APPENDIX A
Shade/Shadow Study

205 East Valley Boulevard Project
Shade | Shadow Study

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EXECUTIVE SUMMARY

The purpose of this Shade/Shadow Study (Study) is to describe the existing sunlight exposure and shade/shadow conditions at the proposed 205 East Valley Boulevard Project ("project") site and in the immediate vicinity, as well as analyzing the introduction of new sources of shade/shadow from the proposed project.

The project site is located at 205 East Valley Boulevard in the City of San Gabriel (Assessor's Parcel Numbers [APNs] 5369-018-002 and 5369-018-020). The L-shaped project site encompasses approximately 0.69 acres and is currently a paved, vacant site. On-site topography is relatively flat averaging at approximately 328 feet above mean sea level (msl) and gently slopes to the south-southeast.

Overall, the project proposes to construct a new four story, 79,225-square foot building with approximately 10,638 square feet of residential space and approximately 60,088 square feet of commercial space. Residential space would include 51 dwelling units, with 18 single-bedroom and 33 double-bedroom apartments. Single-bedroom apartments would range from 755 to 862-square feet. Double-bedroom apartments would range from 1,038 to 1,126-square feet. The second and third floor communal spaces would include a 976-square foot community room. A 976-square foot landscaped courtyard would be found on the fourth floor. Commercial space would consist of a 2,000-square foot coffee shop and a 8,638-square foot general commercial/office, which would be exclusively found on the ground level. Access would be provided via the building frontage along East Valley Boulevard. A total of 128 parking spaces, including eight electric vehicle spaces and ten American Disability Act (ADA)-accessible spaces, would be provided for employees, residents, and visitors through a combination of ground level and a sub-surface parking garage located along the site's interior. An internal gate would distinguish public parking from residential spaces. Access to the parking garage would be provided along South Palm Avenue.

The proposed project would result in new shadows cast onto surrounding commercial, residential, and mixed-uses, as well as adjacent roadways and sidewalks. As discussed in Section 4.1, *Thresholds of Significance*, a significant impact would result if shadow-sensitive use areas (where sunlight is important to its function, such as outdoor backyard spaces for residences) would be shaded by project-related structures for more than three hours between 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October), compared to existing conditions. As discussed in Section 4.2, *Impacts and Mitigation Measures*, the proposed project would result in a less than significant impacts regarding shadow conditions onto surrounding uses during the summer/winter solstices and the vernal/autumnal equinoxes.

Early April to Late October

Summer Months. The proposed project would cast shade to off-site uses for greater than four hours between the hours of 9:00 a.m. and 6:00 p.m. during the summer months. Commercial uses to the east would be shaded between 3:00 p.m. and 6:00 p.m., along with institutional uses to the west (between 9:00 a.m. and 3:00 p.m.), and a portion of South Palm Avenue (between 3:00 p.m. and 6:00 p.m.). However, these areas are not considered shadow-sensitive (as sunlight is not important to its function) and/or routinely useable outdoor space. Further, South Palm Avenue already experiences partial shading under existing conditions. Thus, during the summer months, surrounding uses would not experience significant shadow impacts as a result of the proposed project.

Fall Months. The proposed project would cast shade to off-site uses for greater than four hours between the hours of 9:00 a.m. and 6:00 p.m. during the fall months. Residential uses (driveway area) to the north would be shaded between 9:00 a.m. and 6:00 p.m. Institutional uses to the west (between 9:00 a.m. and 3:00 p.m.), commercial uses to the east (between 3:00 p.m. and 6:00 p.m.), and a portion of South Palm Avenue (between 3:00 p.m. and 6:00 p.m.) would also be shaded for more than four hours between 9:00 a.m. and 6:00 p.m. However, these all of these areas (including driveway areas of residential uses) are not considered shadow-sensitive (as sunlight is not important to its function). Further, all of these areas already experience partial shading under existing conditions. Thus, during the fall months, surrounding uses would not experience significant shadow impacts as a result of the proposed project.

Late October to Early April

Winter Months. The proposed project would cast shade for greater than three hours between 9:00 a.m. and 3:00 p.m. at off-site areas in the winter months. The areas shaded for more than three hours (between 9:00 a.m. and 3:00 p.m.) include residential (entryway, driveway, and open space area) to the north of the project site. The open space area associated with the residential-uses is considered shadow-sensitive. However, the impacted shaded area is currently shaded in existing conditions as a result of an existing mature tree. Therefore, the project would not result in significant shade/shadow impacts during the winter months, compared to the existing condition, as this area is already shaded.

Spring Months. The proposed project would cast shade for greater than three hours between 9:00 a.m. and 3:00 p.m. at off-site areas during the spring months. The areas shaded for more than three hours include residential uses (between 9:00 a.m. and 3:00 p.m. [driveway areas]) to the north and institutional uses (between 9:00 a.m. and 3:00 p.m. [parking areas only]) to the west of the project site. However, these areas are not considered shadow-sensitive (as sunlight is not important to its function) and/or routinely useable outdoor space. Therefore, the project would not result in significant shade/shadow impacts during the spring months.

In conclusion, the proposed project would result in prolonged shaded areas. However, of these areas substantially shaded, the existing open space area associated with the residential use to the north is the only areas considered "shadow-sensitive". However, this particular area

substantially shaded as a result of the project is already shaded in the existing condition due to a mature tree at that location. As such, the proposed project would not result in significant increased shading of any shadow-sensitive uses, compared to the existing condition. Impacts in this regard would be less than significant.

1.0 PURPOSE OF THE STUDY

The purpose of this Shade/Shadow Study (Study) is to describe the existing sunlight exposure and shade/shadow conditions at the proposed 205 East Valley Boulevard Project (project) site and in the immediate vicinity, as well as analyzing the introduction of new sources of shade/shadow associated with the proposed project. The information upon which this Study is based was compiled from site photographs, Google Earth Pro 2021 satellite imagery, and shade/shadow diagrams prepared by Digital Preview in August 2021 for both the existing and proposed conditions.

1.1 PROJECT LOCATION/SETTING

The City of San Gabriel (City) is located in the San Gabriel Valley of Los Angeles County, approximately 11 miles east of the Los Angeles Civic Center; refer to Exhibit 1, *Regional Vicinity*. The City consists of 4.09 square miles. Surrounding jurisdictions include the cities of San Marino and Temple City to the north, Temple City and unincorporated County of Los Angeles to the east, Rosemead to the east and south, and Alhambra to the west.

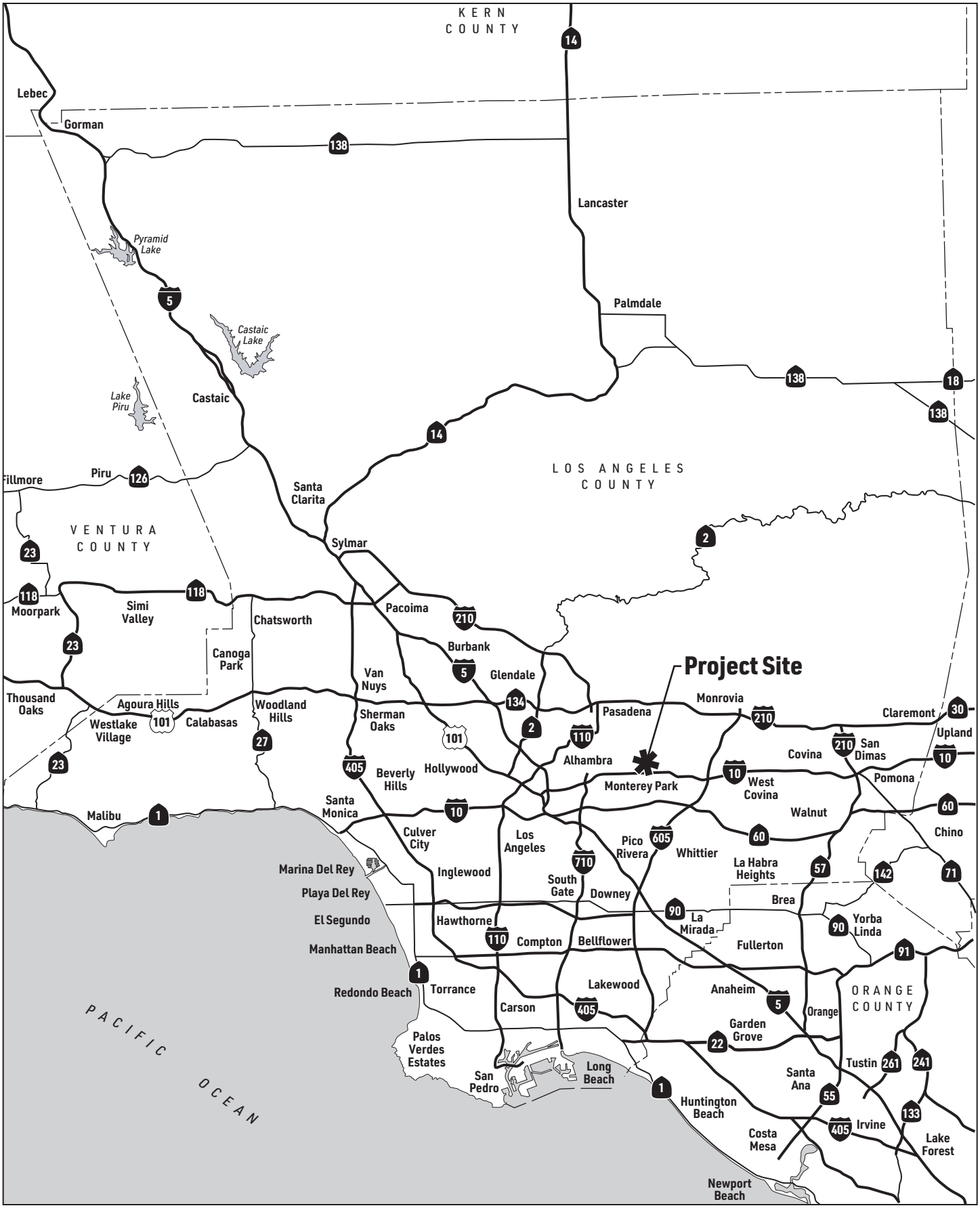
The project site is approximately 0.69 acres and consists of two contiguous parcels generally located at 205 East Valley Boulevard (Assessor's Parcel Numbers [APN] 5369-018-002 and 5369-018-020); refer to Exhibit 2, *Site Vicinity*. Regional access to the project site is provided via the San Bernardino Freeway (Interstate 10) or the Foothill Freeway (Interstate 210). Local access to the project site is provided by East Valley Boulevard, South Palm Avenue, and South Del Mar Avenue.

The L-shaped project site is currently vacant with paved pads. On-site topography is relatively flat averaging at approximately 328 feet above mean sea level (msl) and gently slopes to the south-southeast. Scattered ornamental trees, low-lying grasses, and shrubs are present throughout the site.

1.2 PROJECT DESCRIPTION

Overall, the project proposes to construct a new four story, 79,225-square foot, building with approximately 10,638 square feet of residential space and approximately 60,088 square feet of commercial space; refer to Exhibit 3, *Conceptual Site Plan*. Residential space would include 51 dwelling units, with 18 single-bedroom and 33 double-bedroom apartments. Single-bedroom apartments would range from 755 to 862-square feet. Double-bedroom apartments would range from 1,038 to 1,126-square feet. The second and third floor communal spaces would include a 976-square foot community room. A 976-square foot landscaped courtyard would be found on the fourth floor. Commercial space would consist of a 2,000-square foot coffee shop and a 8,638-square foot general commercial/office, which would be exclusively found on the ground level. Access would be provided via the building frontage along East Valley Boulevard. A total of 128 parking spaces, including eight electric vehicle spaces and ten American Disability Act (ADA)-accessible spaces, would be provided for employees, residents and visitors through a combination of ground level and a sub-surface parking garage located along the site's interior.

An internal gate would distinguish public parking from residential spaces. Access to the parking garage would be provided along South Palm Avenue.



205 EAST VALLEY BOULEVARD PROJECT
SHADE/SHADOW STUDY

Regional Vicinity

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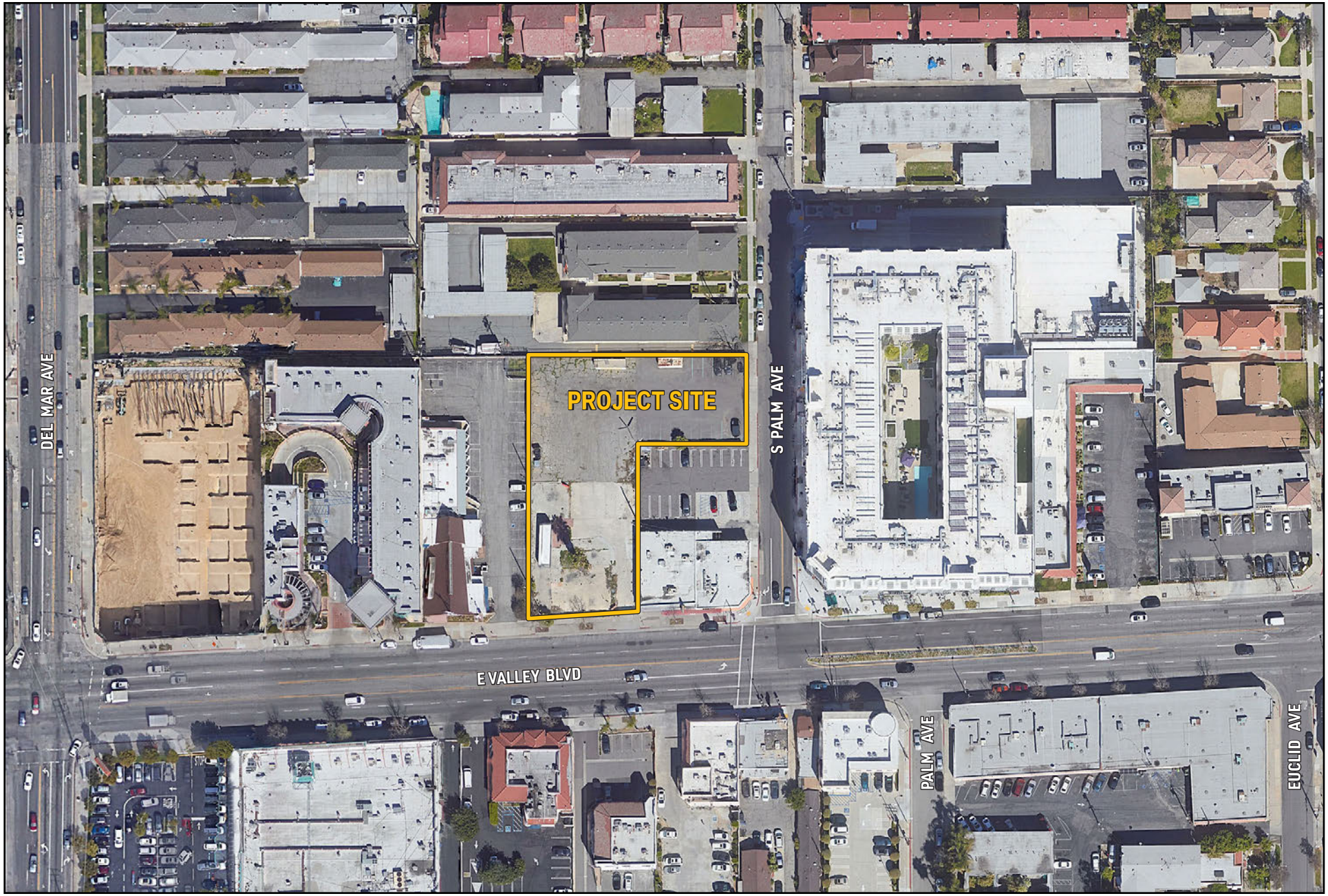
Exhibit 1



Source: Google Earth Pro, August 2021

205 EAST VALLEY BOULEVARD PROJECT
SHADE/SHADOW STUDY

Site Vicinity

Exhibit 2

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Source: The Architect Group, May 2021

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205 EAST VALLEY BOULEVARD PROJECT
SHADE/SHADOW STUDY

Conceptual Site Plan

Exhibit 3

2.0 METHODOLOGY

Shading refers to the effect of shadows cast upon adjacent areas by proposed structures. Consequences of shadows upon land uses may be positive, including cooling effects during warm weather, or negative, such as the loss of natural light necessary for solar energy purposes or the loss of warming influences during cool weather. Shadow effects are dependent upon several factors, including the local topography, the height and bulk of the project's structural elements, sensitivity of adjacent land uses, season, and duration of shadow projection. Facilities and operations sensitive to the effects of shading include routinely usable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; nurseries; and existing solar collectors. These uses are considered sensitive because sunlight is important to function, physical comfort, or commerce.

To identify the proposed project's potential shadow-related impacts, existing and project-generated morning, mid-day, afternoon, and evening shade patterns were compared for each of the four seasons. Specifically, four dates were used for analysis purposes:

- Winter and summer solstices (December 21 and June 21), when the sun is at its lowest and highest point, respectively, and
- Spring and fall equinoxes (March 21 and September 21), when day and night are of approximately equal length.

The longest shadows are cast during the winter months and the shortest shadows are cast during the summer months. The following discussion describes the summer/winter solstice and vernal/autumnal equinox phenomenon, local topography, and some general assumptions that affect shadow patterns in the project vicinity.

SUMMER AND WINTER SOLSTICE

"Solstice" is defined as either of the two points on the ecliptic that lie midway between the equinoxes (separated from them by an angular distance of 90 degrees [°]). At the solstices, the sun's apparent position on the celestial sphere reaches its greatest distance above or below the celestial equator, about 23.5° of the arc. At the time of summer solstice, approximately June 21, the sun is directly overhead at noon at the Tropic of Cancer. In the Northern Hemisphere, the longest day and shortest night of the year occur on this date, marking the beginning of summer. At winter solstice, approximately December 21, the sun is overhead at noon at the Tropic of Capricorn; this marks the beginning of winter in the Northern Hemisphere. Measuring shadow lengths for the winter and summer solstices represents the extreme shadow patterns that occur throughout the year. Shadows cast on the summer solstice are the shortest shadows during the year, becoming progressively longer until winter solstice when the shadows are the longest they are all year.

VERNAL AND AUTUMNAL EQUINOX

An equinox is the moment when the sun passes over the equator. The event occurs twice a year, approximately March 21 and September 21. The equinoxes are the two days each year when the middle of the sun is an equal amount of time above and below the horizon for every location on Earth. In the Northern Hemisphere, the March equinox is known as the vernal equinox and the September equinox is the autumnal equinox. In the Southern Hemisphere, the names are reversed. In practice, at the equinox, the day is longer than the night.

The equinoxes can be interpreted as virtual points in the sky. As Earth moves around the sun, the apparent position of the sun relative to the other stars moves in a full circle over the period of a year. This circle is called the ecliptic, and is also the plane of Earth's orbit projected against the whole sky. Other bright planets like Venus, Mars, and Saturn also appear to move along the ecliptic, because their orbits are in a similar plane to Earth's. Another virtual circle in the sky is the celestial equator, or the projection of the plane of Earth's equator against the whole sky. Because Earth's axis of rotation is tilted relative to the plane of Earth's orbit around the sun, the celestial equator is inclined to the ecliptic by about 23.5°.

SHADE/SHADOW DIAGRAMS

The shade/shadow diagrams are composed of a series of three-dimensional rendered site plans. The site plans consist of the project massing models, as well as the surrounding context and geography. Upon receiving the electronic site plan files (AutoCAD) and project description, a three-dimensional (3D) model is created to the correct heights. The 3D model is then merged with an ortho-rectified aerial photograph into AutoCAD at the correct coordinates, creating a base for the model. The existing surrounding buildings are modeled to height and included with the project model. The model is then set to include the model location, times, and dates, and then the shadow conditions are rendered. The model illustrates the shadow effects of existing buildings and new buildings proposed as part of the project application. The orientation of the model was set to represent the orientation of the project site. Dates selected for each season include the summer/winter solstices and the vernal/autumnal equinoxes. For each of those days selected, the time periods were 9:00 a.m., 12:00 p.m., and 3:00 p.m., as well as 6:00 p.m. (for summer solstice and autumnal equinox only). Note that the shade/shadow diagrams consider shadow effects associated with proposed building massing only and the shadow patterns associated with mature trees are not included in the 3D model.

3.0 EXISTING CONDITIONS

The L-shaped project site is currently a paved, vacant site. On-site topography is relatively flat averaging at approximately 328 feet msl and gently slopes to the south-southeast. Scattered ornamental trees, low-lying grasses, and shrubs are present throughout the site.

The project site is generally located within a developed area of the City, surrounded by the following land uses:

- North: Two-story residential apartments are located to the north of the project;
- East: Commercial uses (a former restaurant) and South Palm Avenue bound the project site to the east and the Sheraton hotel is situated further east of South Palm Avenue;
- South: East Valley Boulevard bound the project site to the south with and two-story commercial buildings further south; and,
- West: Institutional uses (The Salvation army San Gabriel Center of Worship and Service) bounds the project site to the west.

3.1 CLIMATE

The general region lies in the semipermanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The climate consists of a semiarid environment with mild winters, warm summers, moderate temperatures, and comfortable humidity. Precipitation is limited to a few winter storms. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The average annual temperature varies little throughout the area (which encompasses the project site), averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the project's geographical area show greater variability in annual minimum and maximum temperatures. All portions of the area have had recorded temperatures over 100°F in recent years.

Although the project's geographical area has a semi-arid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the area by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. The local climate is typically warm during summer when temperatures tend to be in the 80s and cool during winter when temperatures tend to be in the 60s. The warmest month of the year is August with an average maximum temperature of 87°F, while the coldest month of the year is December with an average minimum temperature of 44°F. The annual average precipitation in San Gabriel is 17.9 inches. Rainfall occurs most frequently in February, with an average rainfall of 4.50 inches.[1]

[1] U.S. Climate Data, *Climate San Gabriel – California* (monthly), https://www.usclimatedata.com/climate/san-gabriel/california/united-states/usca0988, accessed August 19, 2021.

3.2 EXISTING SHADOW-SENSITIVE USES

As noted above, facilities and operations sensitive to the effects of shading include: routinely usable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; nurseries; and existing solar collectors. Shadow-sensitive uses in the vicinity of the project site include the balcony and courtyard areas associated with the mixed-uses to the north of the project site. These areas are dependent on sunlight for the physical comfort of this use (outdoor space for residence).

3.3 EXISTING SHADE/SHADOW CONDITIONS

Existing shade/shadow diagrams were created for the existing buildings surrounding the project site. The following describes the existing shadow conditions of the project site during the summer/winter solstices and the vernal/autumnal equinoxes.

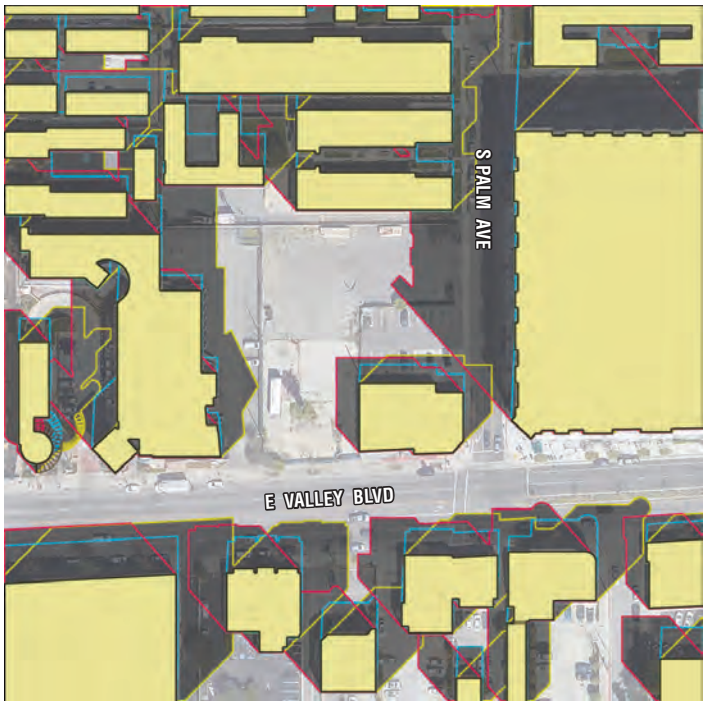
Winter Solstice. There are no existing on-site buildings which could produce shading to the surrounding area. Therefore, during the winter solstice, no shadows are cast from the project site and no shadow-sensitive uses would be shaded by existing on-site conditions. However, shadow-sensitive residential uses to the north are currently shaded by existing off-site conditions (commercial buildings to the east); refer to Exhibit 4, *Existing Shade/Shadow Patterns*.

Vernal Equinox. There are no existing on-site buildings which could produce shading to the surrounding area. Therefore, during the vernal equinox, no shadows are cast from the project site and no shadow-sensitive uses would be shaded by existing on-site conditions. However, shadow-sensitive residential uses to the north are currently shaded by existing off-site conditions (commercial buildings to the east); refer to Exhibit 4.

Summer Solstice. There are no existing on-site buildings which could produce shading to the surrounding area. Therefore, during the summer solstice, no shadows are cast from the project site and no shadow-sensitive uses would be shaded by existing on-site conditions. However, shadow-sensitive residential uses to the north are currently shaded by existing off-site conditions (commercial buildings to the east); refer to Exhibit 4.

Autumnal Equinox. There are no existing on-site buildings which could produce shading to the surrounding area. Therefore, during the autumnal equinox, no shadows are cast from the project site and no shadow-sensitive uses would be shaded by existing on-site conditions. However, shadow-sensitive residential uses to the north are currently shaded by existing off-site conditions (commercial buildings to the east); refer to Exhibit 4.

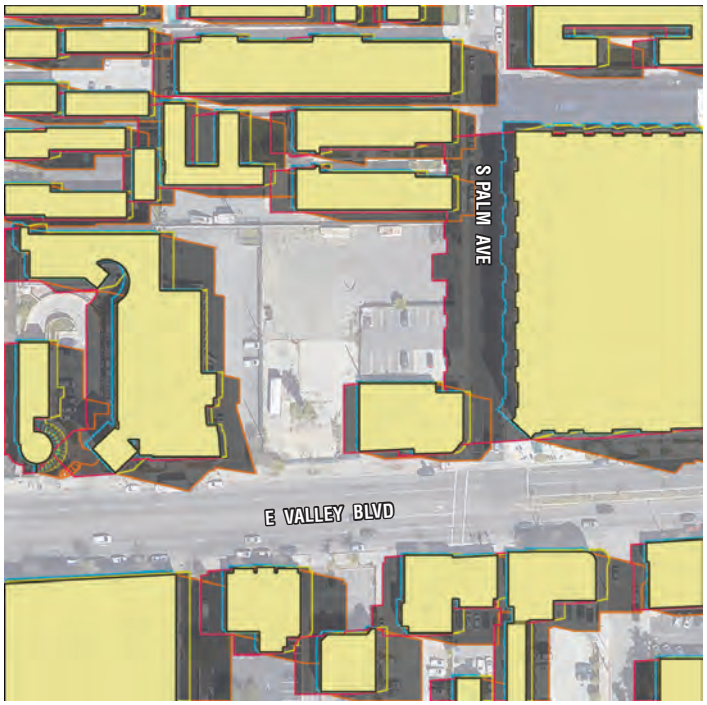
Late October to Early April



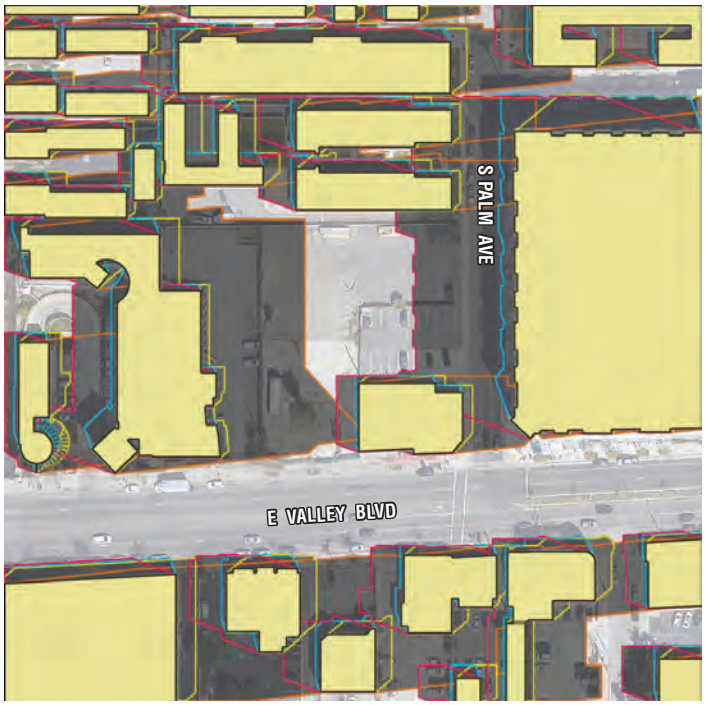
Winter Solstice

Vernal Equinox

Early April to Late October



Summer Solstice



Autumnal Equinox

LEGEND

- 9 a.m. Shadow Pattern
- 12 p.m. Shadow Pattern
- 3 p.m. Shadow Pattern
- 6 p.m. Shadow Pattern

Note: Based on the daytime lighting conditions throughout the year, the Summer Solstice and Autumnal Equinox shadow patterns are represented from 9:00 a.m. and 6:00 p.m. and the Winter Solstice and Vernal Equinox shadow patterns are represented from 9:00 a.m. to 3:00 p.m.

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205 EAST VALLEY BOULEVARD PROJECT
SHADE/SHADOW STUDY

Existing Shade/Shadow Patterns

Exhibit 4

4.0 SHADE/SHADOW ANALYSIS

4.1 THRESHOLDS OF SIGNIFICANCE

A project would have a significant impact pertaining to the degradation of character/quality if it would substantially block surrounding shadow-sensitive areas. Since the City of San Gabriel does not have a specific adopted threshold to determine whether or not increased shade/shadow patterns are considered significant, Michael Baker International has utilized the City of Los Angeles' adopted threshold. Further, the urbanized character of the City is similar to that of Los Angeles (pertaining to potential shade/shadow concerns) and Los Angeles is one of the few cities in southern California with an adopted threshold of significance for shade/shadow impacts. Thus, for the purposes of this analysis, a project would have a significant impact if:

- Shadow-sensitive use areas (where sunlight is important to its function) would be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October), compared to existing conditions.[2]

For the purposes of this analysis, facilities and operations sensitive to the effects of shading include: routinely useable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; nurseries; and existing solar collectors. These uses are considered sensitive because sunlight is important to function, physical comfort, or commerce.

4.2 IMPACTS AND MITIGATION MEASURES

SS-1 ***Result in shading of shadow-sensitive use areas (where sunlight is important to its function) by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October), compared to existing conditions?***

Level of Significance Before Mitigation: *Less Than Significant Impact.*

The proposed project would construct a new, 79,225-square foot mixed-use building. The proposed structure would be up to four stories (approximately 59 feet in height). The following analysis describes the shadow conditions from the proposed project onto surrounding uses during the summer/winter solstices and the vernal/autumnal equinoxes.

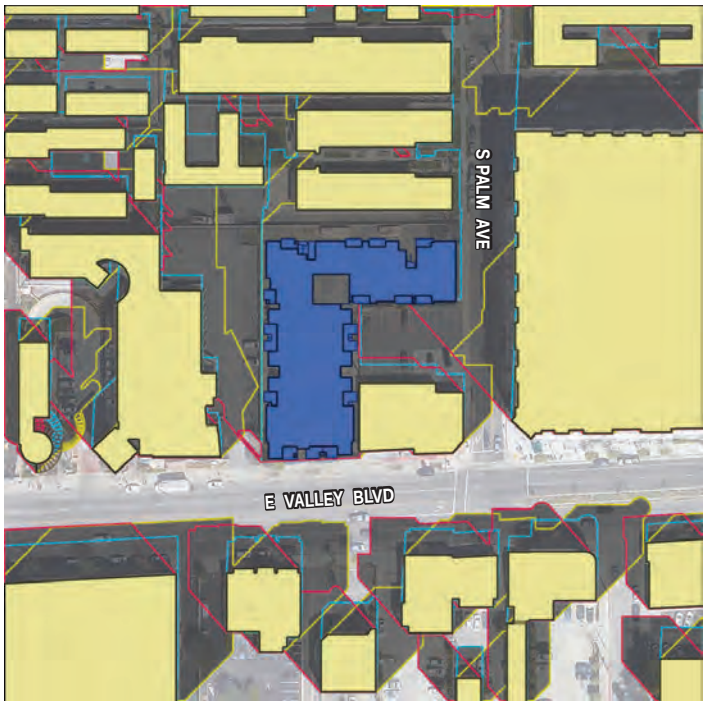
[2] City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006.

Winter Solstice. On December 21, shadows are widespread within and around the project site from the morning (9:00 a.m.) to the afternoon (3:00 p.m.) hours; refer to Exhibit 5, *Proposed Shade/Shadow Patterns*. Morning shadows (9:00 a.m.) would spill onto institutional uses to the west and residential uses to the north. At mid-day (12:00 p.m.), shadows cast from the project site would spill onto residential uses to the north. Shadows cast during the afternoon (3:00 p.m.) would cast onto commercial uses to the south, residential uses to the north, as well as South Palm Avenue and commercial uses to the east; refer to Exhibit 5. As noted above, the residential uses to the north of the project site proposed project would be shaded for more than three hours between the morning (9:00 a.m.) and afternoon (3:00 p.m.). The green space area associated with the residential-uses to the northwest of the project site is considered shadow-sensitive (as sunlight is not important to their function) and/or routinely usable outdoor spaces. However, the green space area associated with the residential-uses to the northwest experience shading under existing conditions as a result of the existing trees to the north of the project site; refer to Exhibit 4. A less than significant impact would occur in this regard.

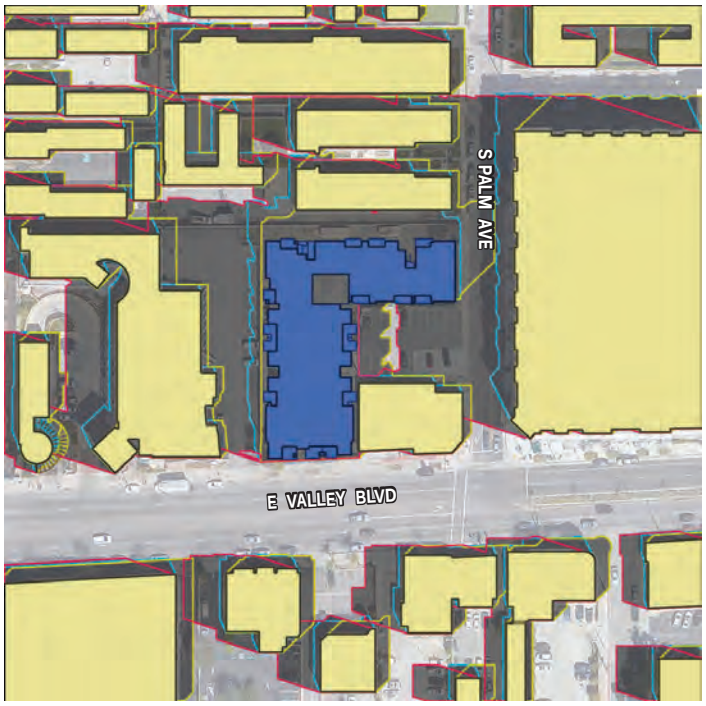
Vernal Equinox. Shadows generated by the proposed project on March 21, when the sun shines at a moderate angle at noon, would cast shadows to the north, northeast, east, west, and northwest between the hours of 9:00 a.m. and 3:00 p.m.; refer to Exhibit 5. The proposed project would cast shadows onto institutional uses to the west and residential uses to the north of the project site during the morning (9:00 a.m.) and mid-day (12:00 p.m.) hours. During the afternoon (3:00 p.m.) hour, shadows would be cast onto the commercial uses to the south of the project site, residential uses to the north and a portion of South Palm Avenue to the east of the project site. As seen on Exhibit 5, the project would cast shadows onto residential uses to the north and institutional uses to the west of the project site for greater than three hours between 9:00 a.m. and 3:00 p.m. during the spring months. However, these areas are not considered shadow-sensitive (as sunlight is not important to their function) and/or routinely useable outdoor spaces. A less than significant impact would occur in this regard.

Summer Solstice. During the summer solstice, the proposed project would cast shadows onto institutional uses to the west during the morning (9:00 a.m.) hour. During the mid-day (12:00 p.m.) hour, shadows cast by the proposed project would primarily be contained within the project's boundary with some shadows nominally casting onto the institutional uses to the west. During the afternoon (3:00 p.m.) hour, shadows cast by the proposed project would be cast onto commercial uses to the south and a portion of South Palm Avenue. Shadows cast during the evening (6:00 p.m.) hour would spill onto commercial uses to the south, a portion of East Valley Boulevard, a portion of South Palm Avenue and commercial uses to the east. As shown in Exhibit 5, the project would cast shadows onto institutional uses to the west, commercial uses to the south and a portion of South Palm Avenue for more than four hours between 9:00 a.m. and 6:00 p.m. during the summer months. However, these areas are not considered shadow-sensitive (as sunlight is not important to their function) and/or routinely useable outdoor space. A less than significant impact would occur in this regard.

Late October to Early April

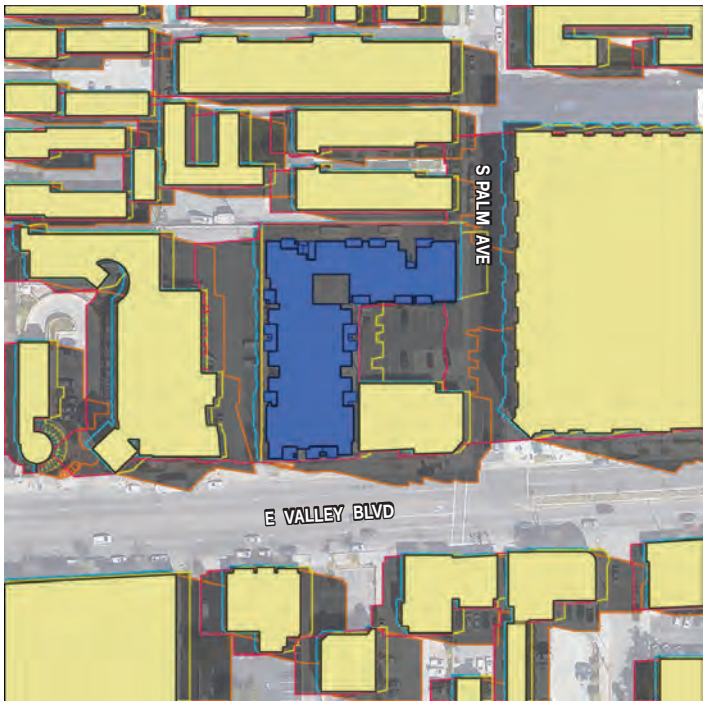


Winter Solstice

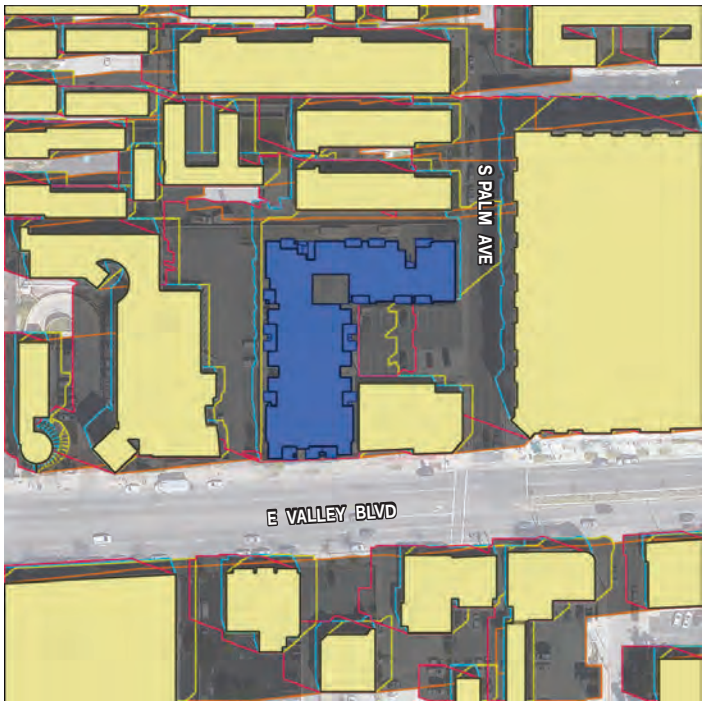


Vernal Equinox

Early April to Late October



Summer Solstice



Autumnal Equinox

LEGEND

- 9 a.m. Shadow Pattern
- 12 p.m. Shadow Pattern
- 3 p.m. Shadow Pattern
- 6 p.m. Shadow Pattern

Note: Based on the daytime lighting conditions throughout the year, the Summer Solstice and Autumnal Equinox shadow patterns are represented from 9:00 a.m. and 6:00 p.m. and the Winter Solstice and Vernal Equinox shadow patterns are represented from 9:00 a.m. to 3:00 p.m.

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NOT TO SCALE

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205 EAST VALLEY BOULEVARD PROJECT
SHADE/SHADOW STUDY

Proposed Shade/Shadow Patterns

Exhibit 5

Autumnal Equinox. Shadows generated by the proposed project on September 21 would occur when the sun shines at a moderate angle at noon and would cast shadows to the north and east between the hours of 9:00 a.m. and 6:00 p.m.; refer to Exhibit 5. The proposed project would cast shadows onto institutional uses to the west and residential uses to the north of the project site during the morning (9:00 a.m.) and mid-day (12:00 p.m.) hours. During the afternoon (3:00 p.m.) hour, shadows would be cast onto the commercial uses to the south of the project site, residential uses to the north and South Palm Avenue to the east of the project site. During the evening (6:00 p.m.) hour, shadows would be cast onto commercial uses south of the project site, as well as South Palm Avenue, and commercial uses to the east. As shown on Exhibit 5, the project would cast shade to off-site uses for greater than four hours between the hours of 9:00 a.m. and 6:00 p.m. during the fall months. Specifically, residential uses to the north, institutional uses to the west, commercial uses to the south and a portion of South Palm Avenue would be shaded for more than four hours between 9:00 a.m. and 6:00 p.m. However, these uses are not considered a shadow-sensitive use (as sunlight is not important to its function) and/or routinely useable outdoor space. Further, the residential uses to the north, institutional uses to the west, commercial uses to the south and a portion of South Palm Avenue already experience shading under existing conditions. Thus, during the fall months, surrounding uses would not experience significant shadow impacts as a result of the proposed project.

Impact Conclusion

The proposed project would result in new shadows cast onto surrounding commercial, residential, and institutional uses, as well as adjacent roadways and sidewalks. As discussed in Section 4.1, *Thresholds of Significance*, a significant impact would result if shadow-sensitive use areas (where sunlight is important to its function) would be shaded by project-related structures for more than three hours between 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October), compared to existing conditions.

Early April to Late October

Summer Months. As illustrated on Exhibit 5, the proposed project would cast shade to off-site uses for greater than four hours between the hours of 9:00 a.m. and 6:00 p.m. during the summer months. Commercial uses to the east would be shaded between 3:00 p.m. and 6:00 p.m., along with institutional uses to the west (between 9:00 a.m. and 3:00 p.m.), and a portion of South Palm Avenue (between 3:00 p.m. and 6:00 p.m.). However, these areas are not considered shadow-sensitive (as sunlight is not important to its function) and/or routinely useable outdoor space. Further, South Palm Avenue already experiences partial shading under existing conditions. Thus, during the summer months, surrounding uses would not experience significant shadow impacts as a result of the proposed project.

Fall Months. As illustrated on Exhibit 5, the proposed project would cast shade to off-site uses for greater than four hours between the hours of 9:00 a.m. and 6:00 p.m. during the fall months. Residential uses (driveway area) to the north would be shaded between 9:00 a.m. and 6:00 p.m. Institutional uses to the west (between 9:00 a.m. and 3:00 p.m.), commercial uses to the east

(between 3:00 p.m. and 6:00 p.m.), and a portion of South Palm Avenue (between 3:00 p.m. and 6:00 p.m.) would also be shaded for more than four hours between 9:00 a.m. and 6:00 p.m. However, these all of these areas (including driveway areas of residential uses) are not considered shadow-sensitive (as sunlight is not important to its function). Further, all of these areas already experience partial shading under existing conditions. Thus, during the fall months, surrounding uses would not experience significant shadow impacts as a result of the proposed project.

Late October to Early April

Winter Months. As illustrated on Exhibit 5, the proposed project would cast shade for greater than three hours between 9:00 a.m. and 3:00 p.m. at off-site areas in the winter months. The areas shaded for more than three hours (between 9:00 a.m. and 3:00 p.m.) include residential (entryway, driveway, and open space area) to the north of the project site. The open space area associated with the residential-uses is considered shadow-sensitive. However, the impacted shaded area is currently shaded in existing conditions as a result of an existing mature tree. Therefore, the project would not result in significant shade/shadow impacts during the winter months, compared to the existing condition, as this area is already shaded.

Spring Months. As illustrated on Exhibit 5, the proposed project would cast shade for greater than three hours between 9:00 a.m. and 3:00 p.m. at off-site areas during the spring months. The areas shaded for more than three hours include residential uses (between 9:00 a.m. and 3:00 p.m. [driveway areas]) to the north and institutional uses (between 9:00 a.m. and 3:00 p.m. [parking areas only]) to the west of the project site. However, these areas are not considered shadow-sensitive (as sunlight is not important to its function) and/or routinely useable outdoor space. Therefore, the project would not result in significant shade/shadow impacts during the spring months.

Finding

In conclusion, the proposed project would result in prolonged shaded areas. However, of these areas substantially shaded, the existing open space area associated with the residential use to the north is the only areas considered "shadow-sensitive". However, this particular area substantially shaded as a result of the project is already shaded in the existing condition due to a mature tree at that location. As such, the proposed project would not result in significant increased shading of any shadow-sensitive uses, compared to the existing condition. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

5.0 REFERENCES

5.1 PREPARERS

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5.2 DOCUMENTS

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2. City of San Gabriel, *The Comprehensive General Plan of the City of San Gabriel, California*, adopted by Resolution No. 04-16, May 18, 2004.

3. City of San Gabriel, *San Gabriel Municipal Code*, current though Ordinance 673, passed July 6, 2021.

5.3 WEBSITES

1. Google Earth Pro, 2021.

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