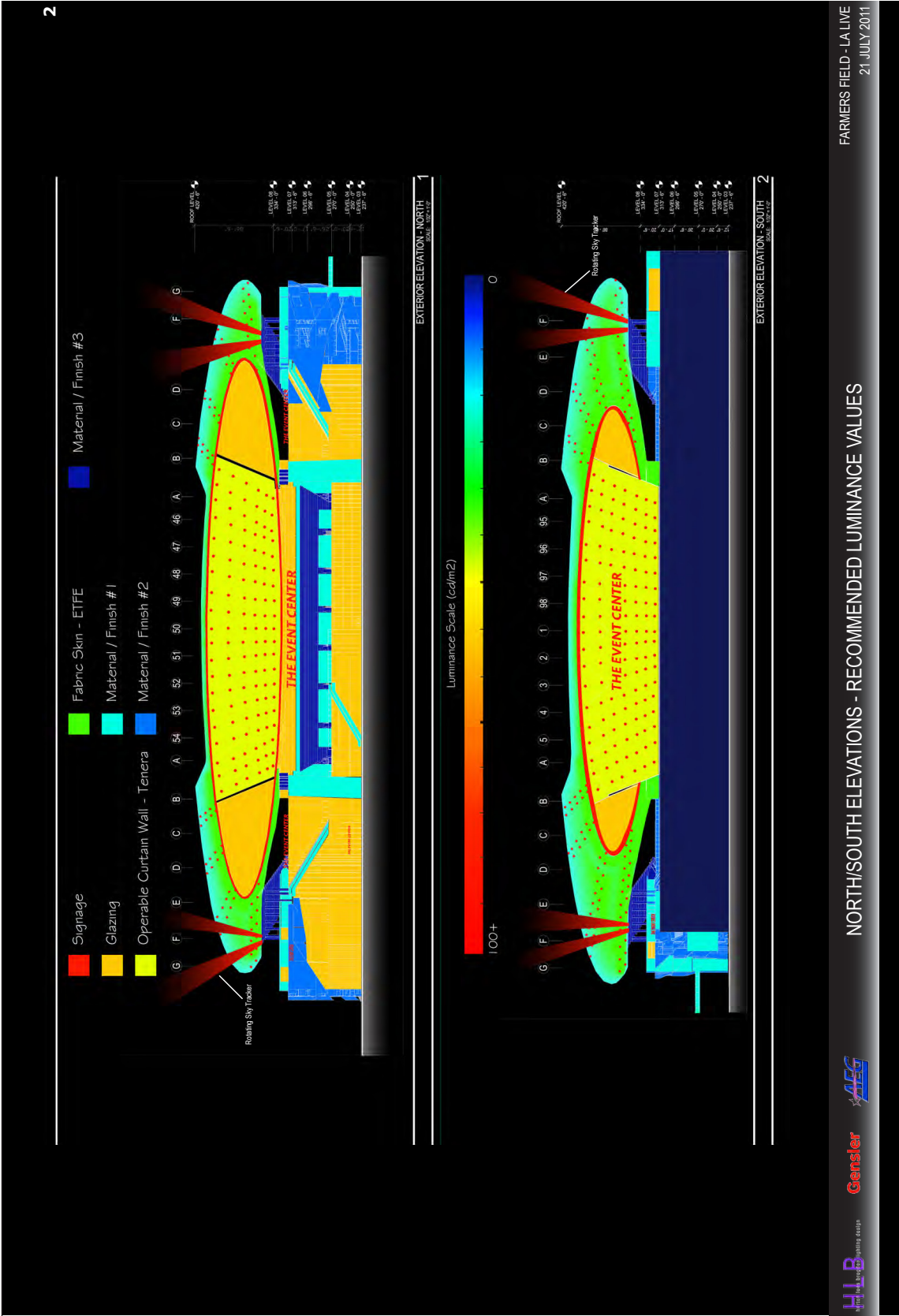
FARMER'S FIELD - CONCEPTUAL LIGHTING PARAMETERS

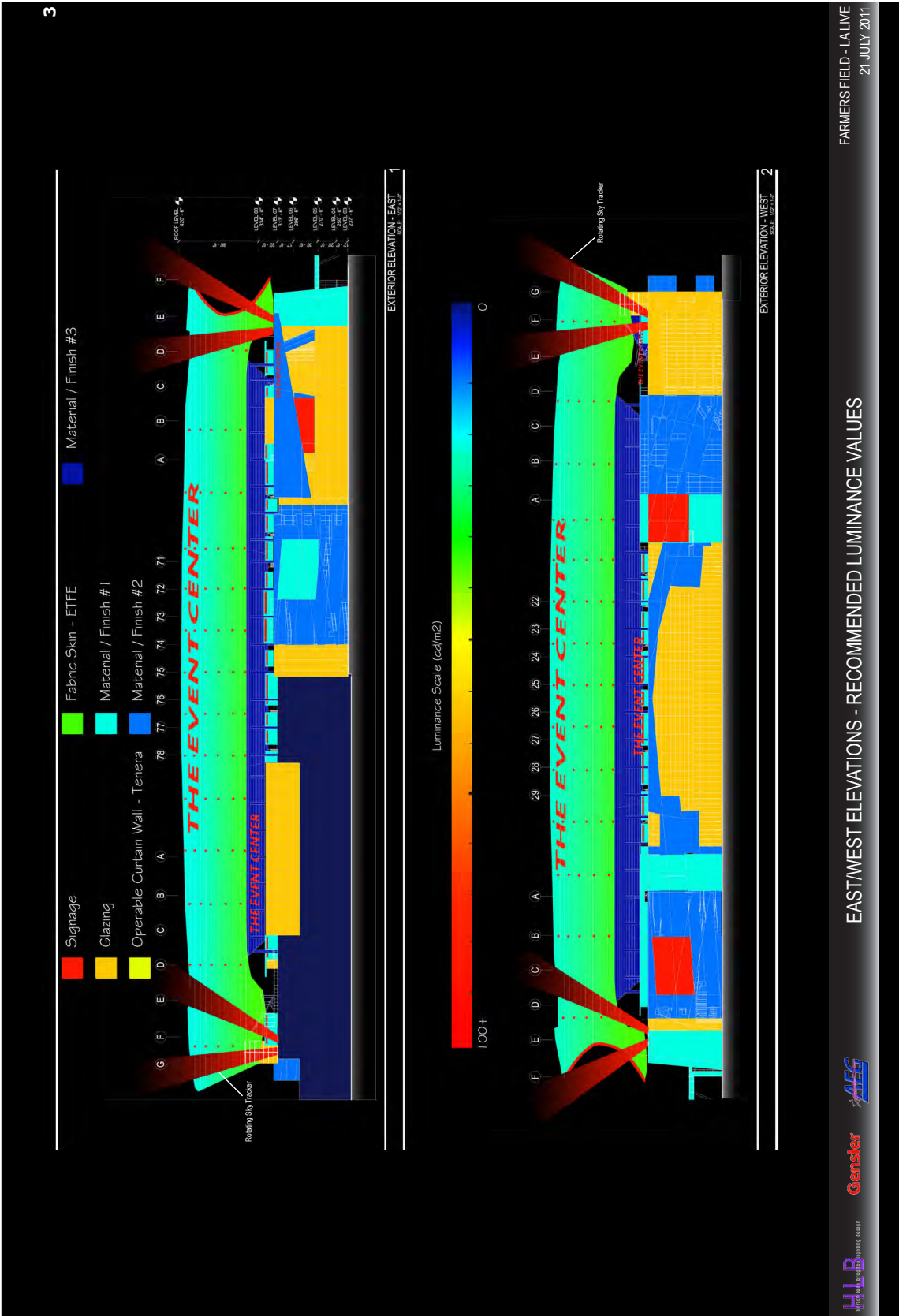
FARMERS FIELD - LA LIVE
21 JULY 2012

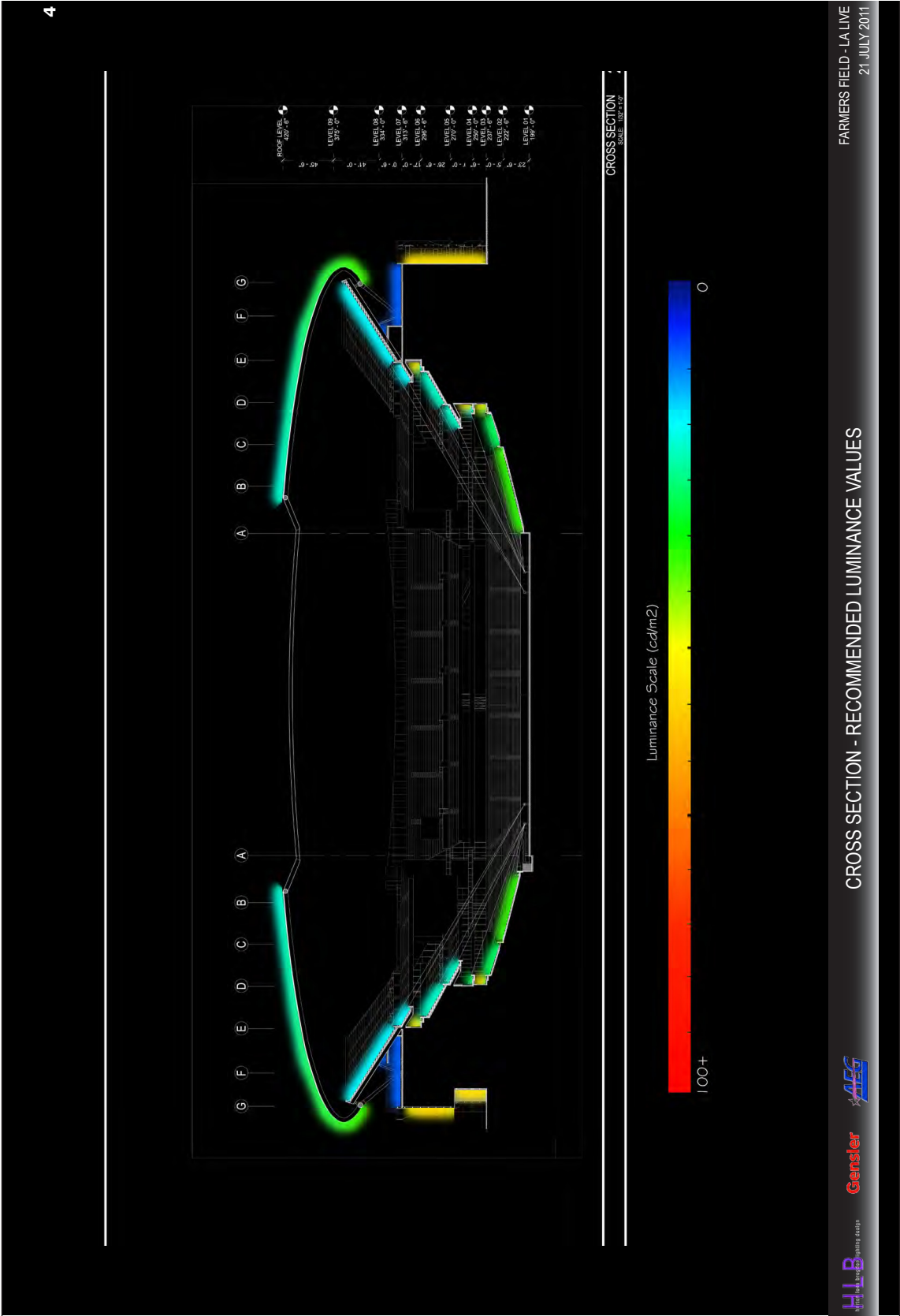
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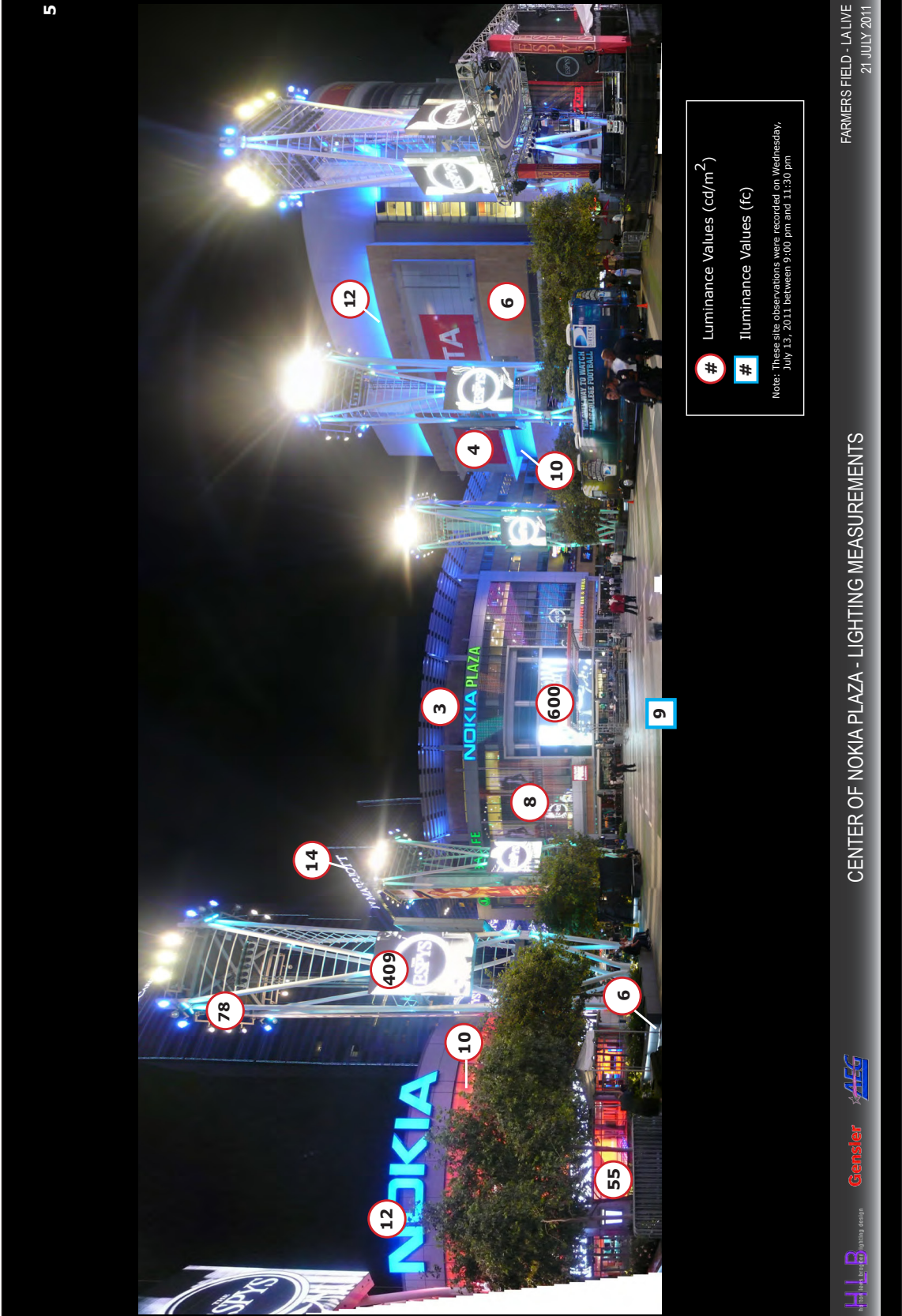
Recommended Luminance Value Summary	1
North / South Elevations - Recommended Luminance Values	2
East / West Elevations - Recommended Luminance Values	3
Cross Section - Recommended Luminance Values	4
Site Analysis - Lighting Measurements	5 - 14

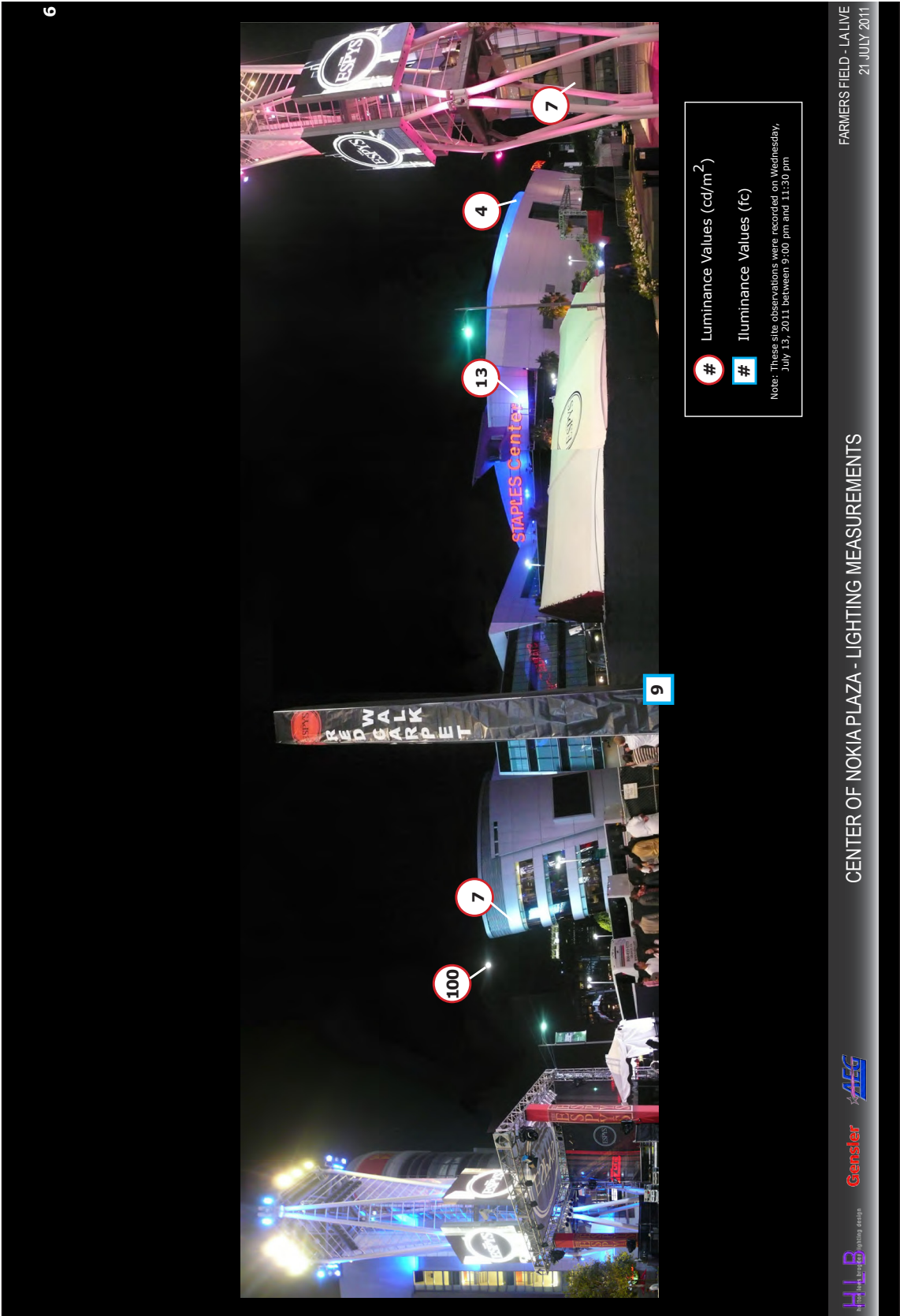


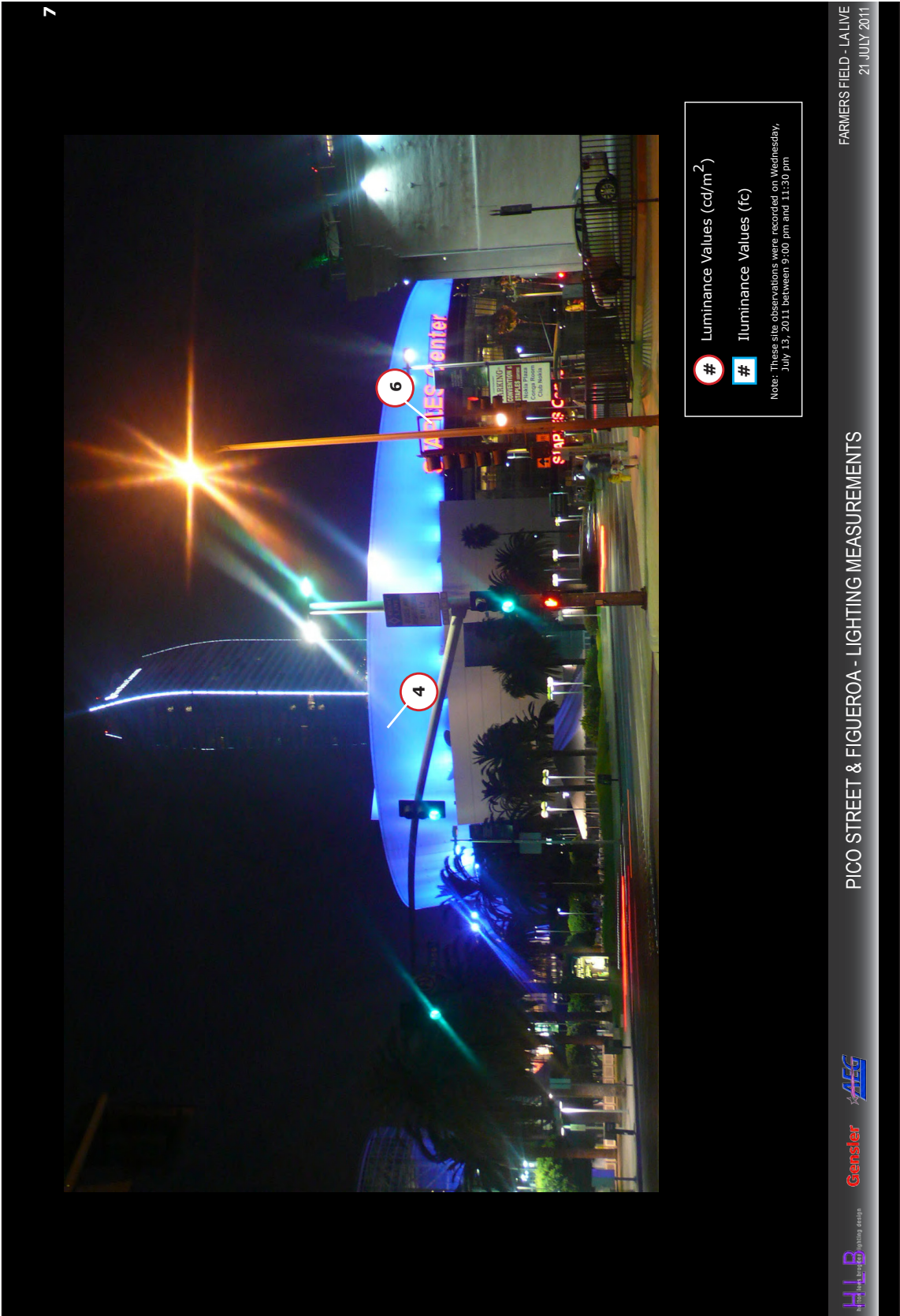


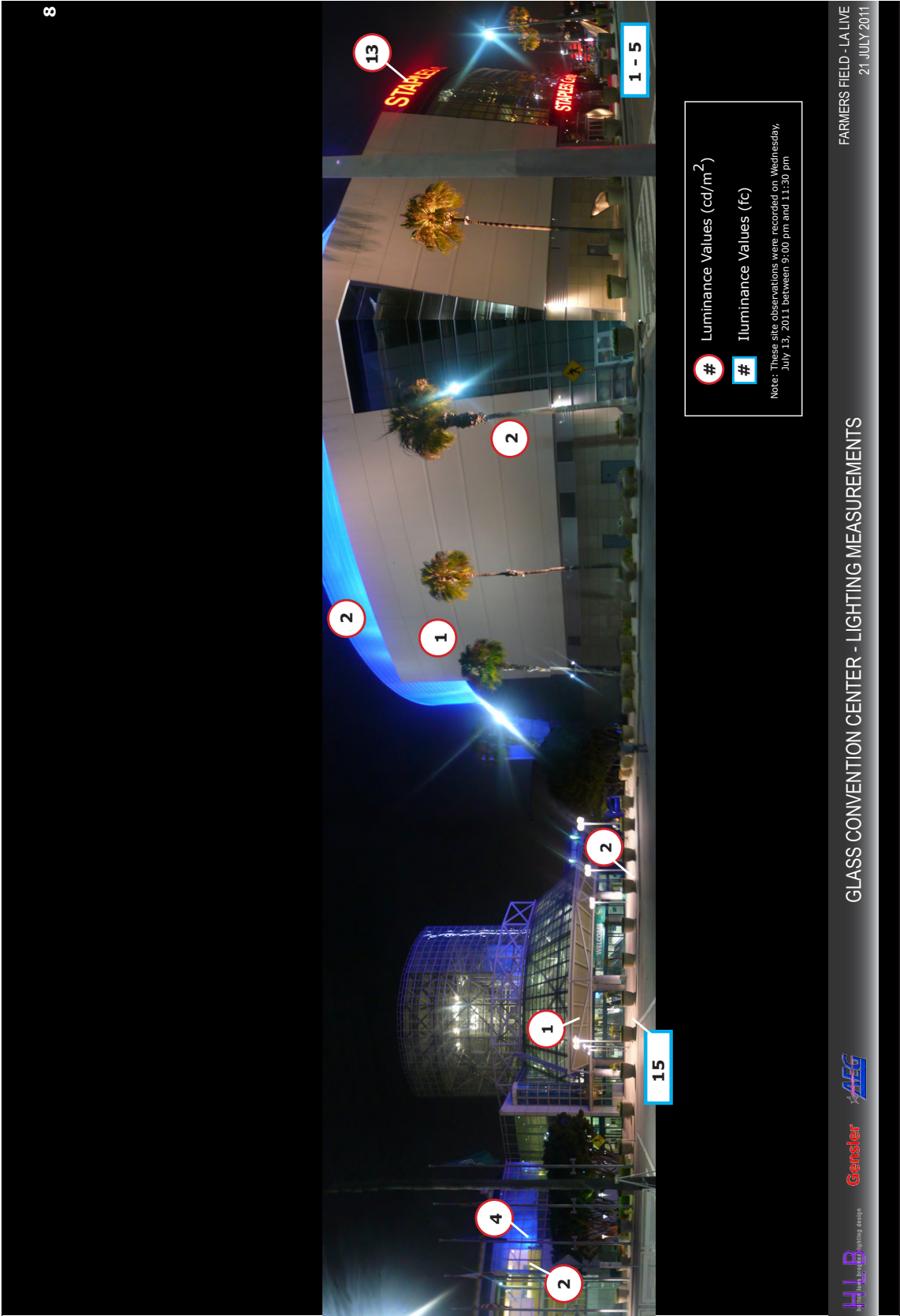


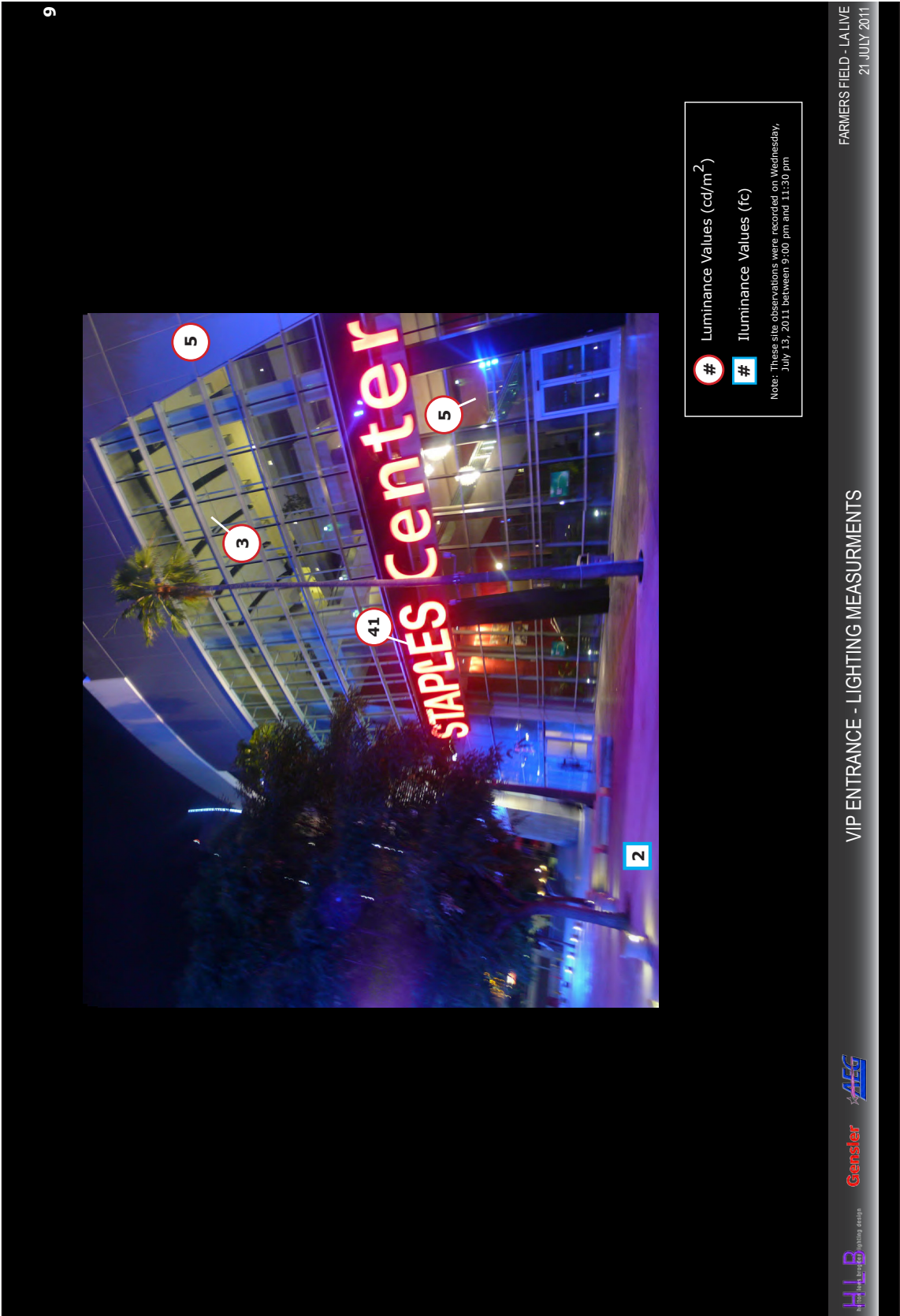


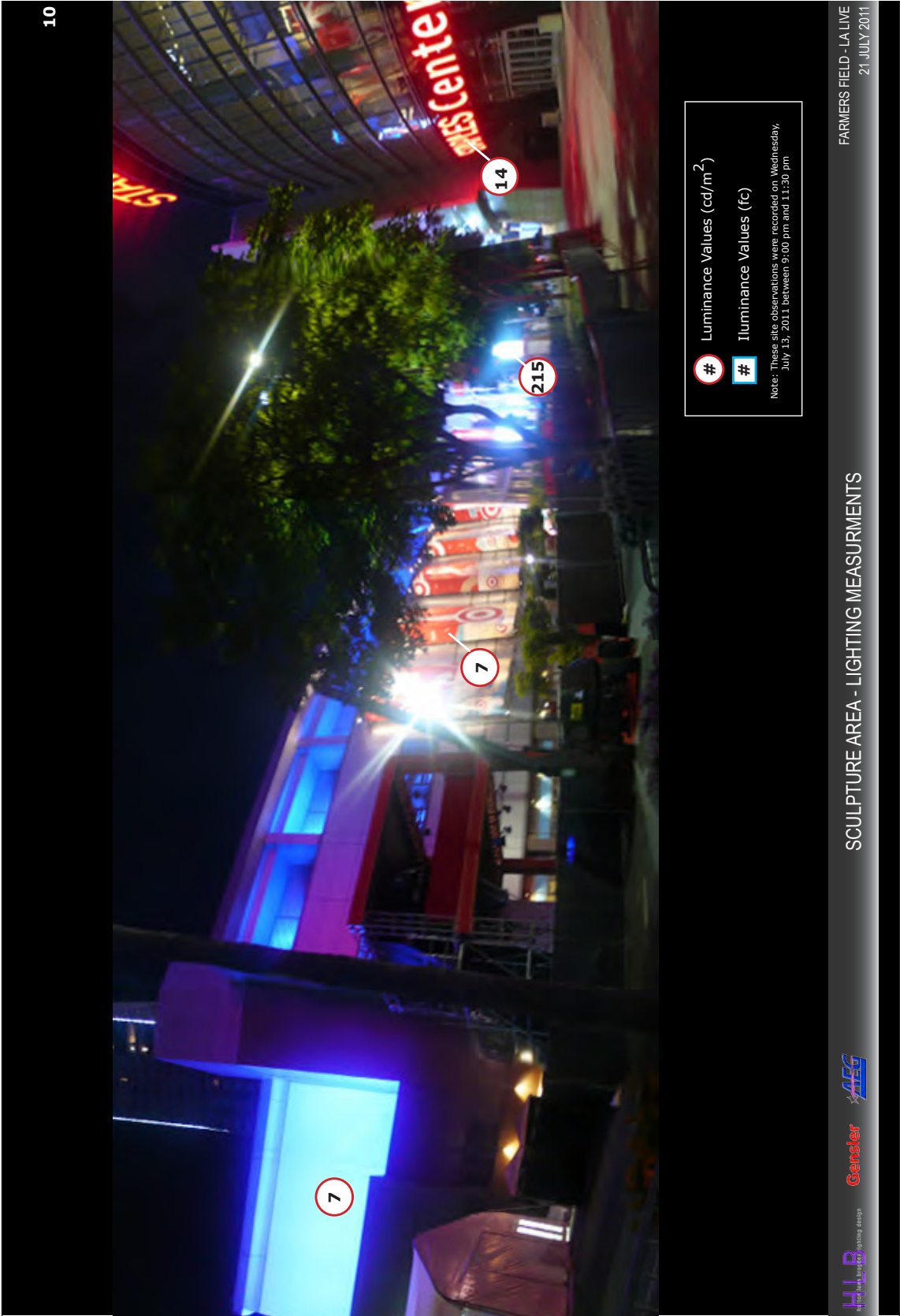


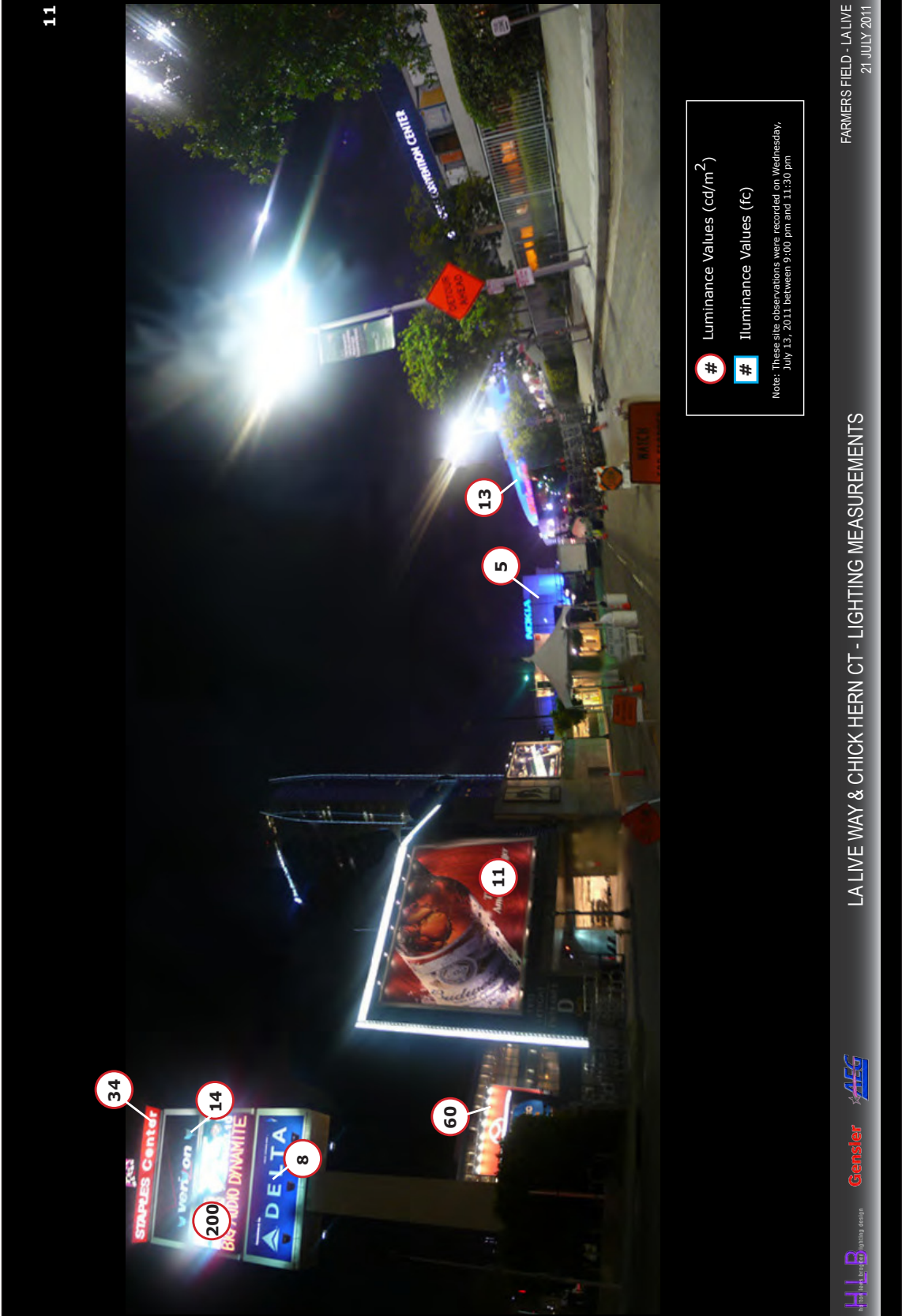


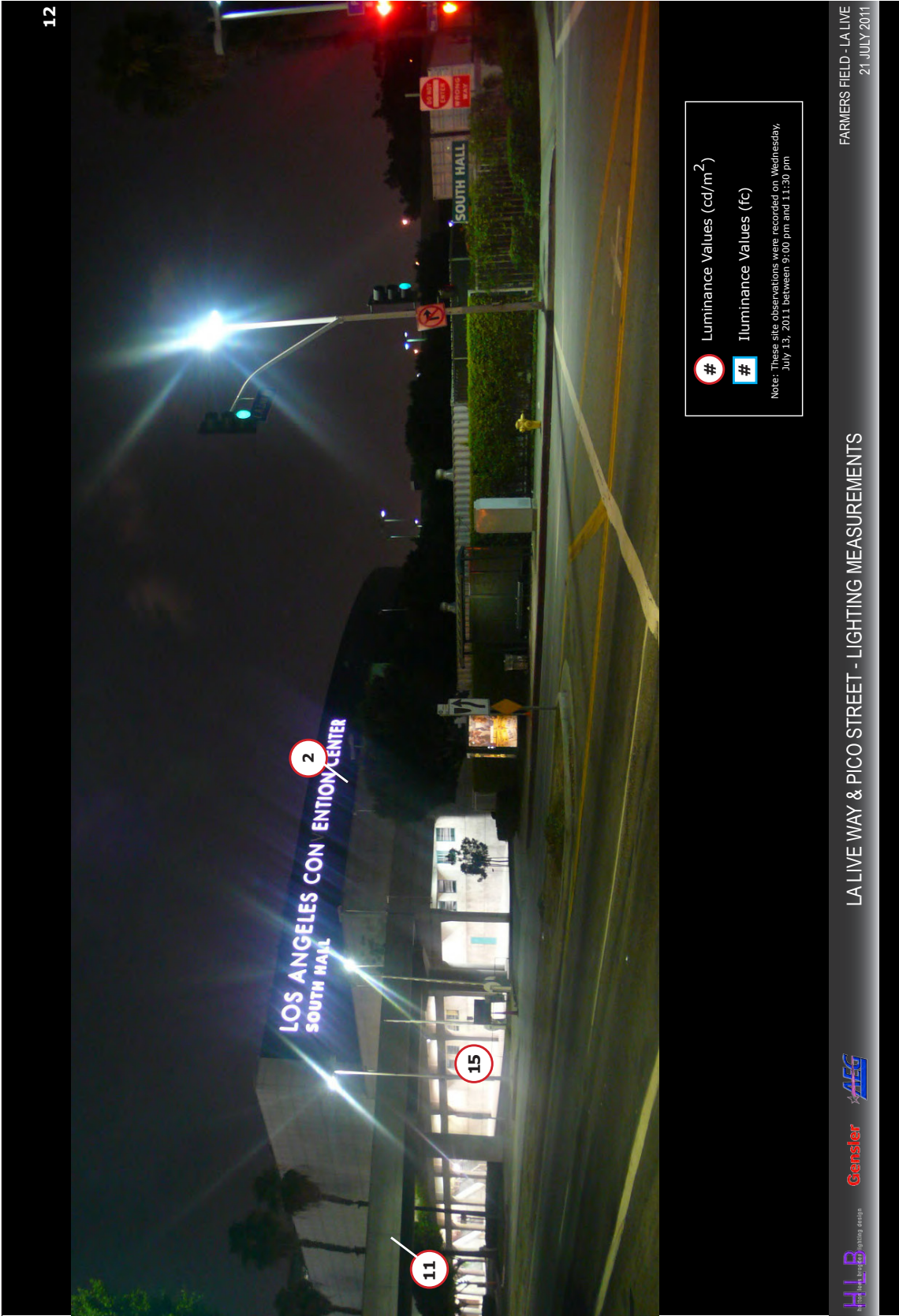


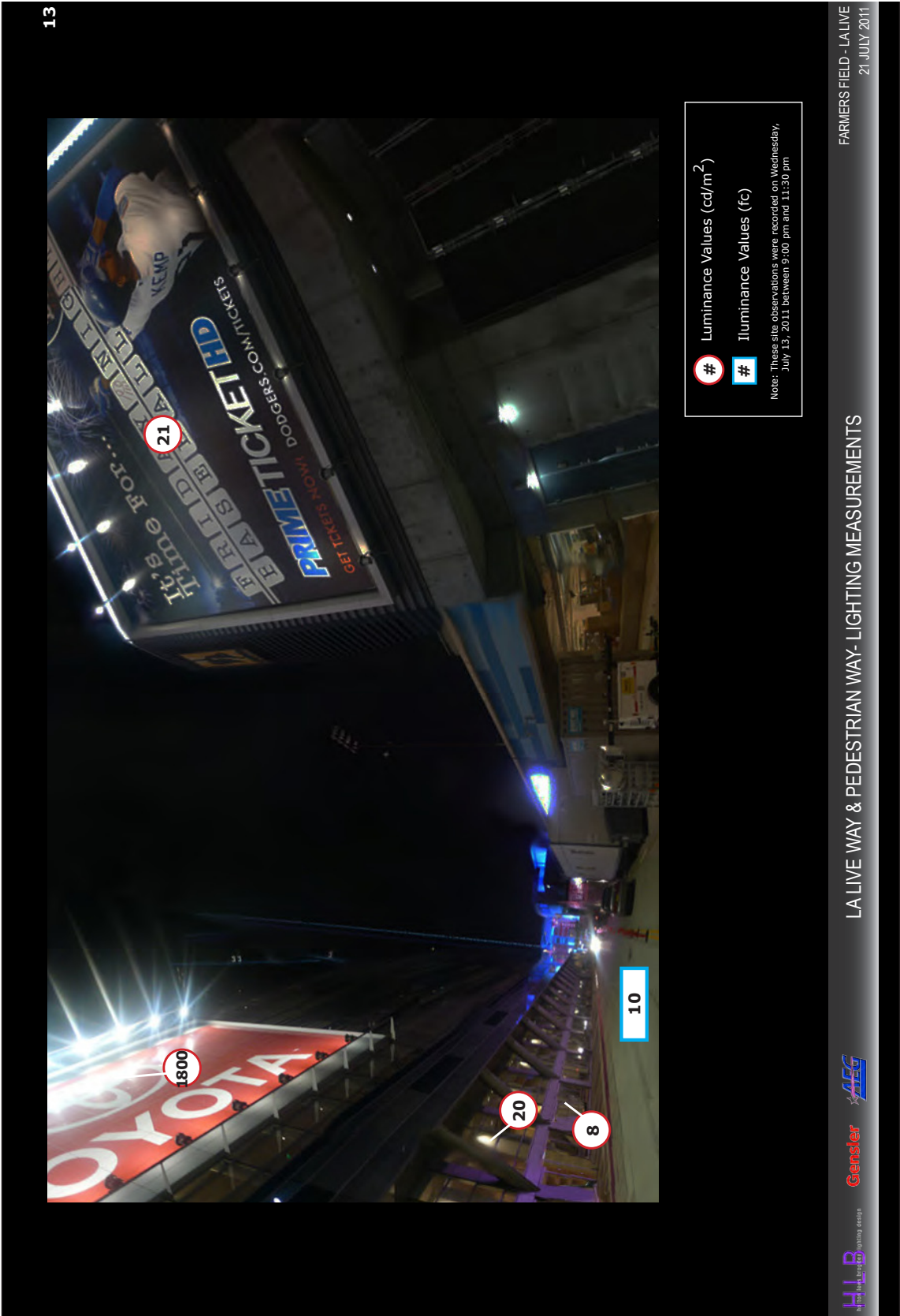


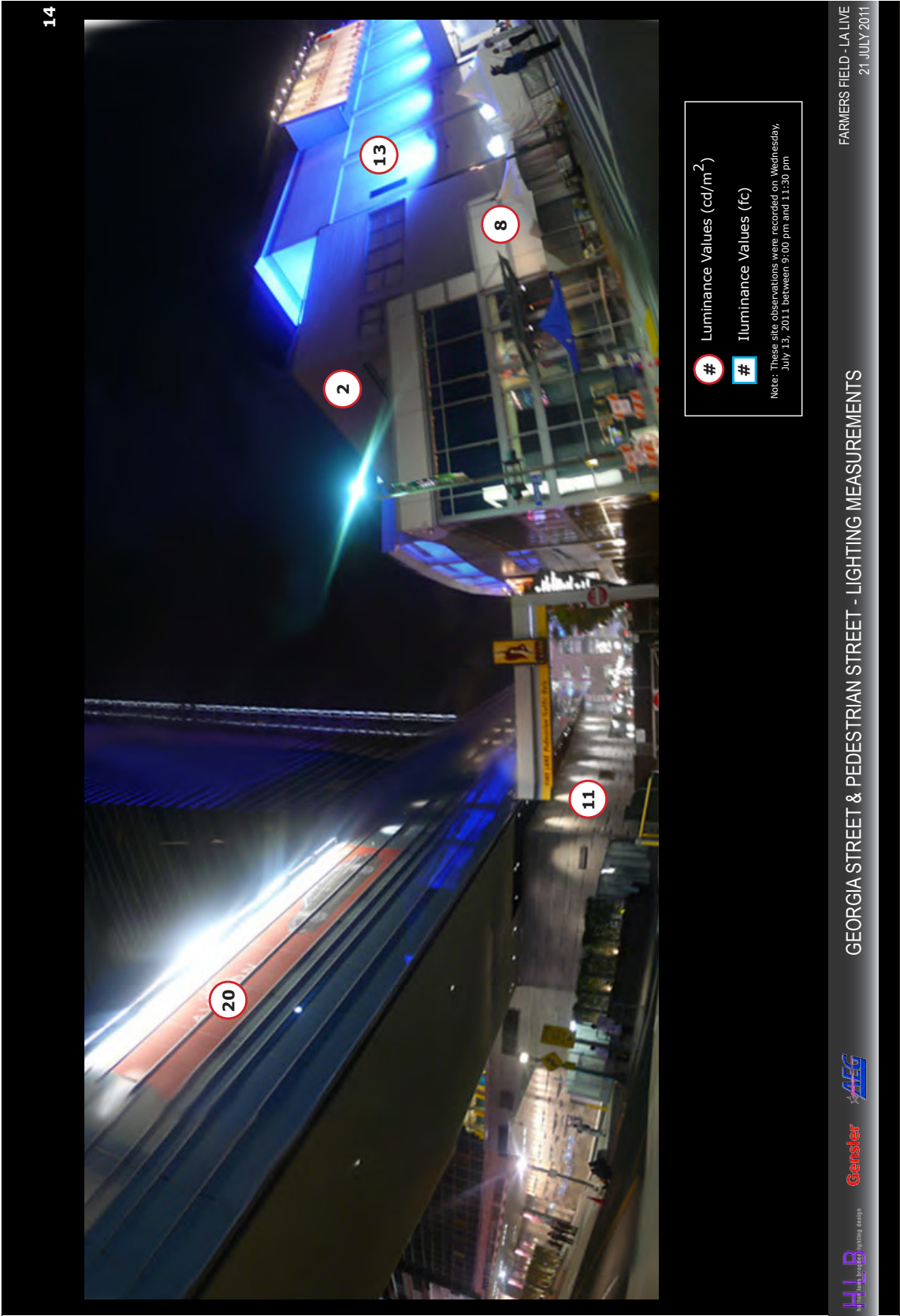












Appendix G - Measurements & Analysis Procedure

G.1 Overview

The predicted light emissions are a compilation of measured and calculated intensities. A process for measuring existing light emissions and predicting future light emissions is provided for here-in. These predicted light emissions involve contributions from three distinct architectural components: the stadium, Pico Hall and the garages. Additionally, contributions from individual signage elements will be denoted on a per sign basis.

G.2 Predicting Future Light Emissions with Computational Analysis

G.2.1 Process Overview

The Project includes new lighting for signage, safety, and use of the facilities. A computer simulation is utilized to predict contributions from new light sources at receptor points and at the site boundary. The computer simulation captures three-dimension building geometry of both new and existing buildings on the site, in addition to selected existing building located offsite. Offsite obstructions were included in the computer simulation if their inclusion was meaningful when predicting illuminance intensities or views from the receptor sites.

Light sources from the new buildings in the project are included in this analysis in addition to all new signage. The inputs for these new light sources are based on documentation provided by members of the design team (Appendix F, G, H & I) and by Arup, where necessary.

Illuminance calculations were performed for each receptor point to quantify the increase in illuminance relative to existing, measured conditions. The calculations include both signage and architectural lighting associated with the new buildings, but not lighting associated with existing buildings. Illuminance calculations were also performed along the site boundary to quantify light trespass with respect to architectural lighting and stadium sports lighting. High Dynamic Range Images (HDRI) were produced from the computer model for each receptor point to capture luminance information as seen from each receptor point.

The calculated illuminance and luminance values are used to evaluate the proposed new lighting relative to existing conditions and the significance thresholds that are explained in other sections.

G.2.2 Inputs

The computer simulation relies on numerous inputs to successfully predict light emissions from the project. Inputs include three dimensional geometry of both new and existing buildings, luminous intensities of the stadium sports lighting, exterior architectural lighting of new buildings, and location and brightness of new signage.

Appendix G

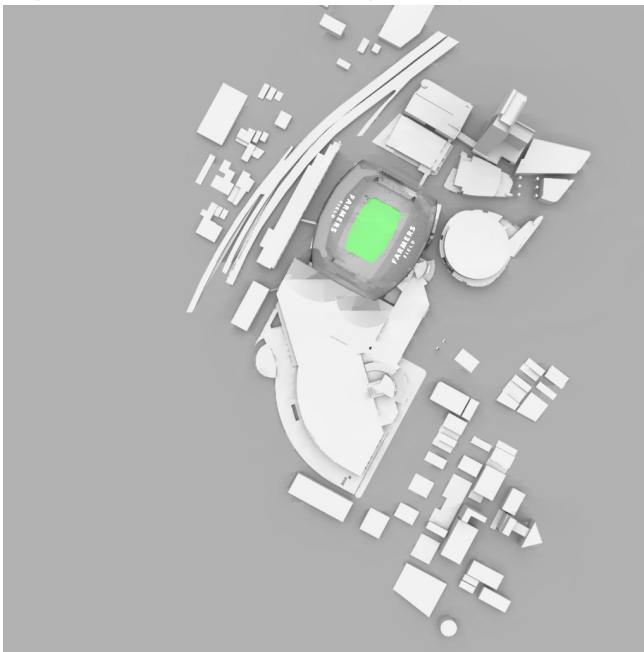
Geometry

Geometry used in the computer model was obtained from numerous members of the design team, as outlined in the following table. All geometry was imported into Rhinoceros 3D format with a single, unified coordinate system before exporting to Radiance (description of Radiance is provided below). In select cases, building geometry was simplified to remove unnecessary interior surfaces.

Table G.2.2.1 - Geometry inputs and sources

Geometry	Furnished by	Basis of Model
Farmers Field Stadium	Gensler	Revit model dated 05/16/2011
Pico Hall	Populus	Sketchup model dated 07/28/2011
Garages	AEG/Arup	PDF drawings dated 02/28/2008
South Hall	Gensler	Revit model received 07/20/2011
Existing site buildings (Nokia, Staples, etc)	Gensler	Revit models received 07/18/2011
Surrounding context	Arup	Google Earth

Figure G.2.2.1 - Aerial view of geometry included in the model



Signage

New signage is included in the project on both new, and existing buildings, on the site. These signs will contribute to light trespass at receptor locations and at the site boundary. The location and brightness of all signs were provided by AEG via email on August 1, 2011. The modeling assumptions for the signs are described in the assumptions section below.

Appendix G

Event Center Materials

The materials for the event center were received from Gensler. The diagram below shows how these materials are applied to the Event Center. The diagram below shows the modeled and analyzed properties. ETFE material properties are drawn from the ETFE Technical report referenced in Appendix I.

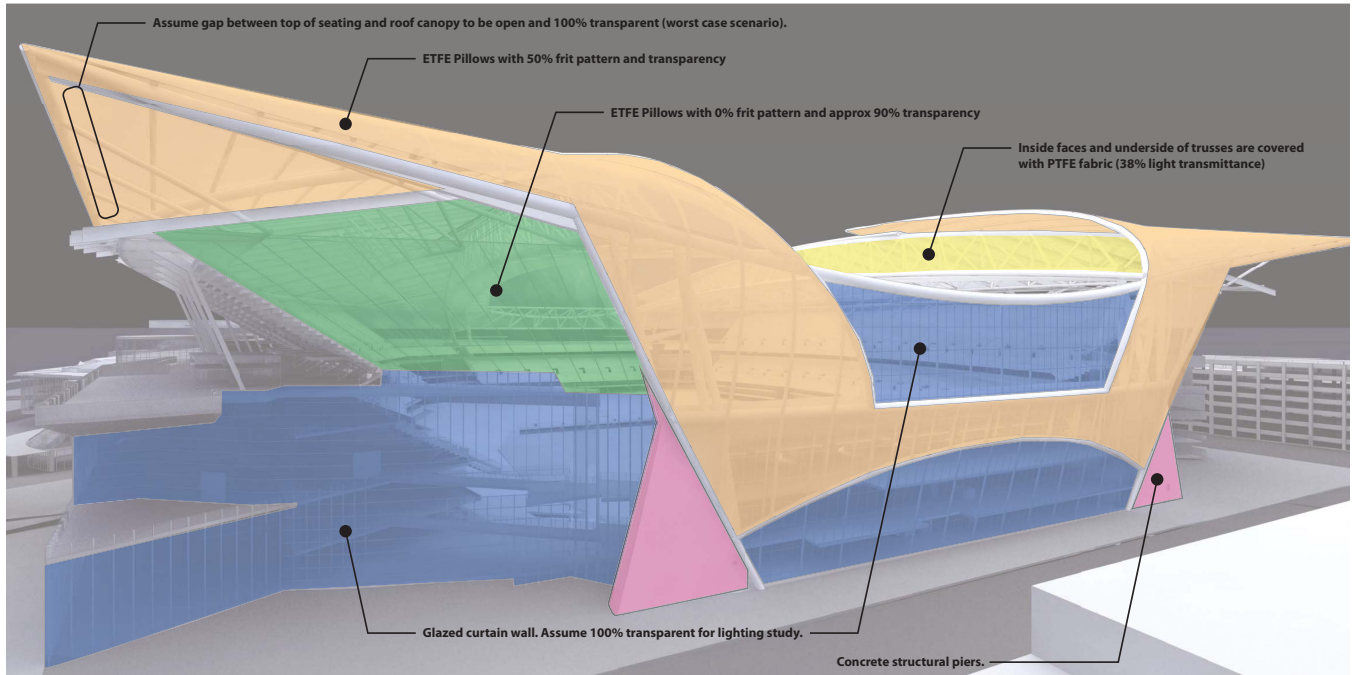


Figure G.2.2.2 - Architectural diagram provided by Gensler with material properties indicated.

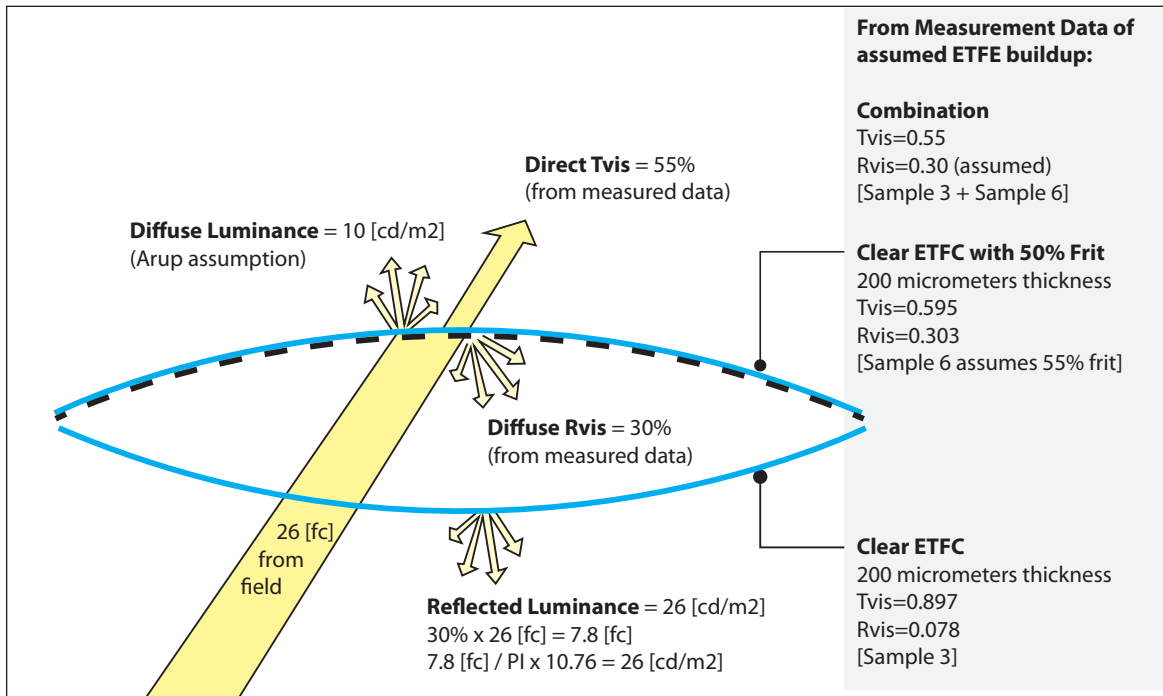


Figure G.2.2.3 - Diagram illustrating material properties and light emission assumptions used in analysis.

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Stadium lighting

Interior stadium lighting is served by an array of 1500 W narrow beam metal halide fixtures aimed at the field. The system provides 300 fc (horizontal) on the field and 20-100 fc at the seats. The floodlights are located near the edge of the two long sides of the roof at an elevation angle of 30 degrees above center of field. Appendix J includes the product data sheet and the photometric file used for this fixture.

Façade lighting

The lighting design for the new buildings has not yet been determined beyond a conceptual level. Therefore, several assumptions were made to account for the light emissions of new buildings at receptor points and site boundary. Architectural lighting of new buildings is accounted for by applying a uniform luminance across the façade and roof surfaces as per documents furnished by HLB (Appendix F).

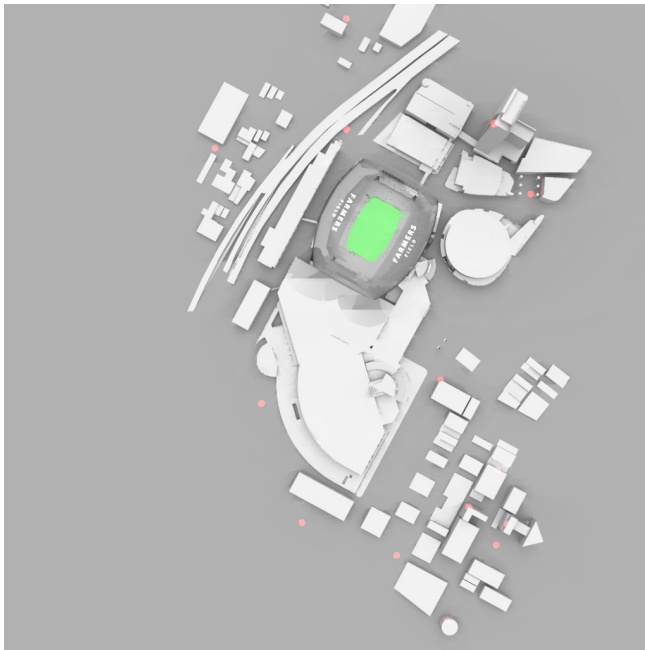
Garage Lighting

Lighting for the Bond Street garage and LA Live Way garage is included by applying a uniform luminance to the ceiling plane to achieve minimum 5 fc on floor surface.

Receptor points

Illuminance calculations and luminance renderings were produced at all the same receptor point locations where physical measurements were taken. Additional receptor points were selected for the Ritz Carlton tower and where physical measurements were desired but not accessible.

Figure G.2.2.2 - Receptor locations (shown in light red dots)



Appendix G

G.2.3 Computational Analysis

Analysis Software

All calculations for this study were performed using Radiance (Version 4.0, by Gregory Ward at Lawrence Berkeley National Laboratory) to model the proposed buildings, existing buildings, site context, signage, and applicable light fixtures. Radiance is a validated, physically-based, open source suite of programs specifically written to conduct accurate lighting analysis. Utilizing a backwards ray-tracing algorithm, Radiance evaluates the interaction between the three-dimensional Project scene with sources of illumination contained within.

Modelling of Light Sources

Sources of illumination in this analysis are specified using one of two methods:

- 1) Stadium light fixtures (Appendix I) are implemented in the model using IES files generated by the manufacturer following IESNA protocols. These files are imported directly into Radiance at a specified location and orientation to accurately predict the photometric performance of the fixture they represent.
- 2) Signage and architectural facade lighting is implemented into the model by mapping a uniform luminance distribution onto the appropriate surface. This method is useful to represent the exitance of light from surfaces when the actual lighting design has not yet been specified.

Illuminance and Luminance Calculations

Illuminance and luminance calculations are performed by scattering thousands of rays from the receptor point and tracing them back until they reach a light source. This method of backwards ray tracing allows extremely complex scenes to be modeled in a robust yet efficient manner. Reflection & transmission (diffuse and specular), absorption, and subtractive/additive color mixing are all accurately modeled in the ray tracing process, allowing virtually any surface material property to be accurately modeled.

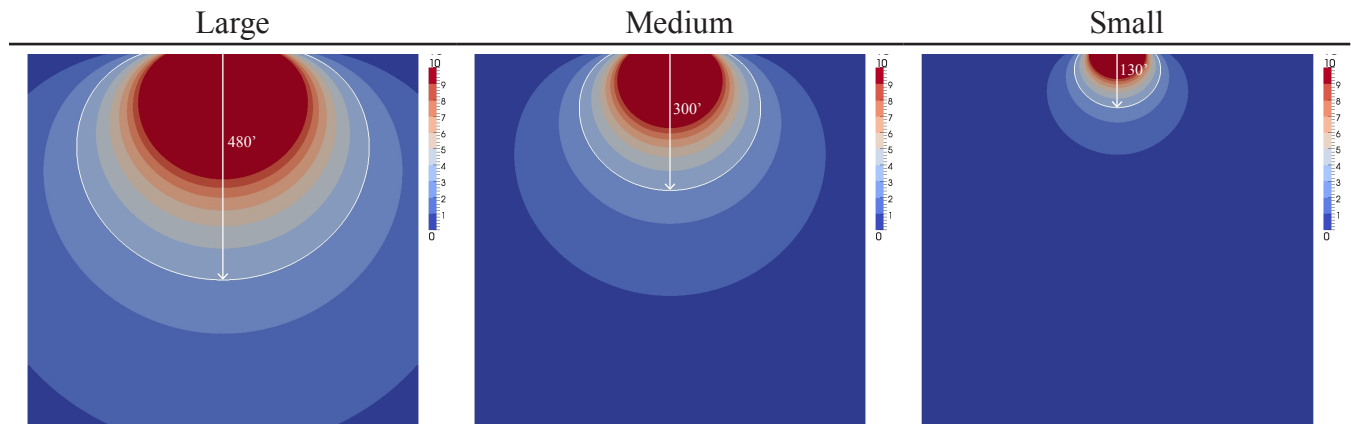
Additional information on the accuracy of Radiance is provided in a separate section G.2.5.

LED Signage Zone of Influence

Illuminance calculations were performed for the changeable LED signs to determine their “zone of influence” of 3 [fc], per the City of Los Angeles Municipal Code. The following diagrams show the Radiance analysis performed for the three typical sizes of changeable LED signs for the assumed luminous intensity of 2500 [cd/m²]. The iso-contour line for each sign is representative of 3 [fc] vertical illuminance (facing the LED sign). The perpendicular distance from the center of the sign to the extent of influence (assuming 3 [fc]) is shown for each sign size.

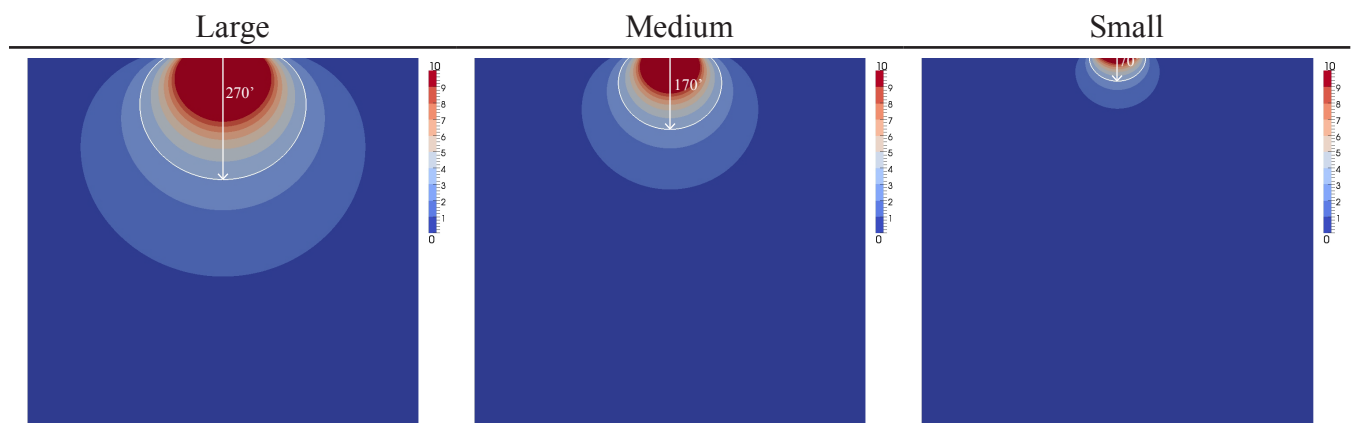
Appendix G

Figure G.2.3.1 - Zone of influence calculations for unmitigated LED signs (2500 cd/m²)



To reduce the zone of influence of the changeable LED signs, the luminous intensity is reduced to 800 [cd/m²]. The diagrams below show the calculations for reduced output signage.

Figure G.2.3.2 - Zone of influence calculations for mitigated LED signs (800 cd/m²)



G.2.4 Assumptions

Field Event Lighting

Interior stadium field event lighting is served by an array of 1500 W narrow beam metal halide fixtures aimed at the field. The system provides 300 fc (horizontal) on the field, the requirement for illuminating NFL fields for high definition video recording.

The luminaire modeled in this analysis is the GE PowerSpot 1500 W Metal Halide with glare shield, narrow beam (3x3). A 0.70 light loss factor has been applied to the luminaire. Luminaire data (IES files) follows IESNA procedures for measuring luminous intensities of light fixtures.

Appendix G

To minimize light sources in the calculation, each grouping of 4 fixtures was combined into a single source with the same distribution but with four times the output. This simplification capitalizes on the additive nature of light, and results in the same light levels on the field but with only 25% of the computational requirements. This important simplification achieves accurate results and limits computation time.

Receptor points

For the purpose of receptor point calculations, all receptor points are aimed at the same point on the site, consistent with physical measurements. This point corresponds to the uppermost edge of the Staples Center nearest the proposed Stadium.

Site boundary calculations

Illuminance calculations were performed in 10 foot increments along the site boundary to quantify light trespass. These calculation points were aimed toward the center of the site at a point 40 feet above the ground. This approach was utilized to obtain the maximum illuminance reading that would result from building façade lighting.

Sky Condition

All calculations were performed assuming a clear sky with zero reflectance (albedo). A separate analysis was undertaken to study the sensitivity of receptor measurements to cloud ceiling height, see Section 6.5.1.

Signage Luminance

Signs are modeled as lambertian emitters with a uniform luminance distribution as outlined in the table below. A lambertian emitter produces the same luminance regardless of viewing angle. This phenomenon is a reasonable simplification for many LED light sources, and for surfaces that reflect light in a diffuse manner.

The SS and TE signs are front lit to 25 fc, which corresponds to a luminance of 96 cd/m² when assuming an 80% sign reflectance and 0.7 light loss factor. Luminance of the front lit signs is calculated using the formula $L = M/p = (E\rho)/\pi$.

Reflectance = ρ

Luminance = L (cd/m²)

Exitance = M

Illuminance = E

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Table G.2.4.1 - Sign luminance assumptions

Sign Type	Lighting Target		Reflectance (assumed)
	L [cd/m ²]	E [fc]	
NR	40		--
SS	96	35*	0.8
RP	40		--
LED	2500**		--
SP	40		--
ID	40		--
TE	96	35	0.8

Notes:

* The 35fc value here is the design illuminance with no light loss factor applied. A 0.7 light loss factor applied to the 35fc value results in 25fc, which is the design target.

** Design input value

Building façade luminance calculations

The exterior envelope of new buildings are modeled as lambertian emitters with a uniform luminance distribution as shown in the tables below. The luminance values of the stadium, including the walls and the roof, are based on information provided by HLB in Appendix E. Luminance values of Pico Hall are estimated by Arup based on luminance measurements of existing site buildings by HLB. The highly articulated Stadium facade was enclosed by luminous surfaces of the correct intensity to simplify the modeling of the architectural lighting.

Table G.2.4.2 - Façade luminances from the design inputs

Building Surface	Lighting target		Reflectance (assumed)
	[cd/m ²]	[fc]	
Stadium - Roof (ETFE)	20		
Stadium - Tenara Fabric	30		
Plaza lighting	21	10	0.6
Stadium - Exterior Walls	60		
Pico Hall - Roof	0.05		
Pico Hall - Roof pools	0.1		
Pico Hall - Exterior Walls	4		

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Table G.2.4.3 - Façade luminances for the application of Project Design Features

Building Surface	Lighting target		Reflectance (assumed)
	[cd/m2]	[fc]	
Stadium - Roof (ETFE)	10		
Stadium - Tenara Fabric	10		
Plaza lighting	21	10	0.6
Stadium - Exterior Walls	10		
Pico Hall - Roof	0.05		
Pico Hall - Roof pools	0.1		
Pico Hall - Exterior Walls	4		

Table G.2.4.4 - Reflectance properties

Surface	Reflectance	Transmittance
All existing buildings (except Ritz tower)	20% (diffuse)	
Ritz tower	10% (specular)	
Stadium seating	50%	
Stadium field	30%	
Stadium operable glass façade		90%
Ground	20%	
Cloud layer	80%	

Radiance calculation parameters

The accuracy and calculation time in Radiance is highly dependent on the ambient calculation parameters used in the analysis. These parameters dictate the resolution and number of interreflections of light accounted for in the simulation, among other things. Extensive testing was undertaken to determine the optimal settings for these ambient calculation parameters to achieve the desired accuracy in a reasonable time frame. The following ambient calculation parameters were used in the analysis.

Table G.2.4.5 -Radiance ambient calculation parameters

Ambient Parameter	Setting
Ambient Bounces (ab)	1
Ambient Resolution (ar)	256
Ambient Divisions (ad)	16000
Ambient Accuracy (aa)	0.015
Weight Limit (lw)	6.25e-5
Ambient Value	0 0 0

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G.2.5 Precision and Accuracy

The values provided in the tables in this document are carried to the hundredths decimal place in order to show the potential impacts and probable values. The accuracy of these values are limited to the computation constraints of Radiance, and the accuracy of field measurements. Values should be considered as indicative levels that would be measured, based on the current understanding of the project site and light sources only, and not exact predictions.

Field results may deviate from computer predictions due to uncontrollable factors such as atmospheric and site conditions, landscaping, final specification of the lighting design, orientation and calibration of field sensors, and variability inherent to the computer simulation.

Radiance has been the subject of many validation efforts by respected illumination engineers and educators and has been deemed capable of producing extremely reliable and accurate results, even for scenes of great complexity. There is virtually no limit to scene size, complexity, materials, or luminaires, when using Radiance.

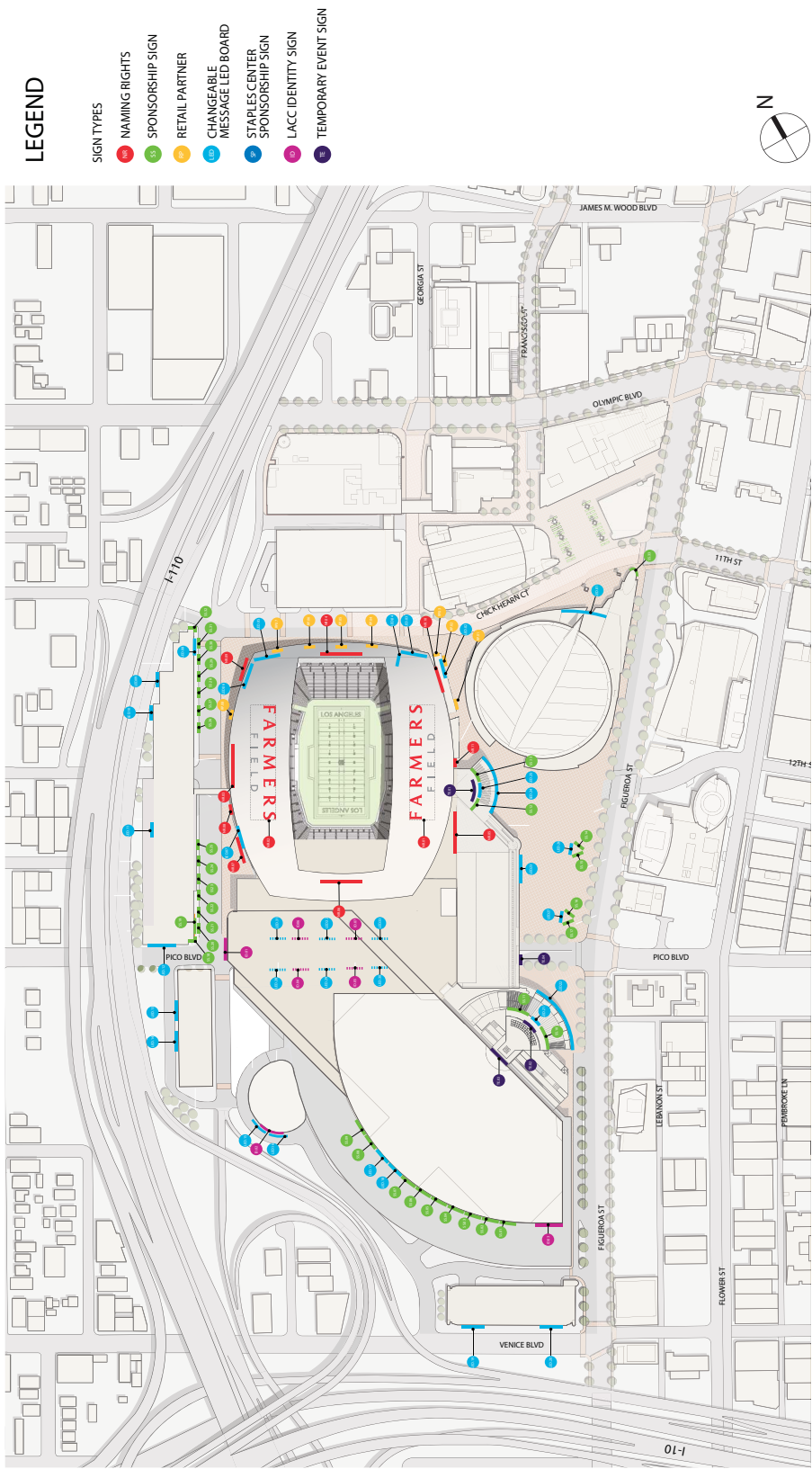
The calculation algorithm used by Radiance involves backwards raytracing and a monte carlo (random) sampling technique. While this generally leads to more accurate results as compared to standard raytracing or more conventional radiosity methods for lighting simulation, there are inherent variations that occur between calculations, even if all inputs are the same.

For low ambient light levels with significant distance between source and measurement points, this margin of error can approach 25%. For ambient illuminance of 2 fc, this margin of error corresponds to approximately 0.5 fc. The relative margin of error decreases for receptor points that are closer to light sources.

Radiance Validation Papers

Validation of Radiance, A. Grynberg, 1989, <http://gaia.lbl.gov/btech/papers/1575.pdf>

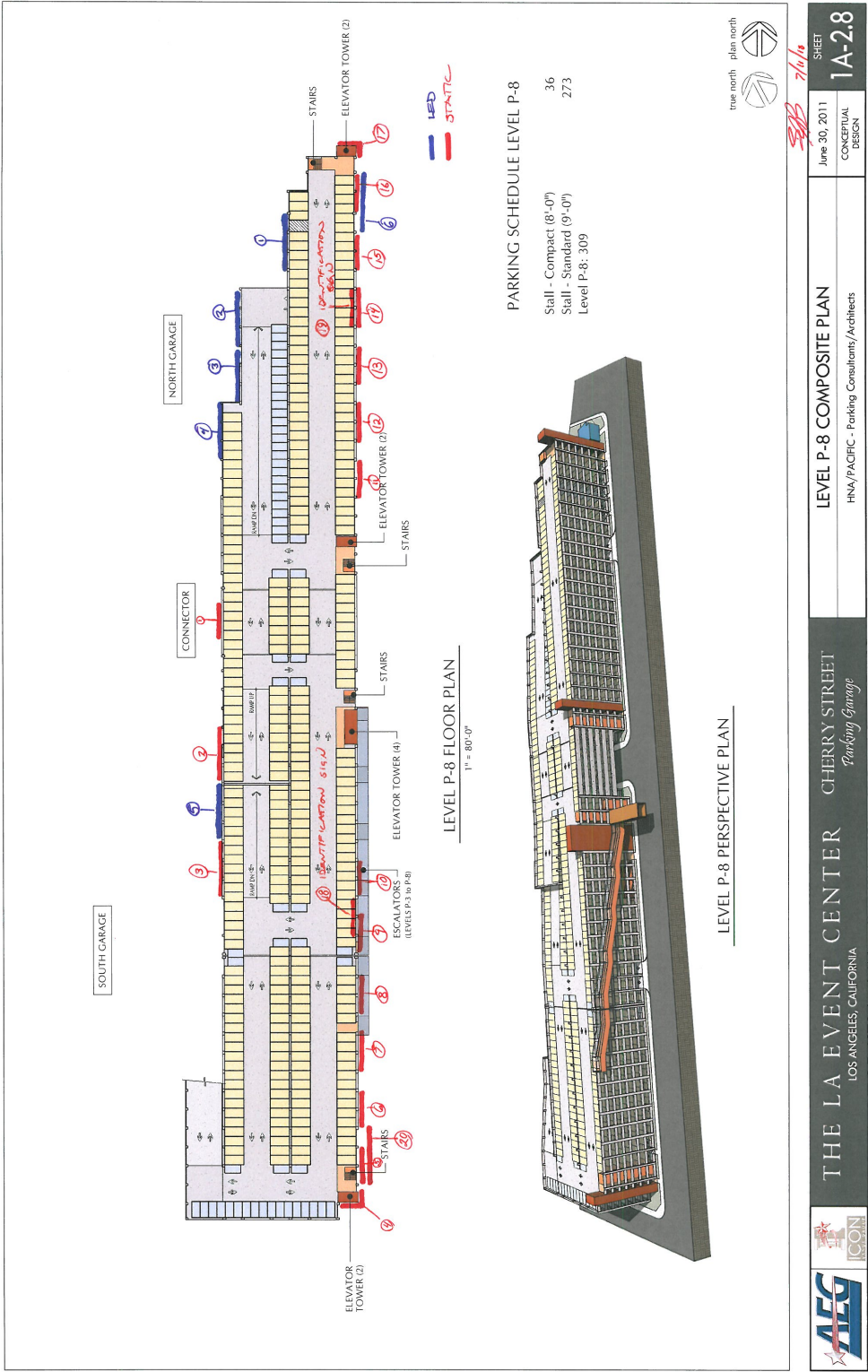
Mardaljevic, J & Lomas, K. (1995) The Application, Validation and Further Development of RADIANCE: Some UK Activities, IBPSA - Building Simulation '95, Madison, Wisconsin, USA [CR]

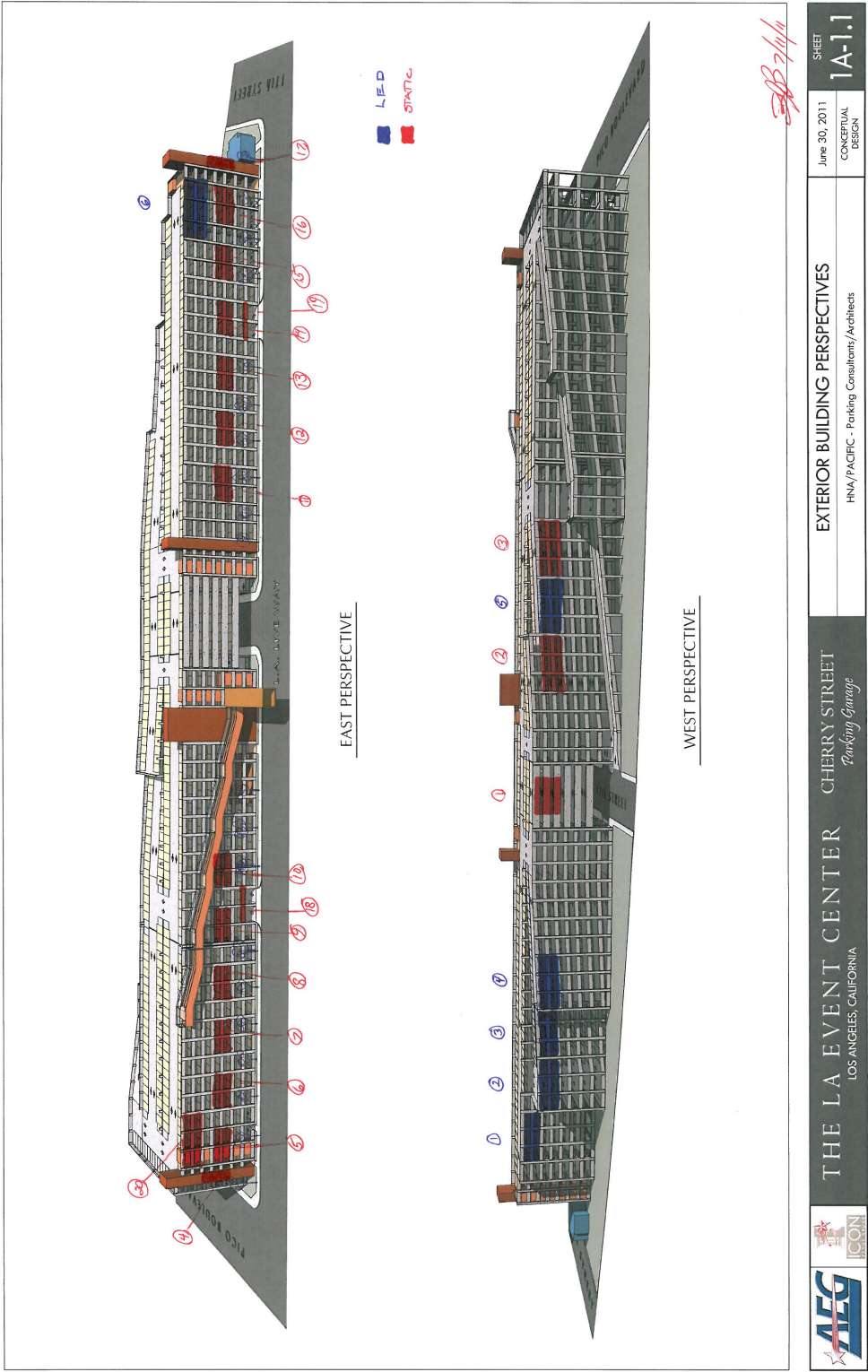


Gensler

Exterior and Site Sign Locations

PROGRESS SET | Proposed Convention & Event Center Specific Plan | Los Angeles, CA | 05.8114.000 | July 20, 2011 | 2





Appendix H

Farmers' Field - Pico Hall Campus Proposed Signage Plan
Inventory List (All Signs by Location)

7/20/2011

SIGN	ELEVATION	SIGN DESCRIPTION	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT LEVEL
Farmers Field									
LED.02	EAST	CHANGEABLE MESSAGE LED BOARD	21'-6"	15'-0"	60'-0"	900	SF	A-1	1
LED.03	NORTH	CHANGEABLE MESSAGE LED BOARD	38'-0"	40'-0"	75'-0"	3,000	SF	A-1	1
LED.04	EAST	CHANGEABLE MESSAGE LED BOARD	6'-0"	60'-0"	15'-0"	900	SF	A-1	1
LED.05	NORTH	CHANGEABLE MESSAGE LED BOARD	38'-0"	40'-0"	75'-0"	3,000	SF	A-1	1
LED.06	WEST	CHANGEABLE MESSAGE LED BOARD	38'-0"	40'-0"	75'-0"	3,000	SF	B	2
LED.07	WEST	CHANGEABLE MESSAGE LED BOARD	38'-0"	40'-0"	75'-0"	3,000	SF	B	2
NR.01	ROOF - WEST	NAMING RIGHTS	ROOF	80'-10 1/2"	366'-0"	29,600	SF	B	-
NR.02	ROOF - EAST	NAMING RIGHTS	ROOF	80'-10 1/2"	366'-0"	29,600	SF	B	-
NR.03	WEST	NAMING RIGHTS	70'-5"	30'-0"	135'-9 1/2"	4,074	SF	B	2
NR.04	NORTH	NAMING RIGHTS	100'-0"	30'-0"	135'-9 1/2"	4,074	SF	A-1	2
NR.05	EAST	NAMING RIGHTS	70'-0"	20'-0"	90'-6 1/2"	1,811	SF	B	2
NR.06	SOUTH	NAMING RIGHTS	90'-0"	20'-0"	90'-6 1/2"	1,811	SF	B	3
NR.07	WEST	NAMING RIGHTS	10'-0"	10'-0"	45'-3 1/2"	453	SF	B	1
NR.08	WEST	NAMING RIGHTS	10'-0"	6'-0"	27'-2"	163	SF	B	1
NR.09	WEST	NAMING RIGHTS	10'-0"	6'-0"	27'-2"	163	SF	B	1
NR.10	EAST	NAMING RIGHTS	60'-0"	20'-0"	90'-6 1/2"	1,811	SF	A-1	1
NR.11	EAST	NAMING RIGHTS	10'-0"	6'-0"	27'-2"	163	SF	A-1	1
RP.01	EAST	RETAIL PARTNER	10'-0"	6'-0"	25'-0"	150	SF	A-1	1
RP.02	EAST	RETAIL PARTNER	10'-0"	6'-0"	25'-0"	150	SF	A-1	1
RP.03	NORTH	RETAIL PARTNER	12'-0"	3'-0"	30'-0"	90	SF	A-1	1
RP.04	NORTH	RETAIL PARTNER	12'-0"	3'-0"	30'-0"	90	SF	A-1	1
RP.05	NORTH	RETAIL PARTNER	12'-0"	3'-0"	30'-0"	90	SF	A-1	1
RP.06	NORTH	RETAIL PARTNER	10'-0"	3'-0"	30'-0"	90	SF	A-1	1
RP.07	NORTH	RETAIL PARTNER	10'-0"	3'-0"	30'-0"	90	SF	A-1	1
RP.08	WEST	RETAIL PARTNER	10'-0"	3'-0"	30'-0"	90	SF	B	1
							88,363	SF	
L.A. Live Way Garage									
LED.09	EAST	CHANGEABLE MESSAGE LED BOARD	38'-0"	20'-6"	56'-0"	1,148	SF	B	2
LED.10	WEST	CHANGEABLE MESSAGE LED BOARD	38'-0"	20'-6"	56'-0"	1,148	SF	B	2
LED.11	WEST	CHANGEABLE MESSAGE LED BOARD	38'-0"	20'-6"	56'-0"	1,148	SF	B	2
LED.12	SOUTH	CHANGEABLE MESSAGE LED BOARD	38'-0"	30'-0"	46'-8"	1,400	SF	B	2
SS.18	SOUTHEAST	SPONSORSHIP SIGN	22'-8"	38'-0"	30'-6"	1,387	SF	B	1/2
SS.19	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.20	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.21	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.22	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.23	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.24	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.25	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.26	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.27	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.28	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.29	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.30	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.31	EAST	SPONSORSHIP SIGN	22'-8"	20'-4"	36'-0"	732	SF	B	1
SS.32	EAST/NORTH	SPONSORSHIP SIGN	22'-8"	38'-0"	30'-6"	1,387	SF	B	1/2
							18,282	SF	
Bond Street Garage									
LED.13	WEST	CHANGEABLE MESSAGE LED BOARD	38'-0"	20'-0"	60'-0"	1,200	SF	B	2
LED.14	WEST	CHANGEABLE MESSAGE LED BOARD	38'-0"	20'-0"	60'-0"	1,200	SF	B	2
							2,400	SF	
Los Angeles Convention Center / Pico Hall									
LED.15	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
LED.16	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
LED.17	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
LED.18	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
LED.21	NORTH	CHANGEABLE MESSAGE LED BOARD	60'-0"	19'-0"	33'-9"	641	SF	A	2
LED.22	NORTH	CHANGEABLE MESSAGE LED BOARD	16'-0"	3'-0"	245'-0"	735	SF	A	1
LED.28	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.29	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.30	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.31	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.32	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.33	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
SS.01	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.02	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.03	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.04	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.05	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.06	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.07	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.08	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.09	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.10	NORTH	CHANGEABLE MESSAGE LED BOARD	60'-0"	19'-0"	33'-9"	641	SF	A	2
SS.11	NORTH	CHANGEABLE MESSAGE LED BOARD	60'-0"	19'-0"	33'-9"	641	SF	A	2
ID.01	SOUTH-WEST	LACC IDENTITY SIGN	80'-0"	7'-3"	180'-0"	1,305	SF	C	2
ID.02	SOUTH-WEST	LACC IDENTITY SIGN	80'-0"	7'-3"	180'-0"	1,305	SF	C	2
ID.03	SOUTH-WEST	LACC IDENTITY SIGN	80'-0"	7'-3"	180'-0"	1,305	SF	C	2
ID.04	SOUTH PEDESTRIAN	LACC IDENTITY SIGN	8'-0"	5'-0"	50'-0"	250	SF	C	1
ID.05	SOUTH PEDESTRIAN	LACC IDENTITY SIGN	8'-0"	5'-0"	50'-0"	250	SF	C	1
ID.06	NORTH PEDESTRIAN	LACC IDENTITY SIGN	8'-0"	5'-0"	50'-0"	250	SF	C	1
ID.07	NORTH PEDESTRIAN	LACC IDENTITY SIGN	8'-0"	5'-0"	50'-0"	250	SF	C	1
TE.02	NORTH	SPONSORSHIP SIGN	85'-0"	66'-0"	75'-0"	4,950	SF	A	2/3
TE.03	SOUTH-WEST	TEMPORARY EVENT SIGN	95'-0"	50'-0"	75'-0"	3,750	SF	A	2
							32,749	SF	
Venice Garage									
LED.19	SOUTH	CHANGEABLE MESSAGE LED BOARD	24'-0"	15'-0"	50'-0"	750	SF	C	1/2
LED.20	SOUTH	CHANGEABLE MESSAGE LED BOARD	24'-0"	15'-0"	50'-0"	750	SF	C	1/2
							1,500	SF	
Los Angeles Convention Center / Concourse									
LED.23	EAST	CHANGEABLE MESSAGE LED BOARD	35'-0"	40'-0"	75'-0"	3,000	SF	A	2
LED.24	EAST	CHANGEABLE MESSAGE LED BOARD	56'-6"	19'-0"	55'-0"	1,045	SF	A	2
LED.25	EAST	CHANGEABLE MESSAGE LED BOARD	56'-6"	19'-0"	33'-9"	641	SF	A	2
SS.12	EAST	CHANGEABLE MESSAGE LED BOARD	15'-6"	3'-0"	145'-0"	435	SF	A	1
SS.13	EAST	CHANGEABLE MESSAGE LED BOARD	56'-6"	19'-0"	55'-0"	1,045	SF	A	2
TE.01	EAST	TEMPORARY EVENT SIGN	85'-0"	50'-0"	56'-0"	2,800	SF	A	2/3
TE.02	NORTH	SPONSORSHIP SIGN	85'-0"	66'-0"	75'-0"	4,950	SF	A	2/3
TE.03	SOUTH-WEST	TEMPORARY EVENT SIGN	95'-0"	50'-0"	75'-0"	3,750	SF	A	2
TE.04	EAST	SPONSORSHIP SIGN	35'-0"	30'-0"	50'-0"	1,500	SF	A	2
							19,166	SF	
Staples Center									
LED.01	NORTH	CHANGEABLE MESSAGE LED BOARD	40'	8'-6"	130'-2"	1,106	SF	A-1	2
SS.13	NORTH	SPONSORSHIP SIGN	25'	40'-0"	60'-0"	2,400	SF	A-1	2
							3,506	SF	
Gilbert Lindsey Plaza									
LED.26	EAST	CHANGEABLE MESSAGE LED PYLON	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
LED.27	EAST	CHANGEABLE MESSAGE LED PYLON	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
SS.14	EAST	SPONSORSHIP SIGN	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
SS.15	EAST	SPONSORSHIP SIGN	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
SS.16	EAST	SPONSORSHIP SIGN	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
SS.17	EAST	SPONSORSHIP SIGN	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
							4,800	SF	
							170,766	SF	

Appendix H

Farmers' Field - Pico Hall Campus Proposed Signage Plan
Inventory List (All Signs by Sign Type)

7/20/2011

SIGN	ELEVATION	SIGN DESCRIPTION	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL
LED.01	NORTH	CHANGEABLE MESSAGE LED BOARD	40'	8' - 6"	130' - 2"	1,106 SF	SF	A-1	2
LED.02	EAST	CHANGEABLE MESSAGE LED BOARD	21' - 6"	15' - 0"	60' - 0"	900 SF	SF	A-1	1
LED.03	NORTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000 SF	SF	A-1	1
LED.04	EAST	CHANGEABLE MESSAGE LED BOARD	6' - 0"	60' - 0"	15' - 0"	900 SF	SF	A-1	1
LED.05	NORTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000 SF	SF	A-1	1
LED.06	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000 SF	SF	B	2
LED.07	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000 SF	SF	B	2
LED.08	EAST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148 SF	SF	B	2
LED.09	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148 SF	SF	B	2
LED.10	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148 SF	SF	B	2
LED.11	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148 SF	SF	B	2
LED.12	SOUTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	30' - 0"	46' - 8"	1,400 SF	SF	B	2
LED.13	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 0"	60' - 0"	1,200 SF	SF	B	2
LED.14	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 0"	60' - 0"	1,200 SF	SF	B	2
LED.15	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
LED.16	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
LED.17	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
LED.18	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
LED.19	SOUTH	CHANGEABLE MESSAGE LED BOARD	24' - 0"	15' - 0"	50' - 0"	750 SF	SF	C	1/2
LED.20	SOUTH	CHANGEABLE MESSAGE LED BOARD	24' - 0"	15' - 0"	50' - 0"	750 SF	SF	C	1/2
LED.21	NORTH	CHANGEABLE MESSAGE LED BOARD	60' - 0"	19' - 0"	33' - 9"	641 SF	SF	A	2
LED.22	NORTH	CHANGEABLE MESSAGE LED BOARD	16' - 0"	3' - 0"	245' - 0"	735 SF	SF	A	1
LED.23	EAST	CHANGEABLE MESSAGE LED BOARD	35' - 0"	40' - 0"	75' - 0"	3,000 SF	SF	A	2
LED.24	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	55' - 0"	1,045 SF	SF	A	2
LED.25	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	33' - 9"	641 SF	SF	A	2
LED.26	EAST	CHANGEABLE MESSAGE LED PYLON	12' - 0"	40' - 0"	20' - 0"	800 SF	SF	A	1/2
LED.27	EAST	CHANGEABLE MESSAGE LED PYLON	12' - 0"	40' - 0"	20' - 0"	800 SF	SF	A	1/2
LED.28	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	A	1
LED.29	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	A	1
LED.30	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	A	1
LED.31	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	A	1
LED.32	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	A	1
LED.33	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	A	1
							38,568 SF		
NR.01	ROOF - WEST	NAMING RIGHTS	ROOF	80' - 10 1/2"	366' - 0"	29,600 SF	SF	B	-
NR.02	ROOF - EAST	NAMING RIGHTS	ROOF	80' - 10 1/2"	366' - 0"	29,600 SF	SF	B	-
NR.03	WEST	NAMING RIGHTS	70' - 5"	30' - 0"	35' - 9 1/2"	4,074 SF	SF	B	2
NR.04	NORTH	NAMING RIGHTS	100' - 0"	30' - 0"	135' - 9 1/2"	4,074 SF	SF	A-1	2
NR.05	EAST	NAMING RIGHTS	70' - 0"	20' - 0"	90' - 6 1/2"	1,811 SF	SF	B	2
NR.06	SOUTH	NAMING RIGHTS	90' - 0"	20' - 0"	90' - 6 1/2"	1,811 SF	SF	B	3
NR.07	WEST	NAMING RIGHTS	10' - 0"	10' - 0"	45' - 3 1/2"	453 SF	SF	B	1
NR.08	WEST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163 SF	SF	B	1
NR.09	WEST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163 SF	SF	B	1
NR.10	EAST	NAMING RIGHTS	60' - 0"	20' - 0"	90' - 6 1/2"	1,811 SF	SF	A-1	1
NR.11	EAST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163 SF	SF	A-1	1
							73,723 SF		
RP.01	EAST	RETAIL PARTNER	10' - 0"	6' - 0"	25' - 0"	150 SF	SF	A-1	1
RP.02	EAST	RETAIL PARTNER	10' - 0"	6' - 0"	25' - 0"	150 SF	SF	A-1	1
RP.03	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90 SF	SF	A-1	1
RP.04	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90 SF	SF	A-1	1
RP.05	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90 SF	SF	A-1	1
RP.06	NORTH	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90 SF	SF	A-1	1
RP.07	NORTH	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90 SF	SF	A-1	1
RP.08	WEST	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90 SF	SF	B	1
							840 SF		
SS.01	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.02	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.03	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.04	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.05	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.06	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.07	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.08	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.09	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152 SF	SF	C	2
SS.10	NORTH	CHANGEABLE MESSAGE LED BOARD	60' - 0"	19' - 0"	33' - 9"	641 SF	SF	A	2
SS.11	NORTH	CHANGEABLE MESSAGE LED BOARD	60' - 0"	19' - 0"	33' - 9"	641 SF	SF	A	2
SS.12	EAST	CHANGEABLE MESSAGE LED BOARD	15' - 6"	3' - 0"	145' - 0"	435 SF	SF	A	1
SS.13	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	55' - 0"	1,045 SF	SF	A	2
SS.14	EAST	SPONSORSHIP SIGN	12' - 0"	40' - 0"	20' - 0"	800 SF	SF	A	1/2
SS.15	EAST	SPONSORSHIP SIGN	12' - 0"	40' - 0"	20' - 0"	800 SF	SF	A	1/2
SS.16	EAST	SPONSORSHIP SIGN	12' - 0"	40' - 0"	20' - 0"	800 SF	SF	A	1/2
SS.17	EAST	SPONSORSHIP SIGN	12' - 0"	40' - 0"	20' - 0"	800 SF	SF	A	1/2
SS.18	SOUTH/EAST	SPONSORSHIP SIGN	22' - 8"	38' - 0"	30' - 6"	1,387 SF	SF	B	1/2
SS.19	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.20	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.21	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.22	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.23	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.24	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.25	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.26	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.27	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.28	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.29	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.30	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.31	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732 SF	SF	B	1
SS.32	EAST/NORTH	SPONSORSHIP SIGN	22' - 8"	38' - 0"	30' - 6"	1,387 SF	SF	B	1/2
SS.33	NORTH	SPONSORSHIP SIGN	25'	40' - 0"	60' - 0"	2,400 SF	SF	A-1	2
							31,020 SF		
TE.01	EAST	TEMPORARY EVENT SIGN	85' - 0"	50' - 0"	56' - 0"	2,800 SF	SF	A	2/3
TE.02	NORTH	SPONSORSHIP SIGN	85' - 0"	66' - 0"	75' - 0"	4,950 SF	SF	A	2/3
TE.03	NORTH	SPONSORSHIP SIGN	85' - 0"	66' - 0"	75' - 0"	4,950 SF	SF	A	2/3
TE.04	SOUTH-WEST	TEMPORARY EVENT SIGN	95' - 0"	50' - 0"	75' - 0"	3,750 SF	SF	A	2
TE.05	SOUTH-WEST	TEMPORARY EVENT SIGN	95' - 0"	50' - 0"	75' - 0"	3,750 SF	SF	A	2
TE.06	EAST	SPONSORSHIP SIGN	35' - 0"	30' - 0"	50' - 0"	1,500 SF	SF	A	2
							21,700 SF		
ID.01	SOUTH-WEST	LACC IDENTITY SIGN	80' - 0"	7' - 3"	180' - 0"	1,305 SF	SF	C	2
ID.02	SOUTH-WEST	LACC IDENTITY SIGN	80' - 0"	7' - 3"	180' - 0"	1,305 SF	SF	C	2
ID.03	SOUTH-WEST	LACC IDENTITY SIGN	80' - 0"	7' - 3"	180' - 0"	1,305 SF	SF	C	2
ID.04	NORTH PEDESTRIAN	LACC IDENTITY SIGN	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	C	1
ID.05	NORTH PEDESTRIAN	LACC IDENTITY SIGN	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	C	1
ID.06	SOUTH PEDESTRIAN	LACC IDENTITY SIGN	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	C	1
ID.07	SOUTH PEDESTRIAN	LACC IDENTITY SIGN	8' - 0"	5' - 0"	50' - 0"	250 SF	SF	C	1
							4,915 SF		

170,766 SF

Appendix H

Farmers' Field - Pico Hall Campus Proposed Signage Plan
Inventory List (LACC Only by Location)

7/20/2011

SIGN	ELEVATION	SIGN DESCRIPTION	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT LEVEL
Los Angeles Convention Center / Pico Hall									
LED.15	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
LED.16	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
LED.17	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
LED.18	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
LED.21	NORTH	CHANGEABLE MESSAGE LED BOARD	60'-0"	19'-0"	33'-9"	641	SF	A	2
LED.22	NORTH	CHANGEABLE MESSAGE LED BOARD	16'-0"	3'-0"	245'-0"	735	SF	A	1
LED.28	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.29	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.30	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.31	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.32	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
LED.33	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8'-0"	5'-0"	50'-0"	250	SF	A	1
SS.01	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.02	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.03	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.04	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.05	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.06	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.07	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.08	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.09	SOUTH-WEST	SPONSORSHIP SIGN	68'-0"	24'-0"	48'-0"	1,152	SF	C	2
SS.10	NORTH	CHANGEABLE MESSAGE LED BOARD	60'-0"	19'-0"	33'-9"	641	SF	A	2
SS.11	NORTH	CHANGEABLE MESSAGE LED BOARD	60'-0"	19'-0"	33'-9"	641	SF	A	2
ID.01	SOUTH-WEST	LACC IDENTITY SIGN	80'-0"	7'-3"	180'-0"	1,305	SF	C	2
ID.02	SOUTH-WEST	LACC IDENTITY SIGN	80'-0"	7'-3"	180'-0"	1,305	SF	C	2
ID.03	SOUTH-WEST	LACC IDENTITY SIGN	80'-0"	7'-3"	180'-0"	1,305	SF	C	2
ID.04	SOUTH PEDESTRIAN	LACC IDENTITY SIGN	8'-0"	5'-0"	50'-0"	250	SF	C	1
ID.05	SOUTH PEDESTRIAN	LACC IDENTITY SIGN	8'-0"	5'-0"	50'-0"	250	SF	C	1
ID.06	NORTH PEDESTRIAN	LACC IDENTITY SIGN	8'-0"	5'-0"	50'-0"	250	SF	C	1
ID.07	NORTH PEDESTRIAN	LACC IDENTITY SIGN	8'-0"	5'-0"	50'-0"	250	SF	C	1
TE.02	NORTH	SPONSORSHIP SIGN	85'-0"	66'-0"	75'-0"	4,950	SF	A	2/3
TE.03	SOUTH-WEST	TEMPORARY EVENT SIGN	95'-0"	50'-0"	75'-0"	3,750	SF	A	2
							32,749 SF		
Venice Garage									
LED.19	SOUTH	CHANGEABLE MESSAGE LED BOARD	24'-0"	15'-0"	50'-0"	750	SF	C	1/2
LED.20	SOUTH	CHANGEABLE MESSAGE LED BOARD	24'-0"	15'-0"	50'-0"	750	SF	C	1/2
							1,500 SF		
Los Angeles Convention Center / Concourse									
LED.23	EAST	CHANGEABLE MESSAGE LED BOARD	35'-0"	40'-0"	75'-0"	3,000	SF	A	2
TE.02	NORTH	SPONSORSHIP SIGN	85'-0"	66'-0"	75'-0"	4,950	SF	A	2/3
TE.03	SOUTH-WEST	TEMPORARY EVENT SIGN	95'-0"	50'-0"	75'-0"	3,750	SF	A	2
TE.04	EAST	SPONSORSHIP SIGN	35'-0"	30'-0"	50'-0"	1,500	SF	A	2
							13,200 SF		
Gilbert Lindsey Plaza									
LED.26	EAST	CHANGEABLE MESSAGE LED PYLON	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
LED.27	EAST	CHANGEABLE MESSAGE LED PYLON	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
SS.14	EAST	SPONSORSHIP SIGN	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
SS.15	EAST	SPONSORSHIP SIGN	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
SS.16	EAST	SPONSORSHIP SIGN	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
SS.17	EAST	SPONSORSHIP SIGN	12'-0"	40'-0"	20'-0"	800	SF	A	1/2
							4,800 SF		
							52,249 SF		

Appendix H

Farmers' Field - Pico Hall Campus Proposed Signage Plan
Inventory List (LACC Only by Sign Type)

7/20/2011

SIGN	ELEVATION	SIGN DESCRIPTION	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL
LED.15	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
LED.16	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
LED.17	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
LED.18	SOUTH-WEST	CHANGEABLE MESSAGE LED BOARD	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
LED.19	SOUTH	CHANGEABLE MESSAGE LED BOARD	24' - 0"	15' - 0"	50' - 0"	750	SF	C	1/2
LED.20	SOUTH	CHANGEABLE MESSAGE LED BOARD	24' - 0"	15' - 0"	50' - 0"	750	SF	C	1/2
LED.21	NORTH	CHANGEABLE MESSAGE LED BOARD	60' - 0"	19' - 0"	33' - 9"	641	SF	A	2
LED.22	NORTH	CHANGEABLE MESSAGE LED BOARD	16' - 0"	3' - 0"	245' - 0"	735	SF	A	1
LED.23	EAST	CHANGEABLE MESSAGE LED BOARD	35' - 0"	40' - 0"	75' - 0"	3,000	SF	A	2
LED.26	EAST	CHANGEABLE MESSAGE LED PYLON	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2
LED.27	EAST	CHANGEABLE MESSAGE LED PYLON	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2
LED.28	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250	SF	A	1
LED.29	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250	SF	A	1
LED.30	NORTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250	SF	A	1
LED.31	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250	SF	A	1
LED.32	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250	SF	A	1
LED.33	SOUTH PEDESTRIAN	CHANGEABLE MESSAGE LED BOARD	8' - 0"	5' - 0"	50' - 0"	250	SF	A	1
							13,584 SF		
SS.01	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.02	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.03	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.04	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.05	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.06	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.07	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.08	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.09	SOUTH-WEST	SPONSORSHIP SIGN	68' - 0"	24' - 0"	48' - 0"	1,152	SF	C	2
SS.10	NORTH	CHANGEABLE MESSAGE LED BOARD	60' - 0"	19' - 0"	33' - 9"	641	SF	A	2
SS.11	NORTH	CHANGEABLE MESSAGE LED BOARD	60' - 0"	19' - 0"	33' - 9"	641	SF	A	2
SS.14	EAST	SPONSORSHIP SIGN	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2
SS.15	EAST	SPONSORSHIP SIGN	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2
SS.16	EAST	SPONSORSHIP SIGN	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2
SS.17	EAST	SPONSORSHIP SIGN	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2
							14,850 SF		
TE.02	NORTH	SPONSORSHIP SIGN	85' - 0"	66' - 0"	75' - 0"	4,950	SF	A	2/3
TE.02	NORTH	SPONSORSHIP SIGN	85' - 0"	66' - 0"	75' - 0"	4,950	SF	A	2/3
TE.03	SOUTH-WEST	TEMPORARY EVENT SIGN	95' - 0"	50' - 0"	75' - 0"	3,750	SF	A	2
TE.03	SOUTH-WEST	TEMPORARY EVENT SIGN	95' - 0"	50' - 0"	75' - 0"	3,750	SF	A	2
TE.04	EAST	SPONSORSHIP SIGN	35' - 0"	30' - 0"	50' - 0"	1,500	SF	A	2
							18,900 SF		
ID.01	SOUTH-WEST	LACC IDENTITY SIGN	80' - 0"	7' - 3"	180' - 0"	1,305	SF	C	2
ID.02	SOUTH-WEST	LACC IDENTITY SIGN	80' - 0"	7' - 3"	180' - 0"	1,305	SF	C	2
ID.03	SOUTH-WEST	LACC IDENTITY SIGN	80' - 0"	7' - 3"	180' - 0"	1,305	SF	C	2
ID.04	SOUTH PEDESTRIAN	LACC IDENTITY SIGN	8' - 0"	5' - 0"	50' - 0"	250	SF	C	1
ID.05	SOUTH PEDESTRIAN	LACC IDENTITY SIGN	8' - 0"	5' - 0"	50' - 0"	250	SF	C	1
ID.06	NORTH PEDESTRIAN	LACC IDENTITY SIGN	8' - 0"	5' - 0"	50' - 0"	250	SF	C	1
ID.07	NORTH PEDESTRIAN	LACC IDENTITY SIGN	8' - 0"	5' - 0"	50' - 0"	250	SF	C	1
							4,915 SF		
							52,249 SF		

Appendix H

Farmers' Field - Pico Hall Campus Proposed Signage Plan
Inventory List (AEG Only by Location)

7/20/2011

SIGN	ELEVATION	SIGN DESCRIPTION	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT LEVEL
Farmer's Field									
LED.02	EAST	CHANGEABLE MESSAGE LED BOARD	21' - 6"	15' - 0"	60' - 0"	900	SF	A-1	1
LED.03	NORTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000	SF	A-1	1
LED.04	EAST	CHANGEABLE MESSAGE LED BOARD	6' - 0"	60' - 0"	15' - 0"	900	SF	A-1	1
LED.05	NORTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000	SF	A-1	1
LED.06	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000	SF	B	2
LED.07	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000	SF	B	2
NR.01	ROOF - WEST	NAMING RIGHTS	ROOF	80' - 10 1/2"	366' - 0"	29,600	SF	B	-
NR.02	ROOF - EAST	NAMING RIGHTS	ROOF	80' - 10 1/2"	366' - 0"	29,600	SF	B	-
NR.03	WEST	NAMING RIGHTS	70' - 5"	30' - 0"	135' - 9 1/2"	4,074	SF	B	2
NR.04	NORTH	NAMING RIGHTS	100' - 0"	30' - 0"	135' - 9 1/2"	4,074	SF	A-1	2
NR.05	EAST	NAMING RIGHTS	70' - 0"	20' - 0"	90' - 6 1/2"	1,811	SF	B	2
NR.06	SOUTH	NAMING RIGHTS	90' - 0"	20' - 0"	90' - 6 1/2"	1,811	SF	B	3
NR.07	WEST	NAMING RIGHTS	10' - 0"	10' - 0"	45' - 3 1/2"	453	SF	B	1
NR.08	WEST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163	SF	B	1
NR.09	WEST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163	SF	B	1
NR.10	EAST	NAMING RIGHTS	60' - 0"	20' - 0"	90' - 6 1/2"	1,811	SF	A-1	1
NR.11	EAST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163	SF	A-1	1
RP.01	EAST	RETAIL PARTNER	10' - 0"	6' - 0"	25' - 0"	150	SF	A-1	1
RP.02	EAST	RETAIL PARTNER	10' - 0"	6' - 0"	25' - 0"	150	SF	A-1	1
RP.03	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.04	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.05	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.06	NORTH	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.07	NORTH	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.08	WEST	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90	SF	B	1
							88,363 SF		
L.A. Live Way Garage									
LED.08	EAST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148	SF	B	2
LED.09	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148	SF	B	2
LED.10	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148	SF	B	2
LED.11	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148	SF	B	2
LED.12	SOUTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	30' - 0"	46' - 8"	1,400	SF	B	2
SS.18	SOUTH/EAST	SPONSORSHIP SIGN	22' - 8"	38' - 0"	30' - 6"	1,387	SF	B	1/2
SS.19	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.20	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.21	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.22	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.23	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.24	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.25	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.26	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.27	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.28	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.29	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.30	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.31	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.32	EAST/NORTH	SPONSORSHIP SIGN	22' - 8"	38' - 0"	30' - 6"	1,387	SF	B	1/2
							18,282 SF		
Bond Street Garage									
LED.13	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 0"	60' - 0"	1,200	SF	B	2
LED.14	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 0"	60' - 0"	1,200	SF	B	2
							2,400 SF		
Los Angeles Convention Center / Concourse									
LED.24	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	55' - 0"	1,045	SF	A	2
LED.25	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	33' - 9"	641	SF	A	2
SS.12	EAST	CHANGEABLE MESSAGE LED BOARD	15' - 6"	3' - 0"	145' - 0"	435	SF	A	1
SS.13	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	55' - 0"	1,045	SF	A	2
TEMP.1	EAST	TEMPORARY EVENT SIGN	85' - 0"	50' - 0"	56' - 0"	2,800	SF	A	2/3
							5,966 SF		
Staples Center									
LED.01	NORTH	CHANGEABLE MESSAGE LED BOARD	40'	8' - 6"	130' - 2"	1,106	SF	A-1	2
SS.33	NORTH	SPONSORSHIP SIGN	25'	40' - 0"	60' - 0"	2,400	SF	A-1	2
							3,506 SF		
							118,517 SF		

Appendix H

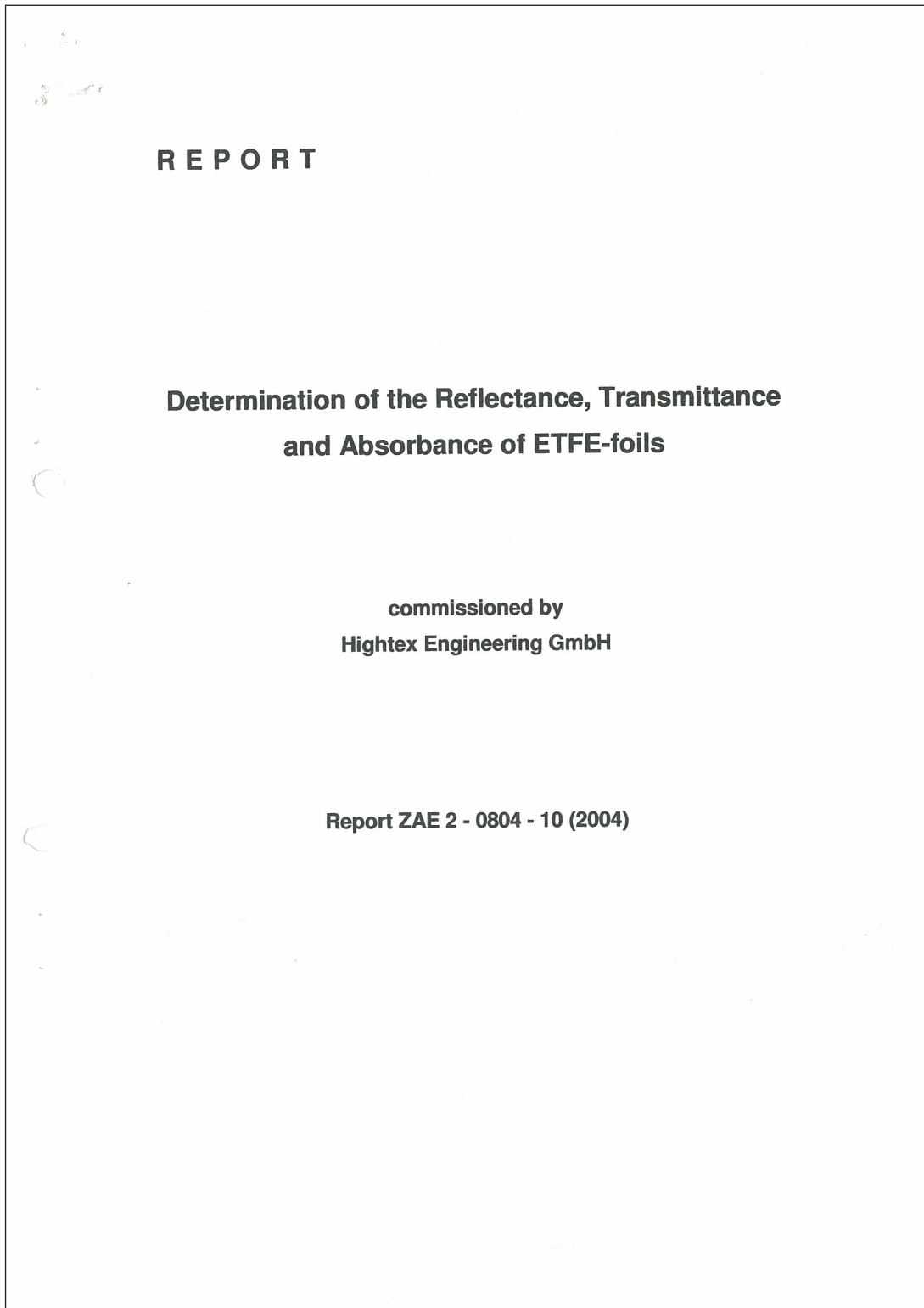
Farmers' Field - Pico Hall Campus Proposed Signage Plan
Inventory List (AEG Only by Sign Type)

7/20/2011

SIGN	ELEVATION	SIGN DESCRIPTION	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL
LED.01	NORTH	CHANGEABLE MESSAGE LED BOARD	40'	8' - 6"	130' - 2"	1,106	SF	A-1	2
LED.02	EAST	CHANGEABLE MESSAGE LED BOARD	21' - 6"	15' - 0"	60' - 0"	900	SF	A-1	1
LED.03	NORTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000	SF	A-1	1
LED.04	EAST	CHANGEABLE MESSAGE LED BOARD	6' - 0"	60' - 0"	15' - 0"	900	SF	A-1	1
LED.05	NORTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000	SF	A-1	1
LED.06	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000	SF	B	2
LED.07	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	40' - 0"	75' - 0"	3,000	SF	B	2
LED.08	EAST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148	SF	B	2
LED.09	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148	SF	B	2
LED.10	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148	SF	B	2
LED.11	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 6"	56' - 0"	1,148	SF	B	2
LED.12	SOUTH	CHANGEABLE MESSAGE LED BOARD	38' - 0"	30' - 0"	46' - 8"	1,400	SF	B	2
LED.14	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 0"	60' - 0"	1,200	SF	B	2
LED.13	WEST	CHANGEABLE MESSAGE LED BOARD	38' - 0"	20' - 0"	60' - 0"	1,200	SF	B	2
LED.24	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	55' - 0"	1,045	SF	A	2
LED.25	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	33' - 9"	641	SF	A	2
24,984 SF									
NR.01	ROOF - WEST	NAMING RIGHTS	ROOF	80' - 10 1/2"	366' - 0"	29,600	SF	B	-
NR.02	ROOF - EAST	NAMING RIGHTS	ROOF	80' - 10 1/2"	366' - 0"	29,600	SF	B	-
NR.03	WEST	NAMING RIGHTS	70' - 5"	30' - 0"	135' - 9 1/2"	4,074	SF	B	2
NR.04	NORTH	NAMING RIGHTS	100' - 0"	30' - 0"	135' - 9 1/2"	4,074	SF	A-1	2
NR.05	EAST	NAMING RIGHTS	70' - 0"	20' - 0"	90' - 6 1/2"	1,811	SF	B	2
NR.06	SOUTH	NAMING RIGHTS	90' - 0"	20' - 0"	90' - 6 1/2"	1,811	SF	B	3
NR.07	WEST	NAMING RIGHTS	10' - 0"	10' - 0"	45' - 3 1/2"	453	SF	B	1
NR.08	WEST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163	SF	B	1
NR.09	WEST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163	SF	B	1
NR.10	EAST	NAMING RIGHTS	60' - 0"	20' - 0"	90' - 6 1/2"	1,811	SF	A-1	1
NR.11	EAST	NAMING RIGHTS	10' - 0"	6' - 0"	27' - 2"	163	SF	A-1	1
73,723 SF									
RP.01	EAST	RETAIL PARTNER	10' - 0"	6' - 0"	25' - 0"	150	SF	A-1	1
RP.02	EAST	RETAIL PARTNER	10' - 0"	6' - 0"	25' - 0"	150	SF	A-1	1
RP.03	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.04	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.05	NORTH	RETAIL PARTNER	12' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.06	NORTH	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.07	NORTH	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90	SF	A-1	1
RP.08	WEST	RETAIL PARTNER	10' - 0"	3' - 0"	30' - 0"	90	SF	B	1
840 SF									
SS.12	EAST	CHANGEABLE MESSAGE LED BOARD	15' - 6"	3' - 0"	145' - 0"	435	SF	A	1
SS.13	EAST	CHANGEABLE MESSAGE LED BOARD	56' - 6"	19' - 0"	55' - 0"	1,045	SF	A	2
SS.18	SOUTH/EAST	SPONSORSHIP SIGN	22' - 8"	38' - 0"	30' - 6"	1,387	SF	B	1/2
SS.19	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.20	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.21	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.22	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.23	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.24	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.25	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.26	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.27	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.28	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.29	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.30	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.31	EAST	SPONSORSHIP SIGN	22' - 8"	20' - 4"	36' - 0"	732	SF	B	1
SS.32	EAST/NORTH	SPONSORSHIP SIGN	22' - 8"	38' - 0"	30' - 6"	1,387	SF	B	1/2
SS.33	NORTH	SPONSORSHIP SIGN	25'	40' - 0"	60' - 0"	2,400	SF	A-1	2
16,170 SF									
TE.01	EAST	TEMPORARY EVENT SIGN	85' - 0"	50' - 0"	56' - 0"	2,800	SF	A	2/3
2,800 SF									
118,517 SF									

Appendix I

An excerpt from the report “Determination of Reflectance, Transmittance, and Absorbance of ETFE-foils is provided below, as this was used as a basis for material property performance of the ETFE materials proposed by Gensler.



1 Aim of the Investigation

The aim of the investigation is to determine the solar, visual and UV reflectance, transmittance and absorbance of ETFE-foils. The numbering of the samples is as follows:

Tab. 1: Numbers of the samples, which were measured.

sample-number	description	thickness / μm
1	ETFE-foil transparent	100
2	ETFE-foil transparent	150
3	ETFE-foil transparent	200
4	ETFE-foil transparent	250
5	ETFE-foil transparent	300
6	ETFE-foil with printing	200
7	ETFE-foil transparent with IR coating	100
8	ETFE-foil with printing	250
9	ETFE-foil M1 with printing	200
10	ETFE-foil M2 with printing	250

2 Theoretical Background

2.1 Determining the spectral values

First, the spectral directional-hemispherical transmittance T_{dh} and reflectance R_{dh} of the samples were measured at room temperature by an integrating sphere (Fig. 1). For measuring the transmittance the sample is irradiated normal to the surface and the radiation, which is transmitted into the hemisphere behind the sample, is detected (Fig. 1a). The inner side of the integrating sphere and the standard are coated with a diffusely reflecting sheet, which has a reflectance near to one. As

Tab. 2: Solar transmittance, reflectance and absorbance.

sample-number	solar transmittance τ_{solar}	solar reflectance ρ_{solar}	solar absorbance α_{solar}
1	0.929 ± 0.020	0.051 ± 0.020	0.020 ± 0.020
2	0.920 ± 0.020	0.058 ± 0.020	0.022 ± 0.020
3	0.903 ± 0.020	0.070 ± 0.020	0.027 ± 0.020
4	0.903 ± 0.020	0.068 ± 0.020	0.029 ± 0.020
5	0.894 ± 0.020	0.073 ± 0.020	0.033 ± 0.020
6: coated side	0.597 ± 0.020	0.300 ± 0.020	0.103 ± 0.020
6: uncoated side		0.293 ± 0.020	0.110 ± 0.020
7: coated side	0.638 ± 0.020	0.252 ± 0.020	0.110 ± 0.020
7: uncoated side		0.232 ± 0.020	0.130 ± 0.020
8	0.636 ± 0.020	0.293 ± 0.020	0.071 ± 0.020
9	0.318 ± 0.020	0.439 ± 0.020	0.243 ± 0.020
10	0.213 ± 0.020	0.469 ± 0.020	0.318 ± 0.020

Tab. 3: Visual transmittance, reflectance and absorbance.

sample-number	visual transmittance τ_{visual}	visual reflectance ρ_{visual}	visual absorbance α_{visual}
1	0.926 ± 0.020	0.054 ± 0.020	0.020 ± 0.020
2	0.917 ± 0.020	0.061 ± 0.020	0.022 ± 0.020
3	0.897 ± 0.020	0.078 ± 0.020	0.025 ± 0.020
4	0.897 ± 0.020	0.075 ± 0.020	0.028 ± 0.020
5	0.886 ± 0.020	0.081 ± 0.020	0.033 ± 0.020
6: coated side	0.595 ± 0.020	0.312 ± 0.020	0.093 ± 0.020
6: uncoated side		0.303 ± 0.020	0.102 ± 0.020
7: coated side	0.839 ± 0.020	0.085 ± 0.020	0.076 ± 0.020
7: uncoated side		0.084 ± 0.020	0.077 ± 0.020
8	0.598 ± 0.020	0.369 ± 0.020	0.033 ± 0.020
9	0.319 ± 0.020	0.443 ± 0.020	0.238 ± 0.020
10	0.209 ± 0.020	0.472 ± 0.020	0.319 ± 0.020



POWR•SPOT® FLOODLIGHT

APPLICATIONS

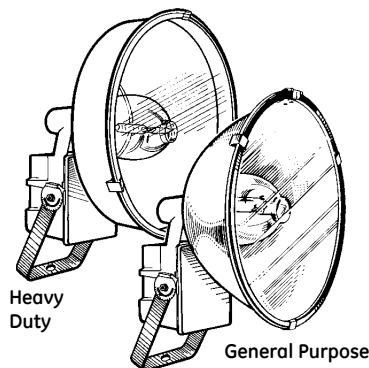
- Recreational and competition sports fields at all levels.
- General floodlighting where revolving reflectors are needed.

SPECIFICATION FEATURES

- 1598 Listed
Suitable For Wet Locations
- Die-cast aluminum ballast housing with polyester powder gray paint finish inside and out
- Enclosed, gasketed, filtered optical with ALGLAS® finish on aluminum reflector and tempered glass closure
- Thermal separation of ballast from socket and lamp
- Removable cover for access to ballast and wiring compartment
- No-weep-hole condensate drain when aimed down
- Built-in cable and strain relief bushing
- Heavy gauge steel trunnion with aiming reset stop
- Mogul base socket – E39 standard with lamp stabilizer 1000 & 1500 watt
- Corrosion-resistant hardware
- Position oriented socket available for “minimum” tilt factor lamp – contact factory
- Field convertible glare reduction available. See Accessories.
- Remote ballasted system available – contact factory

ORDERING NUMBER LOGIC

PSFA	51	M	0	A	2	3	HD0	P
PRODUCT IDENT	WATTAGE	LIGHT SOURCE	VOLTAGE	BALLAST TYPE	TRUNNION TYPE	NEMA TYPE BEAM SPREAD HORIZ X VERT	OPTICAL REFLECTOR	OPTIONS
XXXX	XX	X	X	X	X	X	XXX	XXX
PSFA = Standard Powr•Spot Floodlight all optics.	75= 750 01= 1000 51= 1500	E = Energy Act Compliant Pulse MH (EPMH) S = HPS M = MH Standard: Lamp not included.	60Hz 0 = 120/208/240/277 Multivolt 1 = 120 2 = 208 3 = 240 4 = 277 5 = 480 D = 347 T = 220 50Hz 6 = 220 Y = 240	See Ballast and Photometric Selection Table A = Autoreg	1 = Straight 2 = Angled 3 = Long (for Sports-Star™) (13.750") 4 = Straight Trunnion with CAA-001	Select NEMA Type from Ballast and Photometric Selection Table. Example: 3 = 3 x 3	See Dimensions HD0=Heavy Duty 20-in. (508mm) Diameter GP0=General Purpose 20-in. (508mm) Diameter HD2=Heavy Duty 22-in. (559mm) Diameter GP2=General Purpose 22-in. (559mm) Diameter	F = Fusing (Not available with multivolt) P = Pre-wired with 6-ft (2M) #14/3



OPTICAL COMPONENT LOGIC

OPTICAL COMPONENT LOGIC	MH			HPS			CHOOSE A, B, C, D, E, FROM TABLE USING BEAM SPREAD AND LAMP TYPE
	1500W 51	1000W 01	400W 40	1000W 01	400W 40	750W 75	
A	2	2	1	N/A	N/A	2	HD2 or GP2
B	3	3	3*	N/A	3	3	GPO or HDO
C	4	4	3	N/A	4	4	
D	5	5	5	N/A	5	5	
E	6	6	6	5	6	6	

NOTE: *Not standard. Better equivalent distributions exist. N/A = Not Available

REFERENCES

See Page F-32 for start of Accessories.
See Pages F-46 for Component Ordering Logic.
See Pages F-47 for Explanation of Options and Other Terms Used.
See Pole and Bracket Section Page P-2 for pole selection.

Appendix J

GE PowrSpot IES File:

IESNA:LM-63-2002

[TEST] 02090902 PUBLISHED CURVE CREATED

[TESTLAB] GE LIGHTING SOLUTIONS

[ISSUEDATE] 9/9/2002

[MANUFAC] GE LIGHTING SOLUTIONS

[MORE] www.gelightingsolutions.com

[_FILETYPE] RELATIVE

[SEARCH] FLOOD PSFA

[LUMINAIRE] POWR-SPOT

[DISTRIBUTION] 3 X 3

[LUMCAT] PSFA51M___3__0

[LAMP] 1; 1500W MH, CLEAR BT56, AXIAL

[LAMPCAT] GE MVR1500/U/SPORTS

[BALLAST]

[BALLASTCAT]

[OTHER] HSNQ: CAST HOUSING FABRICATED SHEET DOOR/COVER

[MORE] REFL: SPECULAR SPUN ALUM

[MORE] ENCL: CLEAR SHEET GLASS

[MORE] ACSY:

[MORE] SOCKET POSITION: FIXED

[MORE] COMMENT:

[_ABSOLUTELUMENS] NA

[_LCS]

[_BUG]

[_SUPPLYVOLTAGE]

[_AVERAGEDFILES]

TILT=NONE

1 170000 170.0000 39 20 2 1 -1.6 0.0 0.0

1 1 1642

-90 -85 -75 -65 -55 -45 -35 -25.5 -25 -22.5 -19.5 -16.5 -15 -13.5 -10.5 -7.5 -5 -4.5 -1.5 0 1.5 4.5 5 7.5 10.5
13.5 15 16.5 19.5

22.5 25 25.5 35 45 55 65 75 85 90

0 1.5 4.5 5 7.5 10.5 13.5 15 16.5 19.5 22.5 25 25.5 35 45 55 65 75 85 90

0 0 4 4 45 76 72 117 133 215 419 574 652 729 1005 1530 2235 2376 3461 3740 3774 3155 3024 2373 1674
1092 979 865 646 446 307 280

76 68 60 11 4 0 0

Appendix J

0 0 4 5 45 77 73 113 130 215 416 578 655 733 997 1511 2185 2320 3355 3616 3657 3113 2978 2301 1632
1077 963 850 638 438 306 280
78 68 60 11 4 0 0
0 0 4 7 45 79 75 113 128 200 400 570 648 725 956 1371 1850 1946 2645 2864 2951 2596 2475 1874 1383
979 884 790 597 404 285 261 82
68 60 11 4 0 0
0 0 4 8 45 79 76 113 127 196 391 564 641 717 940 1332 1773 1861 2501 2705 2783 2461 2351 1798 1342
962 871 781 589 398 279 256 83
68 60 11 4 0 0
0 1 4 9 44 81 79 110 120 174 344 533 604 676 861 1137 1386 1436 1783 1912 1946 1791 1729 1421 1137
877 807 737 552 366 253 230 84
70 58 12 4 1 0
0 2 4 10 43 83 84 110 116 151 272 457 531 604 744 922 1051 1077 1213 1258 1269 1224 1203 1096 945
775 716 657 495 314 210 189 85
72 54 13 4 2 0
0 3 4 11 42 86 88 106 110 132 204 355 431 506 631 759 826 839 914 941 941 903 894 850 782 669 616 563
400 242 169 155 86 74 51 15
4 3 0
0 4 4 11 42 87 91 102 106 125 179 300 369 438 563 684 737 748 816 837 833 801 794 758 708 606 553 499
346 210 153 142 87 76 49 15
4 4 0
0 4 4 10 40 85 91 98 101 117 155 246 308 370 495 608 649 657 718 733 725 699 693 665 635 544 489 434
291 178 137 128 87 76 48 14
4 4 0
0 4 4 8 38 82 91 94 96 106 125 162 195 227 321 427 474 484 548 559 552 536 530 495 453 366 325 283
196 136 114 110 87 77 46 12 4
4 0
0 4 4 6 36 78 91 94 95 98 110 125 134 144 181 242 283 291 340 351 348 332 328 306 264 208 189 170 140
113 104 102 87 78 43 9 4 4
0
0 4 4 4 34 76 91 94 95 95 103 112 115 118 134 160 180 184 198 203 206 197 196 193 173 151 143 135 124
107 100 99 87 79 42 8 4 4 0
0 4 4 4 33 74 90 94 94 94 102 110 111 113 125 144 159 162 170 174 178 170 170 170 155 140 134 128 121
106 99 98 87 79 41 8 4 4 0
0 4 4 4 19 53 79 87 87 87 87 87 87 87 89 90 91 91 93 94 94 94 94 95 97 98 98 97 95 93 91 90 87 68 26 8
4 4 0
0 0 4 8 11 23 53 71 72 75 78 81 83 84 87 89 91 91 93 94 94 94 94 94 92 91 91 90 87 85 83 82 64 34 15 4 4 4 0
0 4 4 8 8 8 23 33 34 38 42 47 49 51 54 58 60 61 63 64 62 57 57 57 57 57 57 54 50 45 42 41 26 11 4 4 4 0 0
0 0 4 4 4 8 4 7 8 9 10 11 11 11 11 11 11 11 11 11 11 10 9 8 8 8 8 8 8 8 8 4 4 4 0 0
0 0 4 0 0

00000444000
000

Appendix K

The signage information contained within Appendix K is consistent with the July 2011 inputs documented in Appendix H:

- Signage locations have moved less than +/- 50 feet along all facades with the exception of sign EDD.02 which has moved approximately 110 feet along the east facade of the Event Center (refer to page A-57 for newly proposed location).
- Signage SS.33 wraps the northeast corner of the existing Staples Center. This signage was not provided for in the analysis contained within Section 6.

The above variants will not affect the receptors provided for herein with respect to the 3 footcandle limitation imposed on signage at residences (per the City of Los Angeles Municipal Code Sec. 14.4.4 General Provisions, Part (e) Sign Illumination Limitations).

Appendix K

KEY

BOUNDARY LINES

Convention & Event Center Sign Zones

LA Sports & Entertainment Sign District

Zone A Includes
Pico Boulevard at
Street Level Only
Under Convention
Center

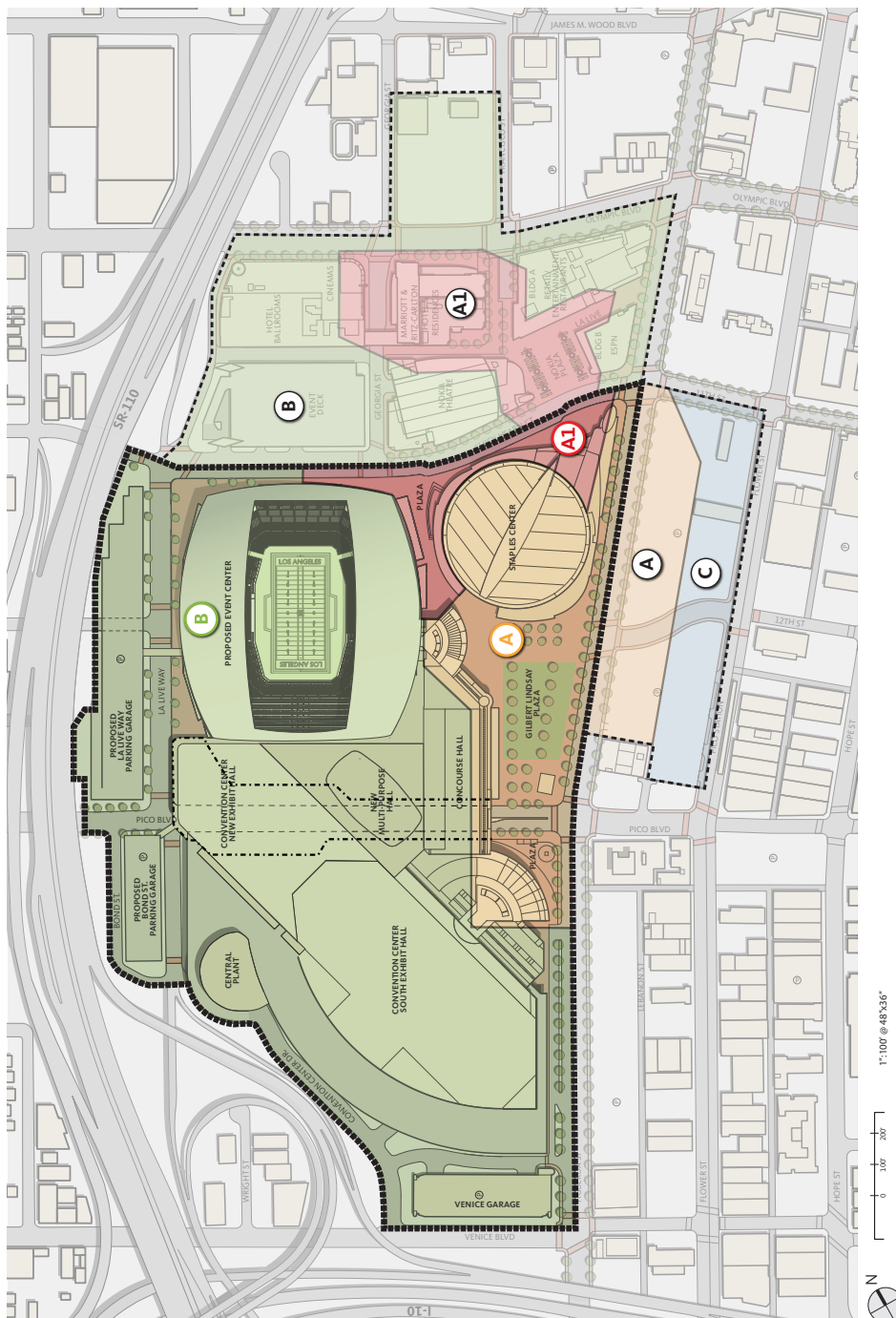
SIGNAGE ZONES

Zone A1

Zone A

Zone B

Zone C



Site Plan: Sign Zones

Proposed Convention Center & Event Center Specific Plan
Los Angeles, CA
October 10, 2011

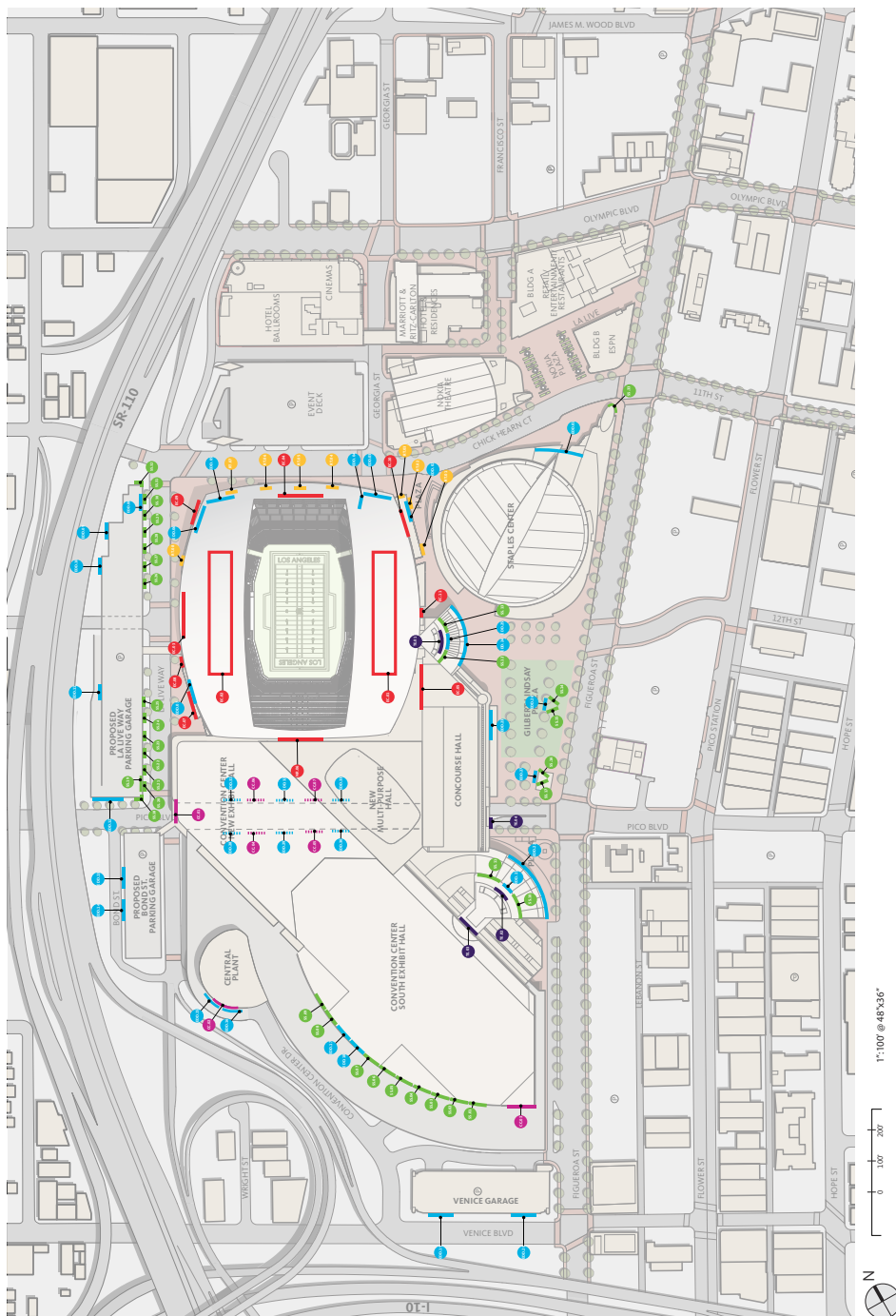
Gensler

Appendix K

KEY

SIGN TYPES

- LACC IDENTITY SIGN
- TEMPORARY EVENT SIGN
- ELECTRONIC DIGITAL DISPLAY
- STATIC WALL SIGN
- EVENT CENTER IDENTITY SIGN
- RETAIL / TENANT IDENTITY SIGN

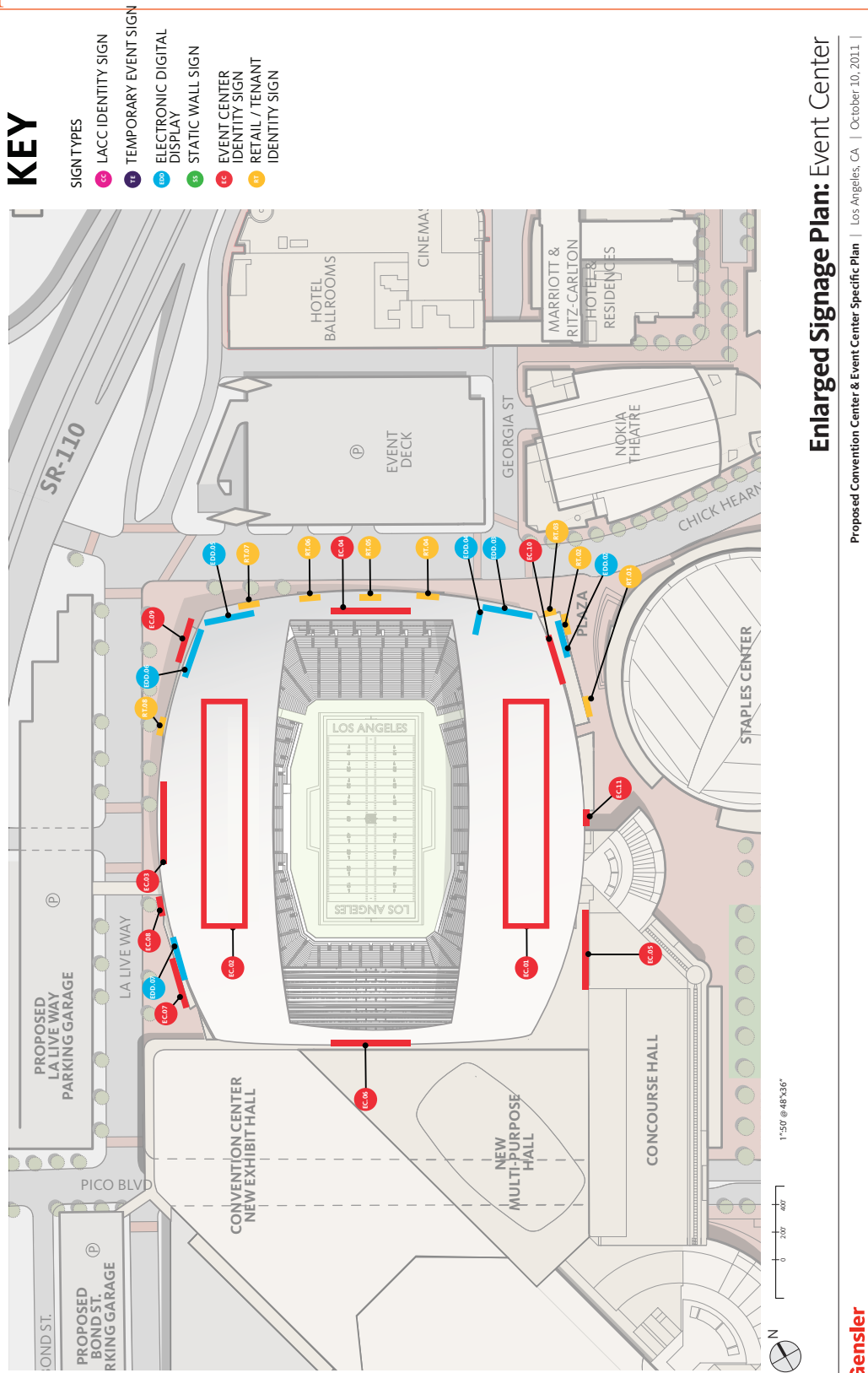


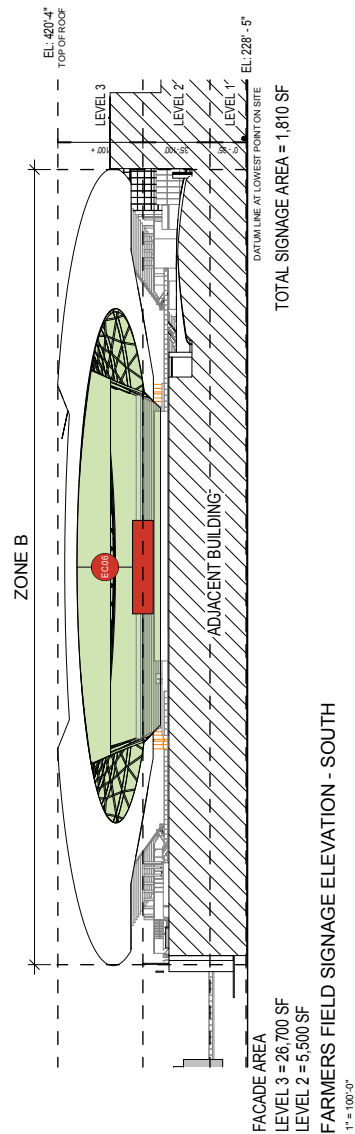
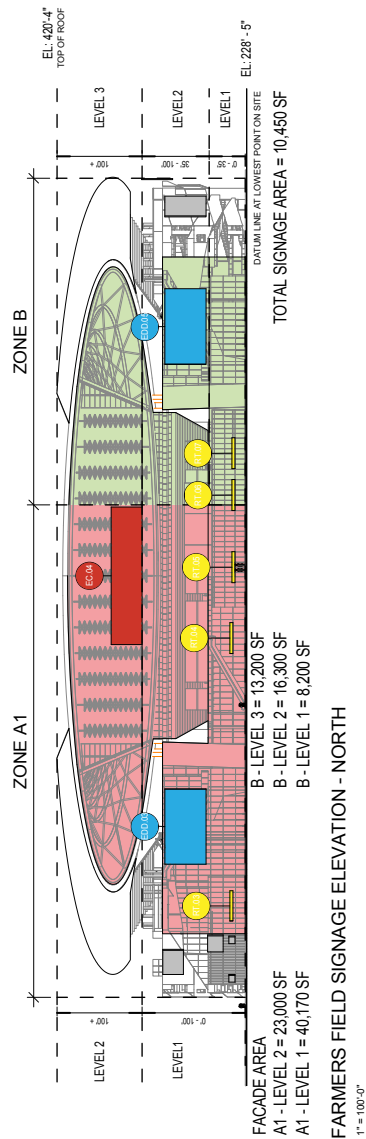
Site Plan: Exterior and Site Sign Locations

Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011

Gensler

Appendix K



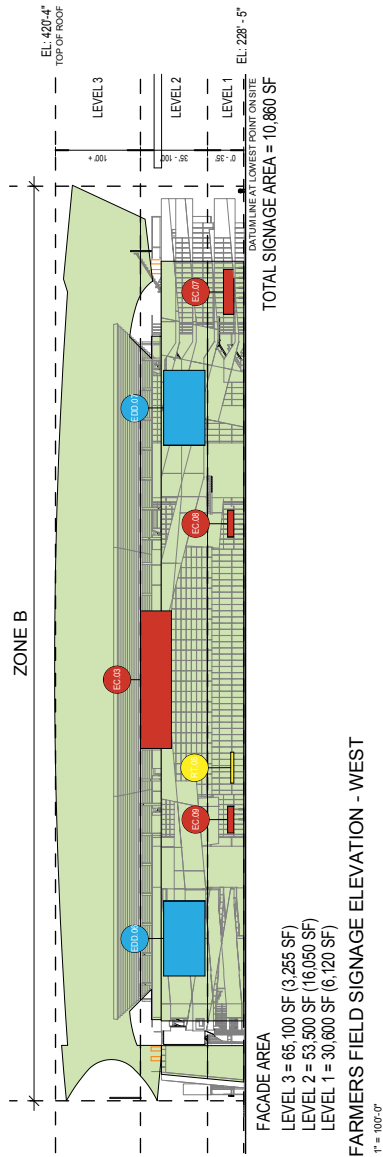
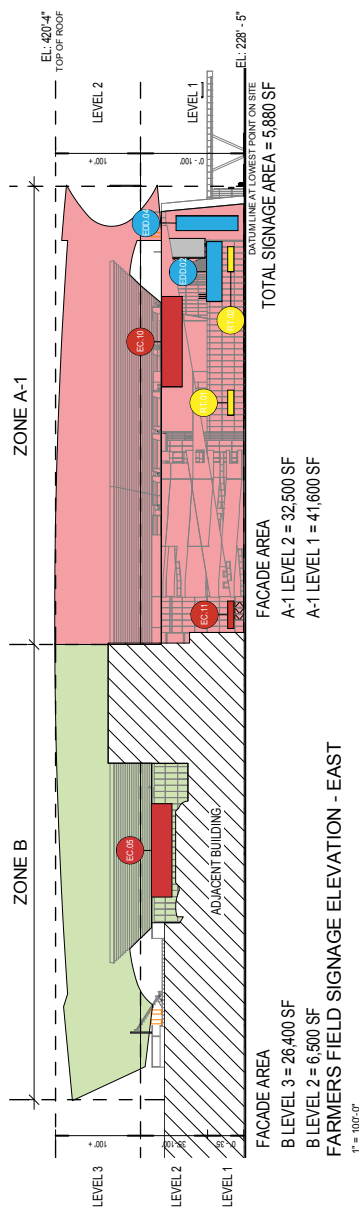


Note: All proposed signs locations are approximate & may require modification of location based on completed design. Signs may relocated up to 10 feet vertically, and 50 feet horizontally, but shall not leave current zones & levels.

Signage Elevations: Event Center

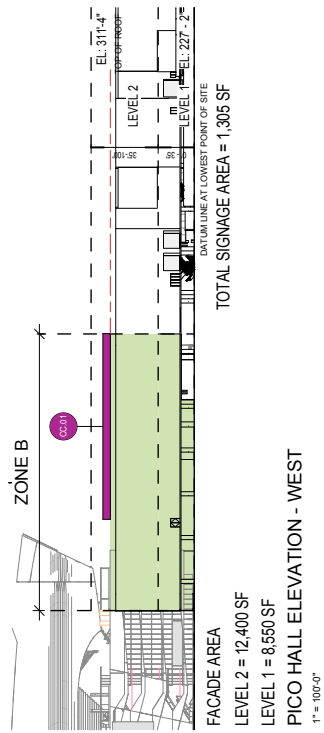
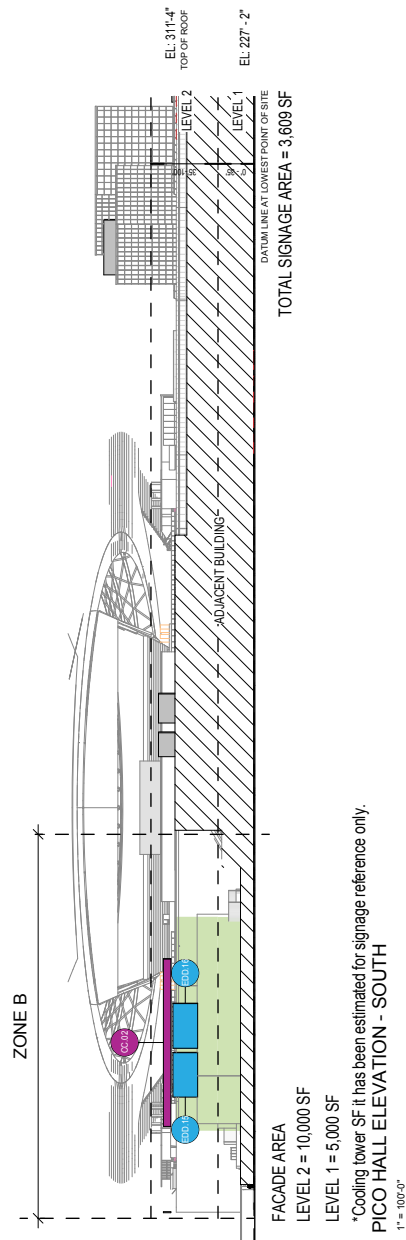
Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011

Gensler



Note: All proposed signs locations are approximate & may require modification of location based on completed design. Signs may be relocated up to 10 feet vertically, and 50 feet horizontally, but shall not leave current zones & levels.

Signage Elevations: Event Center

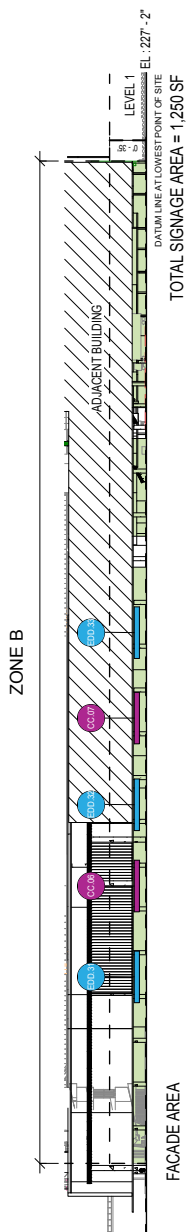


Note: All proposed signs locations are approximate & may require modification of location based on completed design. Signs may be relocated up to 10 feet vertically, and 50 feet horizontally, but shall not leave current zones & levels.

Signage Elevations: Pico Hall

Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011

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PICO HALL PEDESTRIAN ELEVATION - NORTH
1" = 100'-0"



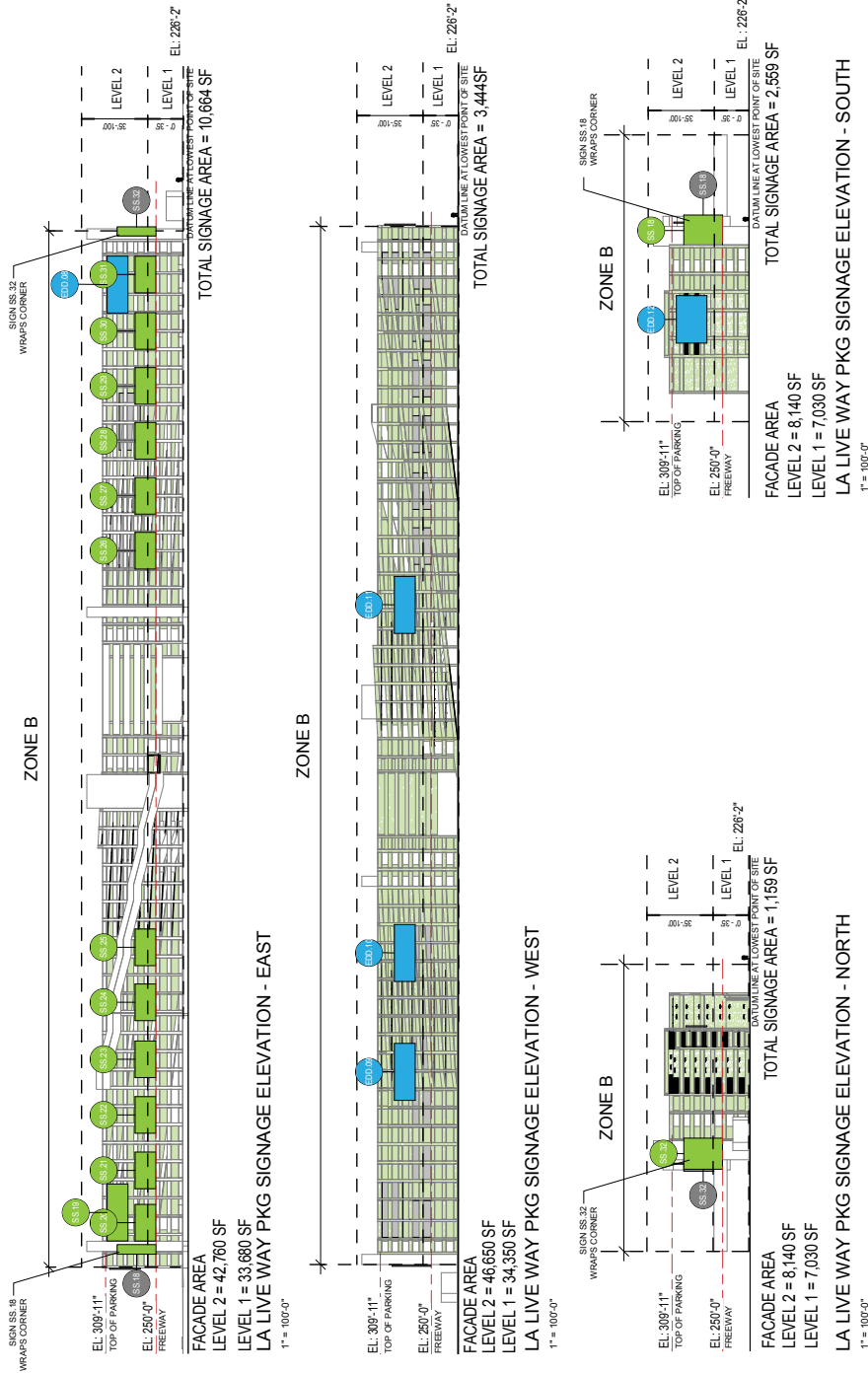
PICO HALL PEDESTRIAN ELEVATION - SOUTH
1" = 100'-0"

Note: All proposed signs locations are approximate & may require modification of location based on completed design. Signs may be relocated up to 10 feet vertically, and 50 feet horizontally, but shall not leave current zones & levels.

Signage Elevations: Pico Hall

Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011

Gensler

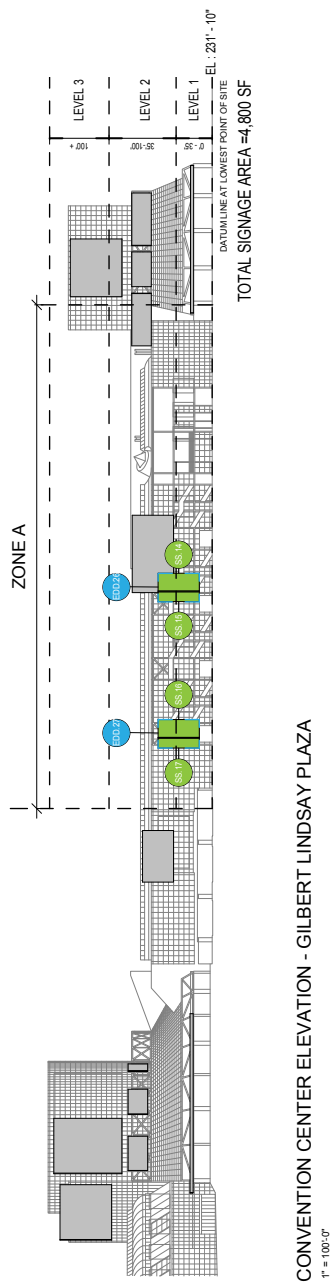
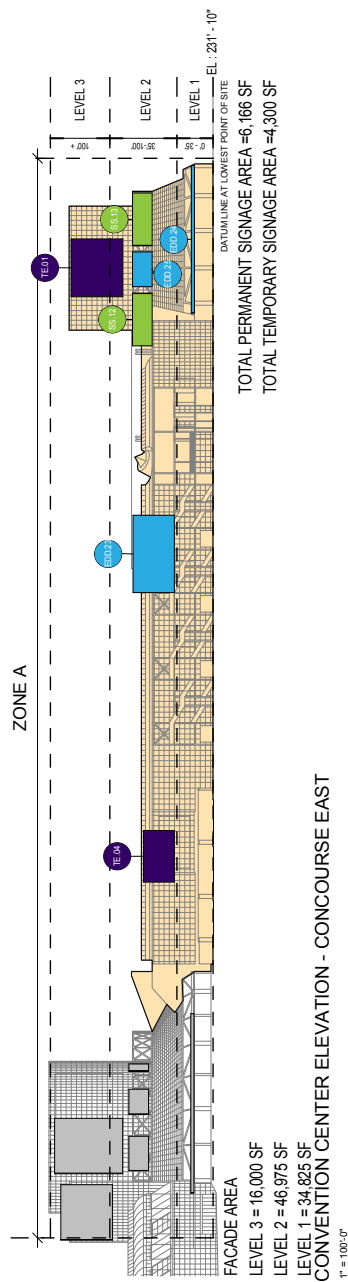


Note: All proposed signs locations are approximate & may require modification of location based on completed design. Signs may relocated up to 10 feet vertically, and 50 feet horizontally, but shall not leave current zones & levels.

Signage Elevations: LA Live Way Garage

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Note: All proposed signs locations are approximate & may require modification of location based on completed design. Signs may be relocated up to 10 feet vertically, and 50 feet horizontally, but shall not leave current zones & levels.

Signage Elevations: Convention Center

Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011

Gensler

Appendix K

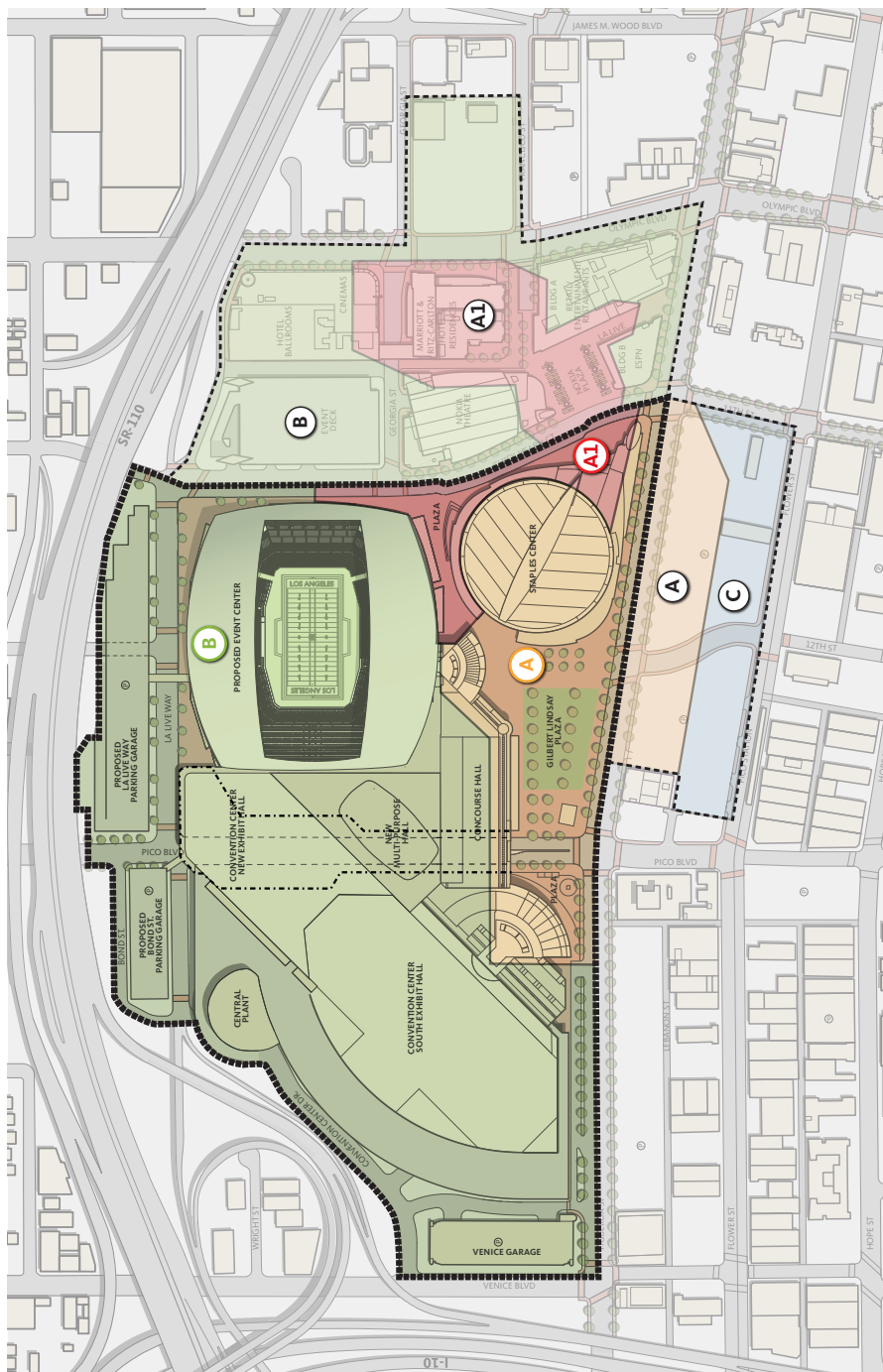
KEY

BOUNDARY LINES

- Convention & Event Center Sign Zones
- LA Sports & Entertainment Sign District
- Zone A Includes Pico Boulevard at Street Level Only Under Convention Center

SIGNAGE ZONES

- Zone A1
- Zone A
- Zone B
- Zone C

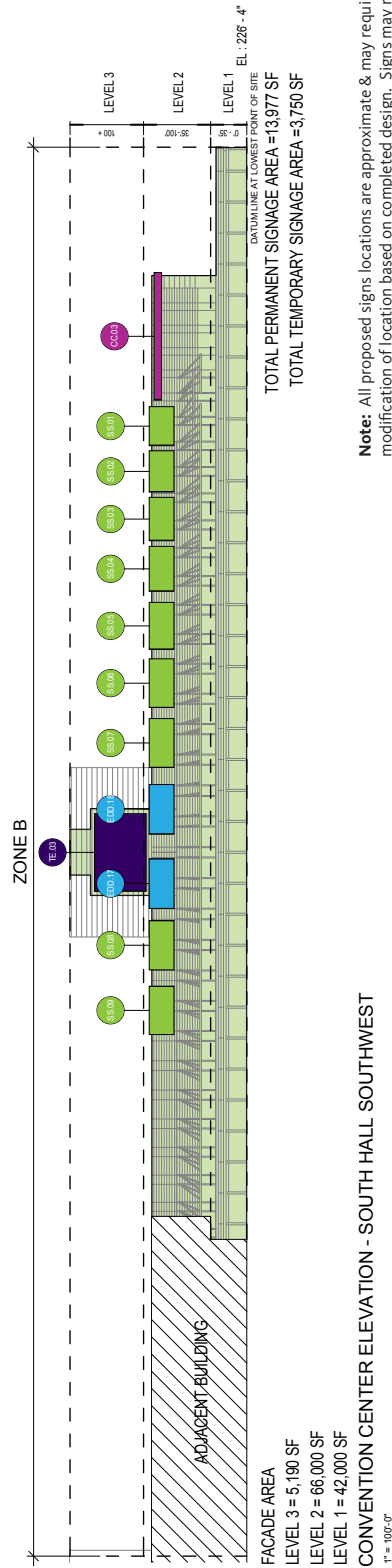
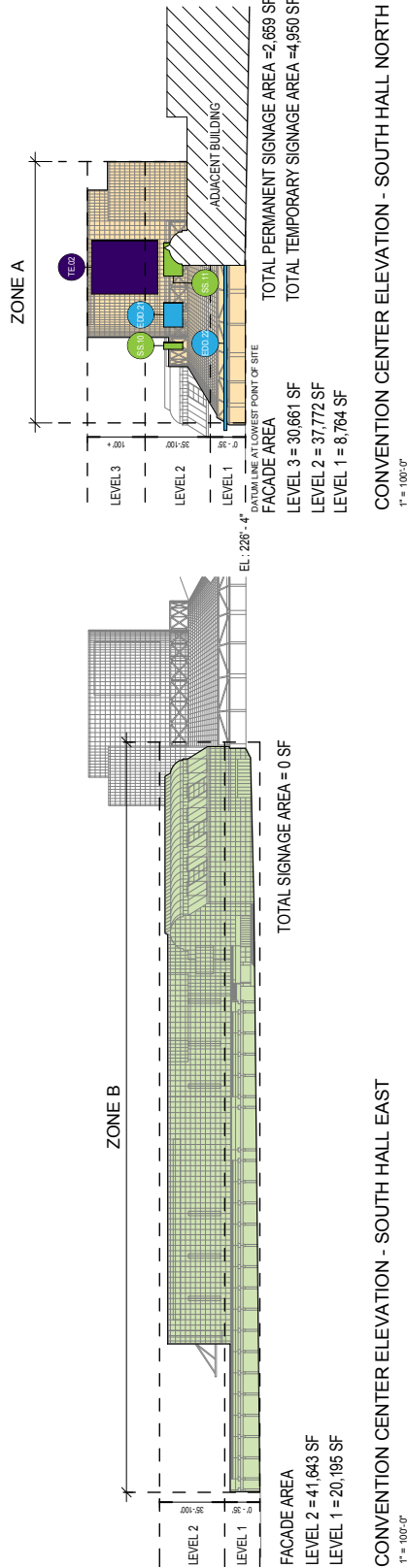


Site Plan: Sign Zones

Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011

Gensler

Appendix K

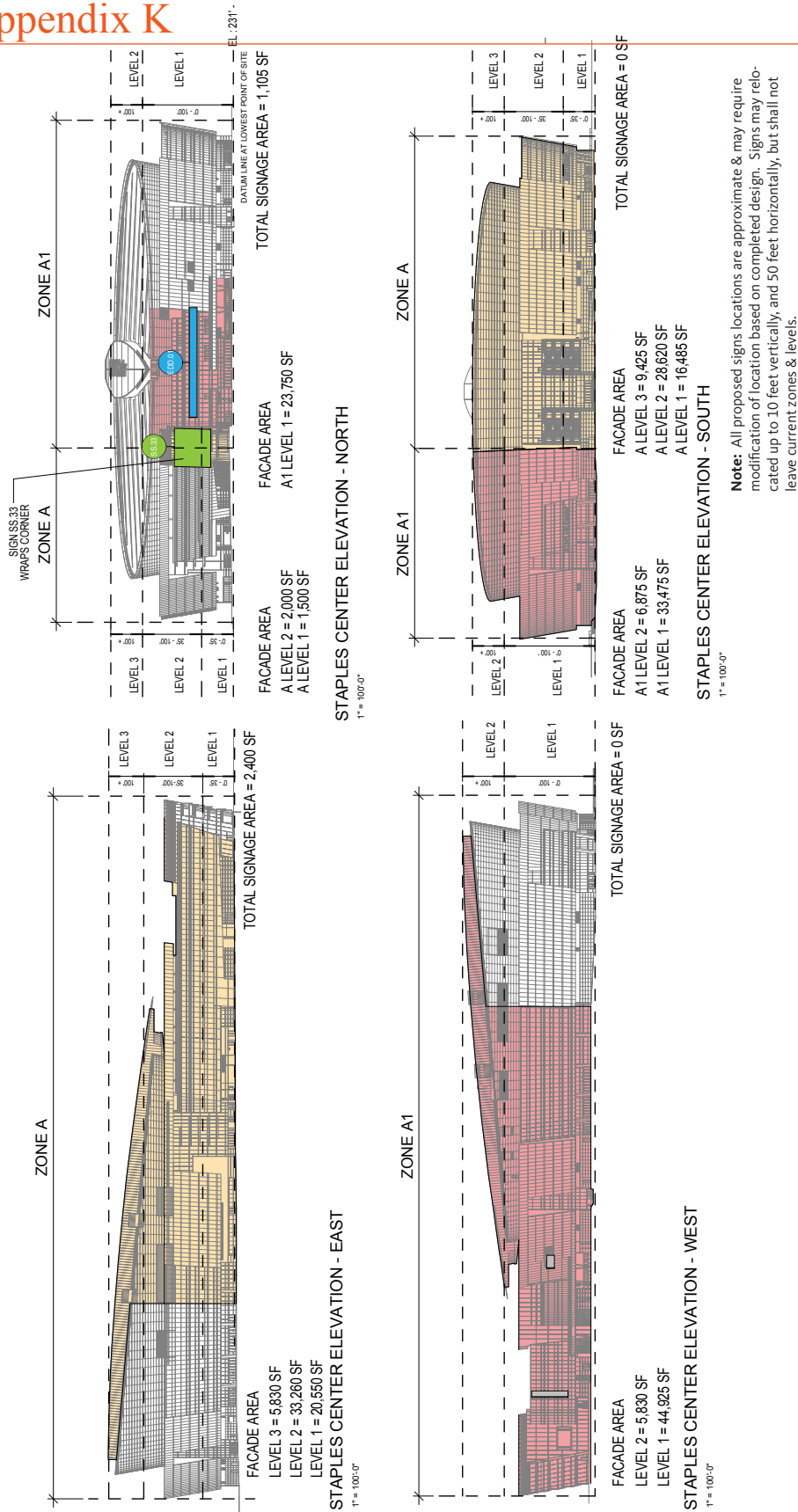


Note: All proposed signs locations are approximate & may require modification of location based on completed design. Signs may be relocated up to 10 feet vertically, and 50 feet horizontally, but shall not leave current zones & levels.

Signage Elevations: Convention Center

Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011

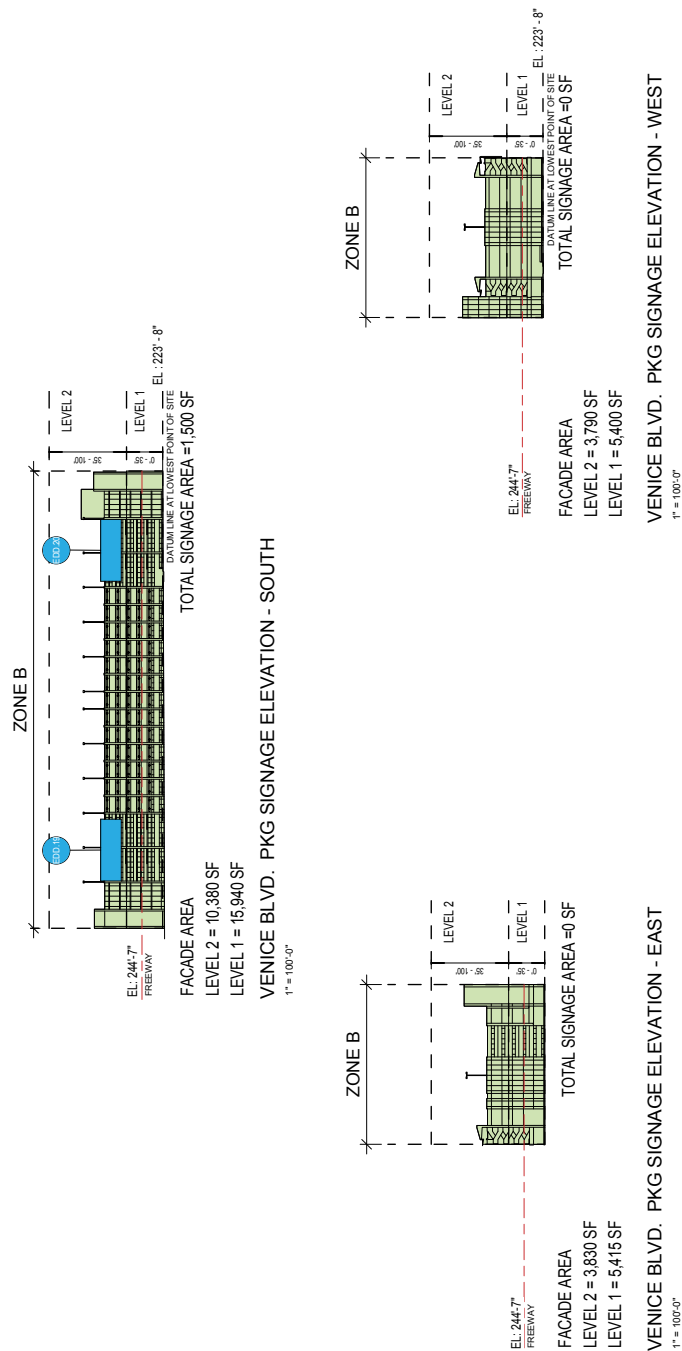
Gensler



Signage Elevations: Staples Center

Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011

Gensler



Note: All proposed signs locations are approximate & may require modification of location based on completed design. Signs may be relocated up to 10 feet vertically, and 50 feet horizontally, but shall not leave current zones & levels.

Signage Elevations: Venice Garage

PERMITTED SIGNS

ZONE A	Non - Animated Signs	Animated Signs	Refresh Rate for Animation
Level 1	Permitted	Permitted	8 Second Static Image with Instant Refresh
Level 2	Permitted	Permitted	8 Second Static Image with Instant Refresh
Level 3	Permitted	Not Permitted	Not Permitted

ZONE A-1

Level 1	Permitted	Permitted	Unrestricted, Full Animation
Level 2	Permitted	Permitted	Unrestricted, Full Animation

ZONE B

Level 1	Permitted	Permitted	8 Second Static Image with Instant Refresh
Level 2	Permitted	Permitted	8 Second Static Image with Instant Refresh
Level 3	Permitted	Not Permitted	Not Permitted

ZONE C

Level 1	Permitted	Not Permitted	8 Second Static Image with Instant Refresh
Level 2	Permitted	Not Permitted	8 Second Static Image with Instant Refresh
Level 3	Permitted	Not Permitted	Not Permitted

Plaza Tower Signs

Zone A	Permitted	Permitted	8 Second Static Image with Instant Refresh
Zone A1	Permitted	Permitted	Unrestricted, Full Animation
Zone B	Permitted	Permitted	8 Second Static Image with Instant Refresh

Freeway Edge Signs

Zone B	Permitted	Permitted	8 Second Static Image with Instant Refresh
--------	-----------	-----------	--

Signage Schedule: Sign Classification and Area

Proposed Convention Center & Event Center Specific Plan | Los Angeles, CA | October 10, 2011 |

PERMITTED OPERATING HOURS			MAXIMUM PERMITTED INDIVIDUAL SIGN AREA			MINIMUM SEPARATION BETWEEN INDIVIDUAL SIGNS		
ZONE A			ZONE A			ZONE A		
Level 1	Non - Animated Signs	Animated Signs	Level 1	Non - Animated Signs	Animated Signs	Level 1	Non - Animated Signs	Animated Signs
Level 2	Dawn to 2AM	Dawn to 2AM	Level 2	4,000 SF	2,000 SF	Level 2	4 FT	4 FT
Level 3	No Restriction	No Restriction	Level 3	5,000 SF	3,000 SF	Level 3	4 FT	4 FT
	No Restriction	Not Permitted		2,000 SF	Not Permitted		8 FT	Not Permitted
ZONE A-1			ZONE A-1			ZONE A-1		
Level 1	No Restriction	No Restriction	Level 1	3,000 SF	3,000 SF	Level 1	0	0
Level 2	No Restriction	Dawn to 2AM	Level 2	5,000 SF	3,000 SF	Level 2	0	0
ZONE B			ZONE B			ZONE B		
Level 1	Dawn to 2AM	Dawn to 2AM	Level 1	2,000 SF	2,000 SF	Level 1	4 FT	4 FT
Level 2	Dawn to 2AM	Dawn to 2AM	Level 2	5,000 SF	4,000 SF	Level 2	4 FT	4 FT
Level 3	No Restriction	Not Permitted	Level 3	2,000 SF	Not Permitted	Level 3	8 FT	Not Permitted

* Does Not Apply to Roof Identification Signs

Plaza Tower Signs		
Zone A	1,200 SF	1,200 SF
Zone A1	1,200 SF	1,200 SF
Zone B	1,200 SF	1,200 SF

Freeway Edge Signs		
Zone B	3,000 SF	Permitted

* For temporary event signs maximum permitted size is up to 5,000 SF

Signage Schedule: Sign Operation, Maximum Area, and Minimum Separation

Appendix K

SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
ONSITE														
Event Center														
EC.10	EAST	Event Center Identification Sign	Wall	No	Yes	60' - 0"	20' - 0"	90' - 6"	1,810 SF	A-1	A-1	1	No	N/A
EC.11	EAST	Event Center Identification Sign	Wall	No	Yes	10' - 0"	6' - 0"	30' - 0"	180 SF	A-1	A-1	1	No	N/A
RT.01	EAST	Retail Tenant Identification Sign	Wall	No	Yes	10' - 0"	6' - 0"	25' - 0"	150 SF	A-1	A-1	1	No	N/A
RT.02	EAST	Retail Tenant Identification Sign	Wall	No	Yes	10' - 0"	6' - 0"	25' - 0"	150 SF	A-1	A-1	1	No	N/A
RT.03	NORTH	Retail Tenant Identification Sign	Wall	No	Yes	12' - 0"	3' - 0"	30' - 0"	90 SF	A-1	A-1	1	No	N/A
RT.04	NORTH	Retail Tenant Identification Sign	Wall	No	Yes	12' - 0"	3' - 0"	30' - 0"	90 SF	A-1	A-1	1	No	N/A
RT.05	NORTH	Retail Tenant Identification Sign	Wall	No	Yes	12' - 0"	3' - 0"	30' - 0"	90 SF	A-1	A-1	1	No	N/A
EC.04	NORTH	Event Center Identification Sign	Wall	No	Yes	100' - 0"	28' - 0"	123' - 0"	3,450 SF	A-1	A-1	2	No	N/A
EC.07	WEST	Event Center Identification Sign	Wall	No	Yes	10' - 0"	10' - 0"	45' - 0"	450 SF	B	B	1	No	N/A
EC.08	WEST	Event Center Identification Sign	Wall	No	Yes	10' - 0"	6' - 0"	30' - 0"	180 SF	B	B	1	No	N/A
EC.09	WEST	Event Center Identification Sign	Wall	No	Yes	10' - 0"	6' - 0"	30' - 0"	180 SF	B	B	1	No	N/A
EC.03	WEST	Event Center Identification Sign	Wall	No	Yes	70' - 5"	28' - 0"	123' - 0"	3,450 SF	B	B	2	No	N/A
EC.05	EAST	Event Center Identification Sign	Wall	No	Yes	70' - 0"	20' - 0"	90' - 6"	1,810 SF	B	B	2	No	N/A
EC.06	SOUTH	Event Center Identification Sign	Wall	No	Yes	90' - 0"	20' - 0"	90' - 6"	1,810 SF	B	B	3	No	N/A
RT.06	NORTH	Retail Tenant Identification Sign	Wall	No	Yes	10' - 0"	3' - 0"	30' - 0"	90 SF	B	B	1	No	N/A
RT.07	NORTH	Retail Tenant Identification Sign	Wall	No	Yes	10' - 0"	3' - 0"	30' - 0"	90 SF	B	B	1	No	N/A
RT.08	WEST	Retail Tenant Identification Sign	Wall	No	Yes	10' - 0"	3' - 0"	30' - 0"	90 SF	B	B	1	No	N/A
										14,160 SF				

SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
OFFSITE														
Event Center														
EDD.02	EAST	Electronic Digital Display	Wall	No	No	21' - 6"	15' - 0"	60' - 0"	900 SF	A-1	A-1	1	Yes	Unrestricted
EDD.03	NORTH	Electronic Digital Display	Wall	No	No	38' - 0"	40' - 0"	75' - 0"	3,000 SF	A-1	A-1	1	Yes	Unrestricted
EDD.04	EAST	Electronic Digital Display	Wall	No	No	6' - 0"	60' - 0"	15' - 0"	900 SF	A-1	A-1	1	Yes	Unrestricted
EDD.06	WEST	Electronic Digital Display	Wall	Yes	No	38' - 0"	40' - 0"	75' - 0"	3,000 SF	B	B	2	Yes	8 Second Static Image: Instant Refresh
EDD.07	WEST	Electronic Digital Display	Wall	No	No	38' - 0"	40' - 0"	75' - 0"	3,000 SF	B	B	2	Yes	8 Second Static Image: Instant Refresh
EDD.05	NORTH	Electronic Digital Display	Wall	Yes	No	38' - 0"	40' - 0"	75' - 0"	3,000 SF	B	B	2	Yes	8 Second Static Image: Instant Refresh
										13,800 SF				

SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
Event Center Roof														
EC.01	ROOF - WEST	Event Center Identification Sign	Roof	No	Yes	ROOF	80' - 0"	370' - 0"	29,600 SF	B	B	N/A	No	N/A
EC.02	ROOF - EAST	Event Center Identification Sign	Roof	No	Yes	ROOF	80' - 0"	370' - 0"	29,600 SF	B	B	N/A	No	N/A
										59,200 SF				

Signage Schedule: Event Center

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SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
L.A. Live Way Garage														
EDD.08	EAST	Electronic Digital Display	Wall	No	No	50' - 0"	20' - 6"	56' - 0"	1,148 SF	1,148 SF	B	2	Yes	8 Second Static Image; Instant Refresh
EDD.09	WEST	Electronic Digital Display	Wall	Yes	No	38' - 0"	20' - 6"	56' - 0"	1,148 SF	1,148 SF	B	2	Yes	8 Second Static Image; Instant Refresh
EDD.10	WEST	Electronic Digital Display	Wall	Yes	No	38' - 0"	20' - 6"	56' - 0"	1,148 SF	1,148 SF	B	2	Yes	8 Second Static Image; Instant Refresh
EDD.11	WEST	Electronic Digital Display	Wall	Yes	No	38' - 0"	20' - 6"	56' - 0"	1,148 SF	1,148 SF	B	2	Yes	8 Second Static Image; Instant Refresh
EDD.12	SOUTH	Electronic Digital Display	Wall	Yes	No	38' - 0"	30' - 0"	46' - 8"	1,400 SF	1,400 SF	B	2	Yes	8 Second Static Image; Instant Refresh
SS.18	SOUTHEAST	Static Wall Sign	Wall	No	No	21' - 0"	38' - 0"	30' - 6"	1,374 SF	1,374 SF	B	1/2	No	N/A
SS.20	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.21	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.22	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.23	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.24	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.25	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.26	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.27	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.28	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.29	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.30	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.31	EAST	Static Wall Sign	Wall	No	No	21' - 0"	24' - 0"	36' - 0"	864 SF	864 SF	B	1/2	No	N/A
SS.32	EAST/NORTH	Static Wall Sign	Wall	Yes	No	21' - 0"	45' - 0"	30' - 6"	1,374 SF	1,374 SF	B	1/2	No	N/A
SS.19	EAST	Static Wall Sign	Wall	No	No	50' - 0"	20' - 6"	56' - 0"	1,148 SF	1,148 SF	B	2	No	N/A
										20,296 SF				

SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
Bond Street Garage														
EDD.13	WEST	Electronic Digital Display	Wall	Yes	No	38' - 0"	20' - 0"	60' - 0"	1,200 SF	1,200 SF	B	2	Yes	8 Second Static Image; Instant Refresh
EDD.14	WEST	Electronic Digital Display	Wall	Yes	No	38' - 0"	20' - 0"	60' - 0"	1,200 SF	1,200 SF	B	2	Yes	8 Second Static Image; Instant Refresh
										2,400 SF				

SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
Venice Garage														
EDD.19	SOUTH	Electronic Digital Display	Wall	Yes	No	35' - 0"	20' - 0"	50' - 0"	1,000 SF	1,000 SF	B	2	Yes	8 Second Static Image; Instant Refresh
EDD.20	SOUTH	Electronic Digital Display	Wall	Yes	No	35' - 0"	20' - 0"	50' - 0"	1,000 SF	1,000 SF	B	2	Yes	8 Second Static Image; Instant Refresh
										2,000 SF				

Signage Schedule: Garages

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SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
Los Angeles Convention Center / Pico Hall														
EDD.22	NORTH	Electronic Digital Display	Marquee	No	No	16'-0"	3'-0"	245'-0"	735 SF	735 SF	A	1	Yes	8 Second Static Image; Instant Refresh
EDD.21	NORTH	Electronic Digital Display	Wall	No	No	60'-0"	20'-0"	34'-0"	680 SF	680 SF	A	2	Yes	8 Second Static Image; Instant Refresh
EDD.28	NORTH PEDESTRIAN	Electronic Digital Display	Wall	No	No	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	Yes	8 Second Static Image; Instant Refresh
EDD.29	NORTH PEDESTRIAN	Electronic Digital Display	Wall	No	No	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	Yes	8 Second Static Image; Instant Refresh
EDD.30	NORTH PEDESTRIAN	Electronic Digital Display	Wall	No	No	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	Yes	8 Second Static Image; Instant Refresh
EDD.31	SOUTH PEDESTRIAN	Electronic Digital Display	Wall	No	No	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	Yes	8 Second Static Image; Instant Refresh
EDD.32	SOUTH PEDESTRIAN	Electronic Digital Display	Wall	No	No	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	Yes	8 Second Static Image; Instant Refresh
EDD.33	SOUTH PEDESTRIAN	Electronic Digital Display	Wall	No	No	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	Yes	8 Second Static Image; Instant Refresh
EDD.16	SOUTH-WEST	Electronic Digital Display	Wall	No	No	50'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	Yes	8 Second Static Image; Instant Refresh
EDD.17	SOUTH-WEST	Electronic Digital Display	Wall	Yes	No	50'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	Yes	8 Second Static Image; Instant Refresh
EDD.18	SOUTH-WEST	Electronic Digital Display	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	Yes	8 Second Static Image; Instant Refresh
SS.01	SOUTH-WEST	Static Wall Sign	Wall	No	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.02	SOUTH-WEST	Static Wall Sign	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.03	SOUTH-WEST	Static Wall Sign	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.04	SOUTH-WEST	Static Wall Sign	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.05	SOUTH-WEST	Static Wall Sign	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.06	SOUTH-WEST	Static Wall Sign	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.07	SOUTH-WEST	Static Wall Sign	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.08	SOUTH-WEST	Static Wall Sign	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.09	SOUTH-WEST	Static Wall Sign	Wall	Yes	No	68'-0"	24'-0"	48'-0"	1,152 SF	1,152 SF	B	2	No	N/A
SS.10	NORTH	Static Wall Sign	Wall	Yes	No	60'-0"	20'-0"	34'-0"	680 SF	680 SF	A	2	No	N/A
SS.11	NORTH	Static Wall Sign	Wall	Yes	No	60'-0"	20'-0"	34'-0"	680 SF	680 SF	A	2	No	N/A
										19,251 SF				

SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
Los Angeles Convention Center / Concourse														
EDD.23	EAST	Electronic Digital Display	Wall	No	No	15'-6"	40'-0"	75'-0"	3,000 SF	3,000 SF	A	2	Yes	8 Second Static Image; Instant Refresh
EDD.24	EAST	Electronic Digital Display	Marquee	No	No	15'-6"	3'-0"	145'-0"	438 SF	438 SF	A	1	Yes	8 Second Static Image; Instant Refresh
EDD.25	EAST	Electronic Digital Display	Wall	No	No	56'-6"	20'-0"	34'-0"	680 SF	680 SF	A	2	Yes	8 Second Static Image; Instant Refresh
SS.12	EAST	Static Wall Sign	Wall	No	No	56'-6"	19'-0"	55'-0"	1,045 SF	1,045 SF	A	2	No	N/A
SS.13	EAST	Static Wall Sign	Wall	No	No	56'-6"	19'-0"	55'-0"	1,045 SF	1,045 SF	A	2	No	N/A
										6,205 SF				

SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
Los Angeles Convention Center / Pico Hall														
CC.05	SOUTH PEDESTRIAN	Identification Sign	Wall	No	Yes	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	No	N/A
CC.06	SOUTH PEDESTRIAN	Identification Sign	Wall	No	Yes	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	No	N/A
CC.07	NORTH PEDESTRIAN	Identification Sign	Wall	No	Yes	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	No	N/A
CC.08	NORTH PEDESTRIAN	Identification Sign	Wall	No	Yes	8'-0"	5'-0"	50'-0"	250 SF	250 SF	B	1	No	N/A
CC.09	SOUTH-WEST	Identification Sign	Wall	Yes	Yes	80'-0"	7'-6"	180'-0"	1,350 SF	1,350 SF	B	2	No	N/A
CC.02	SOUTH-WEST	Identification Sign	Wall	Yes	Yes	80'-0"	7'-6"	180'-0"	1,350 SF	1,350 SF	B	2	No	N/A
CC.03	SOUTH-WEST	Identification Sign	Wall	Yes	Yes	80'-0"	7'-6"	180'-0"	1,350 SF	1,350 SF	B	2	No	N/A
TE.03	SOUTH-WEST	Temporary Sign	Wall	Yes	Yes	100'-0"	50'-0"	75'-0"	3,750 SF	3,750 SF	B	3	No	N/A
										8,900 SF				

Signage Schedule: Convention Center & Pico Hall

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SIGN	ELEVATION	SIGN DESCRIPTION (Primary)	SIGN DESCRIPTION (Secondary)	Freeway Edge	Onsite	HEIGHT ABOVE GROUND	HEIGHT	WIDTH	AREA	SF	DISTRICT	DISTRICT / LEVEL	Animated	Refresh Rate
Los Angeles Convention Center / Concourse														
TE.01	EAST	Temporary Sign	Wall	No	Yes	85' - 0"	50' - 0"	66' - 0"	2,800	SF	A	2/3	No	N/A
TE.02	NORTH	Temporary Sign	Wall	No	Yes	85' - 0"	75' - 0"	4,950	SF	A	A	2/3	No	N/A
TE.04	EAST	Temporary Sign	Wall	No	Yes	35' - 0"	30' - 0"	50' - 0"	1,500	SF	A	2	No	N/A
									9,250 SF					
Gilbert Lindsey Plaza														
EDD.26	EAST	Electronic Digital Display	Pole	No	No	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2	Yes	8 Second Static Image; Instant Refresh
EDD.27	EAST	Electronic Digital Display	Pole	No	No	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2	Yes	8 Second Static Image; Instant Refresh
SS.14	EAST	Static Wall Sign	Pole	No	No	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2	No	N/A
SS.15	EAST	Static Wall Sign	Pole	No	No	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2	No	N/A
SS.16	EAST	Static Wall Sign	Pole	No	No	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2	No	N/A
SS.17	EAST	Static Wall Sign	Pole	No	No	12' - 0"	40' - 0"	20' - 0"	800	SF	A	1/2	No	N/A
									4,800 SF					
Staples Center														
SS.33	NORTH	Static Wall Sign	Wall	No	Yes	25'	40' - 0"	60' - 0"	2,400	SF	A-1	2	No	N/A
									2,400 SF					
Staples Center														
EDD.01	NORTH	Electronic Digital Display	Wall	No	No	40'	8' - 6"	130' - 0"	1,105	SF	A-1	2	Yes	8 Second Static Image; Instant Refresh
									1,105 SF					

Signage Schedule: Convention Center & Staples Center

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References

The California Building Code

California Building Standards Commission, “California Building Code 2010, California Code of Regulations Title 24, Part 2,” June 2010.

The California Electrical Code

National Electric Code, “California Electrical Code 2010,” January 2011

IESNA RP-33-99

Illuminating Engineering Society of North America, “Lighting for Exterior Environments,” February 1999.

IESNA TM-11-00

Illuminating Engineering Society of North America, “Light Trespass: Research, Results, and Recommendations,” December 2000.

IESNA Handbook, 10th Edition.

DiLaura, David, Houser, Kevin, Mistrick, Richard, Steffy, Gary, “IESNA The Lighting Handbook 10th Edition,” 2011.

IESNA-Model Lighting Ordinance

Illuminating Engineering Society of North America and International Dark Sky Association, “Joint IDA IES Model Lighting Ordinance (MLO),” June 2011.