



CITY OF BEVERLY HILLS  
**TRAFFIC & PARKING COMMISSION**

September 1, 2016

**TO:** Traffic & Parking Commission  
**FROM:** Aaron Kunz, Deputy Director of Transportation  
**SUBJECT:** Crosswalks in Beverly Gardens Park  
**ATTACHMENTS:** A. Fehr & Peers Report

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The City has retained Fehr & Peers to prepare an evaluation of pedestrian crossings along the Decomposed Granite (DG) path in Beverly Gardens Park (attached). Staff plans to forward this report to the City Council for consideration to incorporate modifications with the Santa Monica Boulevard Reconstruction project. Jaimee Bourgeois will provide a presentation at the September 1, 2016 meeting. Staff requests Traffic & Parking Commission review and input prior to forwarding this evaluation to the City Council.



## MEMORANDUM

Date: August 24, 2016

To: Aaron Kunz, City of Beverly Hills

From: Rachel Neumann and Jaimee Bourgeois

**Subject: Beverly Hills Decomposed Granite Path Pedestrian Crossing Evaluation**

*Ref: LA15-2772*

This memorandum summarizes the results of an evaluation of pedestrian crossings along the decomposed granite path adjacent to and north of Santa Monica Boulevard North and Wilshire Boulevard in the City of Beverly Hills to determine appropriate crossing treatments.

### STUDY AREA

The study corridor is approximately 1.75 miles and includes the path that runs parallel to and north of Wilshire Boulevard from Whittier Drive to the Electric Fountain on the northwest corner of Wilshire Boulevard and Santa Monica Boulevard North and then continues east parallel to Santa Monica Boulevard North to Carmelita Avenue. The path is primarily decomposed granite with paved portions throughout. The majority of the path is set back from the road by approximately 60 feet with portions connecting to standard sidewalk facilities along Santa Monica Boulevard North and to secondary paths when the path runs through Beverly Gardens Park (three full blocks of park space between Rodeo Drive and Crescent Drive).

The path has 28 crossings including the intersections at the termini (Whittier Drive and Carmelita Avenue). Of these crossings, 5 are at narrow (approximately 20 feet wide) alleys, 13 are at roadways within close proximity to a stop-controlled intersection, and 10 are at roadways within close proximity to a signalized intersection (Figure 1). There are currently mid-block marked crosswalks where the path intersects Trenton Drive and Carmelita Avenue. There are no other mid-block marked crosswalks along the length of the path.

### REVIEW OF KEY CROSSWALK SAFETY RESEARCH

Unless posted otherwise, pedestrians may legally cross at any intersection whether or not the crosswalk is marked. A marked or unmarked crosswalk serves as an extension of the sidewalk. At mid-block locations away from an intersection, markings must be in place to designate a legal crosswalk. At all legal crosswalks, motorists must yield the right-of-way to a pedestrian crossing, and pedestrians must use due care for their own safety. Outside of legal marked crosswalks or unmarked crosswalks at an intersection, pedestrians must yield the right-of-way to vehicles (California Vehicle Codes Sections 21950 and 21954).



Traffic engineers are frequently faced with the question of whether or not to mark a crosswalk. The California Manual on Uniform Traffic Control Devices (CA MUTCD) Section 3B.18 states that crosswalk markings should not be installed indiscriminately at uncontrolled locations; rather, a traffic study should be conducted that considers factors such as the number of lanes, the distance from adjacent signalized intersections, the pedestrian volumes, the average daily traffic (ADT), the speed limit, and other appropriate factors. Furthermore, because mid-block crossings are unexpected by motorists, "they should be discouraged unless, in the opinion of the engineer, there is strong justification in favor of such installation."

To make an informed decision about whether to recommend crosswalk markings, it is helpful to review statistical safety analyses and industry recommendations regarding marked versus unmarked crossings.

To this day, traffic engineers reference a study conducted in 1972 that compared the incidence of pedestrian-related collisions at 400 intersections in San Diego with one marked crosswalk and one unmarked crosswalk (Herms, B., "Pedestrian Crosswalk Study: Crashes in Painted and Unpainted Crosswalks," *Record No. 406*, Transportation Research Board, Washington, DC, 1972). The study found that more collisions occurred at the marked crosswalks, even after taking into account the higher pedestrian volume at the marked crosswalks. The author concluded that the high crash rate may be attributable to the pedestrians' behavior and lack of caution when using a marked crosswalk, although this conclusion was not supported by behavioral data. Following, the concept of "false sense of security" has infiltrated the traffic engineering industry and is often cited as the reason to not mark a crosswalk. This and other prior studies have been criticized for not taking into consideration different operational and physical characteristics at each location.

A study was released in 2005 that used regression models to compare 5-year crash records for 1,000 marked and 1,000 matched unmarked uncontrolled crossings, taking into consideration traffic volume, pedestrian exposure, number of lanes, median type, speed limit and other site variables (Zegeer, C., Stewart, J., and Huang, H., *Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations: Final Report and Recommended Guidelines*, FHWA Publication HRT-04-100, September 2005, [www.fhwa.dot.gov/publications/research/safety/04100/04100.pdf](http://www.fhwa.dot.gov/publications/research/safety/04100/04100.pdf)).

The statistical findings can be summarized as follows:

- The crash rates are no different on two-lane and low-volume multi-lane roads.
- On multi-lane roads with daily traffic volumes above 12,000, a marked crosswalk alone (without other enhancements) was associated with a higher pedestrian crash rate.

The final recommendations for where crosswalk markings should be considered include:

1. At controlled intersections;
2. At uncontrolled intersections within school zones, with consideration of adult crossing guards and signs and markings for enhancement; and
3. At uncontrolled locations where engineering judgement dictates that the physical and operational characteristics would make the use of a crosswalk desirable for pedestrian mobility and safety.



Specifically at uncontrolled locations, the study concludes based on the statistical findings that marked crosswalks alone (without other enhancements) should not be used where speeds exceed 40 mph or on roadways with four or more lanes and a daily volume in excess of 12,000 vehicles without a raised median or 15,000 vehicles with a raised median. Other enhancements may include raised medians, curb extensions, traffic signal if warranted, traffic calming measures, lighting, removal of visibility restrictions, and warning signs/markings and beacons. The final recommendations are best summarized in the table below as published in the report. A key point to acknowledge is that while marked crosswalks do not improve pedestrian safety, they should not simply be avoided because of concern that safety will decrease.

### EXHIBIT 1 RECOMMENDATIONS CONTAINED IN 2005 ZEGEER REPORT

Table 11. Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.\*

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000–15,000			Vehicle ADT > 15,000		
	Speed Limit**									≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)
	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)			
Two lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multilane (four or more lanes) with raised median***	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

\* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.

\*\* Where the speed limit exceeds 64.4 km/h (40 mi/h), marked crosswalks alone should not be used at unsignalized locations.

\*\*\* The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more in-depth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, and other factors may be needed at other sites. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

### CORRIDOR EVALUATION

The corridor evaluation included a site visit, a five-year pedestrian and bicycle collision review, and identification of an appropriate treatment based on academic research, national best practices and location context for each crossing. Fehr & Peers' Xwalk+ tool was used to guide the selection of appropriate treatments.

The trail crossings have been categorized and evaluated based on whether they intersect an alley, a roadway adjacent to a stop-controlled intersection or a roadway adjacent to a signal-controlled



intersection. Each category and the associated evaluation methodology and results are discussed in more detail below.

### ***Alley Crossings***

There are five alley crossings along the corridor that are each approximately 20 feet wide. The alleys provide access to residential garages and garbage bins for trash collection services. As shown on Figure 1, the five alley locations (shown with a light blue circle) are:

- Between Whittier Drive and Trenton Drive north of Wilshire Boulevard
- Between Trenton Drive and Carmelita Ave north of Wilshire Boulevard
- Between Walden Drive and Linden Drive north of Santa Monica Boulevard
- Between Linden Drive and Roxbury Drive north of Santa Monica Boulevard
- Between Roxbury Drive and Bedford Drive north of Santa Monica Boulevard

### Existing Conditions and Collision Analysis

At the alley crossings, there are no existing signage or pavement markings indicating the presence of a pedestrian crossing to vehicles. The sight distance for southbound vehicles approaching Wilshire Boulevard or Santa Monica Boulevard is limited by walls and landscaping.

A five year pedestrian- and bicycle-involved collision review revealed no collisions at or near any of the alley crossings between January 2010 and December 2014.

### Proposed Improvements for Alley Crossings

It was noted during the site visit that vehicle volumes at these locations are low and that most vehicles using the unstriped two-way alleys travel at low speeds due to the narrow roadway and obstacles such as misplaced garbage bins. The primary safety concern for pedestrians at each alley crossing is the limited visibility to motorists due to walls, vegetation and other obstructions. As a result, the recommended treatment for these locations is a high visibility crosswalk with continental markings and fluorescent yellow-green (i.e., neon) pedestrian warning signs. Due to limited sight distance and horizontal curvature, specific placement of the signs should be carefully considered. Figure 2 (Detail A) shows the recommended improvements for alley intersections at three of the locations. Similar treatments are recommended at the other two alley locations.

### ***Crossings Adjacent to Stop Controlled Intersections***

The path crosses 13 two-lane streets with nearby side-street stop control within 50 to 65 feet of Wilshire Boulevard or Santa Monica Boulevard North. Each of these intersections is a three-legged intersection providing access to and from the residential neighborhoods north of Wilshire Boulevard and Santa Monica Boulevard North. The 13 locations are listed in Table 1 (page 7).

### Existing Conditions and Collision Analysis

At all of these locations, there are sidewalks separated from the curb and extending between the path and the side street stop-controlled approach with directional curb ramps at the corner of Wilshire Boulevard or Santa Monica Boulevard North to allow pedestrians to cross at the stop-controlled intersection. In all cases, the decomposed granite path also continues beyond the sidewalk and



terminates at the roadway without a curb ramp. This creates a confusing environment for both pedestrians and motorists with no clear indication as to where pedestrians should cross.

Existing conditions also lack consistency in crosswalk markings: two intersections have crosswalks marked at the path without any curb ramps (green rows in Table 1), seven intersections have crosswalks marked at the adjacent intersection (grey rows in Table 1), and four intersections do not have any marked crosswalks (orange rows in Table 1).

The intersection at Carmelita Avenue and Santa Monica Boulevard is a unique case at the eastern terminus of the path. The path leads directly to the corner of Carmelita Avenue and Santa Monica Boulevard, a stop-controlled intersection with a pork chop island and channelized turns. Southbound vehicles on Carmelita Avenue must turn right.

A five year pedestrian- and bicycle-involved collision review identified one pedestrian collision and five bicycle collisions along Santa Monica Boulevard at side-street stop-controlled intersections between January 2010 and December 2014. The single pedestrian collision involved a hit and run misdemeanor with the motorist violating the pedestrian's right of way at Foothill Road and Santa Monica Boulevard North. The collision report indicates Foothill Road as the primary road and Santa Monica Boulevard North as the secondary road suggesting the collision occurred as the pedestrian was crossing Foothill Road<sup>1</sup>.

The five bicycle collisions occurred along Santa Monica Boulevard at Alpine Drive, Elm Drive, Arden Drive, Alta Drive, and Sierra Drive. The collision at Alta Drive was identified as a felony hit and run with an unknown violation type. The bicycle collisions at Alpine Drive and Elm Drive were classified as automobile right-of-way, indicating a bicycle violation. The bicycle collision at Arden Drive was attributed to improper turning, and the collision at Sierra Drive was attributed to unsafe speeds. These bicycle collisions are likely not a result of the infrastructure surrounding the pedestrian crossing locations for the decomposed granite path, but instead occurred along Santa Monica Boulevard. As such, these collisions cannot be addressed through the scope of this project.

#### Proposed Improvements for Stop-Controlled Intersections

Each of the roadways where the path crossing is adjacent to a stop-controlled intersection at Wilshire Boulevard or Santa Monica Boulevard is a two-lane roadway (one lane in each direction) in a residential area with a 25 mph speed limit. Each crossing location is set back about 60 feet from the stop-controlled intersection. While traffic volumes were not collected on these streets, the existing stop control is indicative of lower volume since traffic signals are typically warranted once the side-street volume reaches 100 vehicles per hour (CA MUTCD Figure 4C-3, lower threshold volume for one lane approach on minor street and two or more lanes on major street). With this understanding of the roadway characteristics, the Xwalk+ tool was used as a guide in selecting general recommendations for the crossings adjacent to stop-controlled intersections. The standard treatment recommendations are as follows:

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<sup>1</sup> The exact location of the collision could not be confirmed in time for the writing of this report, so it is unknown whether it occurred at the path crossing. One collision over a five year period would still be considered a low occurrence.



- Add a raised continental crosswalk at the path crossing
- Add fluorescent yellow-green pedestrian signage
- Remove sidewalk connecting to Wilshire Boulevard or Santa Monica Boulevard
- Remove curb ramps at Wilshire Boulevard or Santa Monica Boulevard

The findings from the 2005 Zegeer Report support the recommendation to install uncontrolled marked crosswalks across these two-lane roadways, as there is no evidence that the collision rate will increase even without additional enhancements. Due to the mid-block location, however, it is recommended to include traffic calming features and high visibility pedestrian treatments, including a raised continental crosswalk and fluorescent yellow-green signage to increase visibility and awareness of pedestrians crossing the street. The raised crosswalk feature could also provide the added benefits of reducing travel speeds and discouraging cut-through traffic. It can be designed to include gutters underneath at each end or it can slope down to street grade to allow water to pass, in which case curb ramps would be required. Advance yield lines should accompany each crossing to provide a buffer between motorists and pedestrians. Furthermore, any obstacles should be removed that limit line of sight between approaching motorists and pedestrians, including but not limited to vegetation and parked vehicles. Removal of the sidewalk connection and curb ramps at the corners of Wilshire Boulevard and Santa Monica Boulevard North will further emphasize the single crossing location at the new mid-block crosswalk and reduce confusion for both motorists and pedestrians. Because there is no sidewalk adjacent to these major roadways on either the north or south side of each street, there is no apparent need for pedestrians to be crossing at the intersection. One exception is that there is a sidewalk on the south side of Wilshire Boulevard at Trenton Drive and Carmelita Avenue, but signs are in place prohibiting pedestrians from crossing Wilshire Boulevard.

Table 1 presents those locations for which the standard treatment is recommended and where some modification is recommended to either preserve existing secondary paths at Carmelita Avenue (Figure 2), Elm Drive (Figure 5), and Maple Drive (Figure 5) or to maintain connectivity for bus passengers at Walden Drive (Figure 2).

One other exception to the standard treatment is at the intersection with the pork chop island at Carmelita Avenue and Santa Monica Boulevard (Figure 6). At this location, the proposed treatment is a two-stage continental crosswalk along Santa Monica Boulevard. This will provide high visibility crosswalks with an existing refuge island. Given that the crosswalks are not set back from the intersection and there is an existing median refuge island, consideration of raised crosswalks is not recommended. In addition, the fluorescent yellow-green signage is not included as a recommendation since the southbound approach is stop controlled and the crossings are located at an intersection, which is an expected location for motorists to encounter pedestrians.



**TABLE 1 TREATMENT RECOMMENDATIONS FOR PATH NEAR STOP CONTROL**

**Standard Recommendations for Crossings Adjacent to Stop Control:**

- ➔ Add raised continental crosswalk
- ➔ Add fluorescent yellow-green pedestrian signage
- ➔ Remove sidewalk connecting to Wilshire Boulevard or Santa Monica Boulevard
- ➔ Remove curb ramps at Wilshire Boulevard or Santa Monica Boulevard

Minor Street	Parallel Major Street	Existing Crosswalk Treatment	Recommendation
Trenton Drive	Wilshire Boulevard	Standard marked crosswalk at the path (midblock)	Standard recommendations above
Carmelita Avenue	Wilshire Boulevard	Standard marked crosswalk at the path (midblock)	Standard recommendations except keep the portion of sidewalk on the east side of Carmelita Avenue that connects to the recently installed secondary path (Figure 2)
Walden Drive	Santa Monica Boulevard	No marked crosswalk	Standard recommendations except keep the sidewalk connecting the bus stop to the path and keep curb ramps (Figure 2)
Linden Drive	Santa Monica Boulevard	Standard marked crosswalk at the intersection	Standard recommendations above
Alpine Drive	Santa Monica Boulevard	Standard (faded) marked crosswalk at the intersection	Standard recommendations above (Figure 4)
Foothill Road	Santa Monica Boulevard	Standard marked crosswalk at the intersection	Standard recommendations above
Elm Drive	Santa Monica Boulevard	Standard marked crosswalk at the intersection	Standard recommendations except keep the portion of sidewalk along the east side of Elm Drive that connects to the secondary path (Figure 5)
Maple Drive	Santa Monica Boulevard	No marked crosswalk	Standard recommendations except keep the portion of sidewalk along the west side of Maple Drive that connects to the secondary path (Figure 5)
Hillcrest Road	Santa Monica Boulevard	Standard marked crosswalk at the intersection	Standard recommendations above
Arden Drive	Santa Monica Boulevard	Standard marked crosswalk at the intersection	Standard recommendations above
Alta Drive	Santa Monica Boulevard	Standard marked crosswalk at the intersection	Standard recommendations above
Sierra Drive	Santa Monica Boulevard	No marked crosswalk	Standard recommendations above
Carmelita Avenue	Santa Monica Boulevard	No marked crosswalk	Remove path connection to curb on Carmelita and add a 2-stage continental crosswalk that is not raised (Figure 6)



### ***Crossings Adjacent to Signalized Intersections***

The path crosses ten streets with nearby signal control at Wilshire Boulevard or Santa Monica Boulevard. Each of these intersections includes multiple lanes and four approaches. These intersections provide a direct connection between the residential neighborhoods north of Wilshire Boulevard and Santa Monica Boulevard to commercial centers of Beverly Hills and surrounding areas.

#### Existing Conditions and Collision Analysis

At all ten signalized intersections adjacent to the path, there are standard crosswalks striped at the north leg of the intersection to serve path users. The crossing distance at the signalized intersections ranges from 30 feet to 60 feet with the exception of an 85-foot (6-lane) crossing distance at Rodeo Drive.

The existing path configuration varies along the corridor. At five of the path crossings near signalized intersections, the decomposed granite path continues beyond the sidewalk that runs along the minor street and terminates at the roadway curb without a curb ramp (locations identified in Table 2 on page 10). This creates a confusing environment for both pedestrians and motorists since the path leads pedestrians to the roadway edge but not to the nearby marked crosswalk. Furthermore, at three of the path crossings near signalized intersections, there is no diagonal, direct pedestrian connection to the crosswalk at the intersection (locations identified in Table 2). At these three locations, the path terminates at the sidewalk along the minor street at a right angle, approximately 60 feet north of the signalized intersection. This indirect access may encourage instances of midblock crossings or the use of shortcuts through the landscaping.

The five year pedestrian- and bicycle-involved collision review identified 6 bicycle and 11 pedestrian collisions. Of these collisions, only one bicycle (at Beverly Drive) and two pedestrian collisions (at Roxbury Drive and Rexford Drive) occurred on the minor street approach. The remaining ten five bicycle and nine pedestrian collisions occurred along Wilshire Boulevard and Santa Monica Boulevard and are likely not a result of the infrastructure along the pedestrian path, but instead are a result of conditions along Wilshire and Santa Monica Boulevards. As such, these collisions cannot be addressed through the scope of this project.

The collision review identified five pedestrian collisions along a single block between Bedford Drive and Camden Drive. Two collisions occurred on Santa Monica Boulevard at the Bedford Drive intersection, two collisions occurred approximately 100 feet east of the Bedford Drive intersection and one collision occurred approximately 150 feet west of the Camden Drive intersection. The violation type for these five collisions included improper turning, pedestrian violation, and pedestrian right of way. This block is the only block along the corridor that includes a contiguous sidewalk, without a grass buffer, adjacent to Santa Monica Boulevard.

#### Proposed Improvements for Signalized Intersections

Each of the roadways where the path crossing is adjacent to a signalized intersection at Wilshire or Santa Monica Boulevards is more than two lanes wide and likely carries more traffic at higher speeds than those adjacent to the stop-controlled intersections because each carries through traffic to and



from the south. For these reasons and because signal control is available in very close proximity, the following recommendations have been identified for the path crossings adjacent to signals:

- Remove direct path connection to a mid-block crossing (five locations total)
- Add a direct path connection to the marked, signal controlled crosswalk (three locations total)

These standard recommendations plus some supplemental recommendations are summarized in Table 2 for each location.

A supplemental recommendation is for the inclusion of an east leg crosswalk at the Whittier Drive and Wilshire Boulevard intersection. This crossing will improve pedestrian access to the developments along Wilshire Boulevard. Providing crosswalks at all four legs of an intersection enhances pedestrian mobility and will provide direct access to the path from the south side of Wilshire Boulevard.

The collision review identified the highest frequency of pedestrian collisions between Bedford Drive and Camden Drive. This is the only location with a sidewalk contiguous with the curb on the north side of Santa Monica Boulevard. Removing the sidewalk along this segment is another supplemental recommendation to provide consistency with the remainder of the corridor and a buffer between pedestrians and motor vehicles.

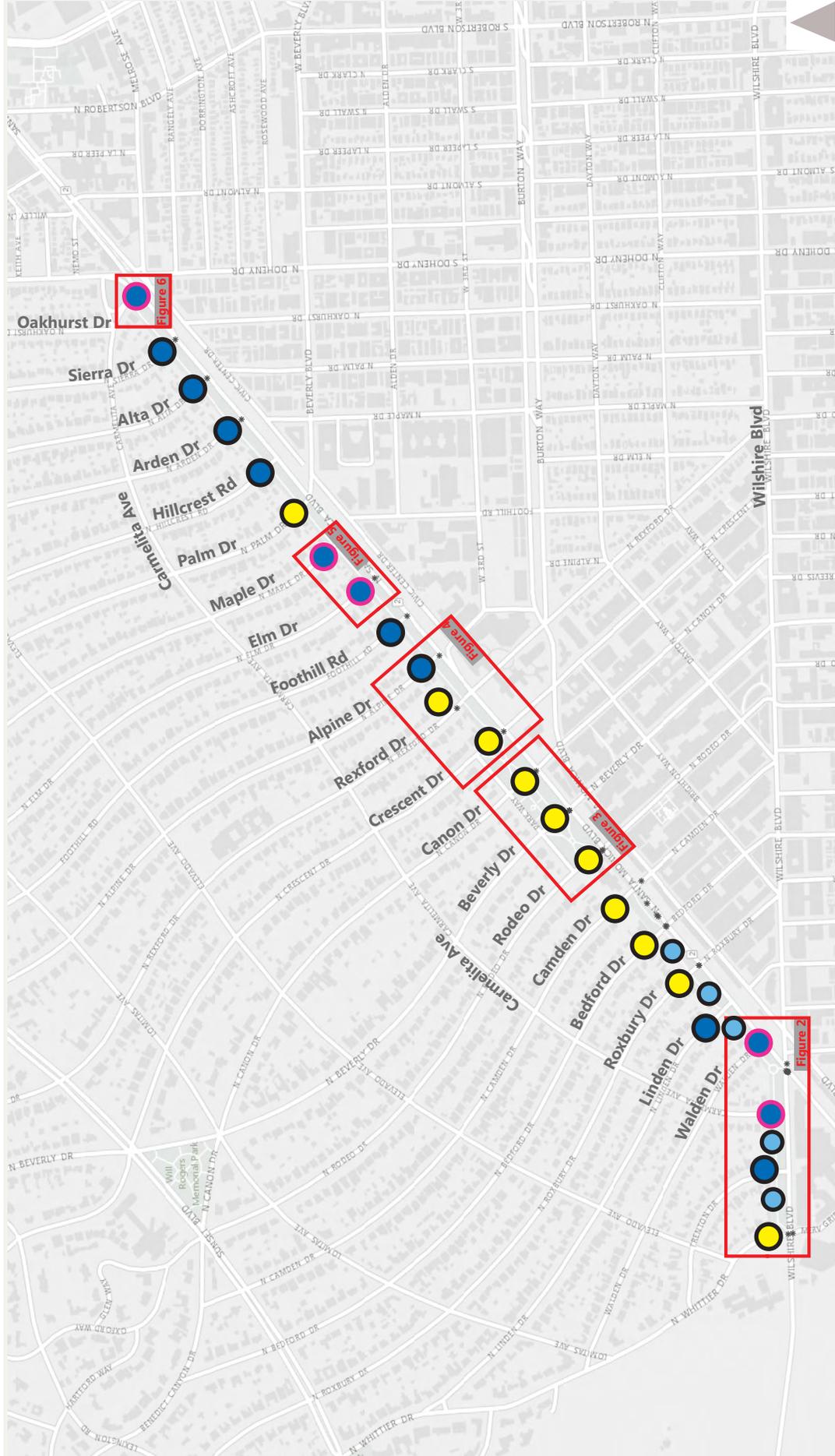
A supplemental recommendation has also been identified at Rodeo Drive and Santa Monica Boulevard. Curb extensions are recommended to reduce the 85-foot crossing distance to a maximum of 64 feet. Turning movement counts should be collected and reviewed to determine whether or not a further reduction could be achieved by eliminating the exclusive southbound right-turn lane.

A final supplemental recommendation is the installation of no pedestrian crossing signage, two on each side of Canon Drive at the intersection points of the path and the sidewalk to prohibit mid-block crossings and to direct pedestrians to the signal.



**TABLE 2 TREATMENT RECOMMENDATIONS FOR PATH NEAR SIGNAL CONTROL**

Minor Street	Parallel Major Street	Remove Path Connection to Mid-Block Crossing	Add Direct Connection to Signalized Crossing	Supplemental Improvements
Whittier Drive (Figure 2)	Wilshire Boulevard	N/A	N/A	Add east-leg crosswalk
Roxbury Drive	Santa Monica Boulevard	Both sides	West side only	N/A
Bedford Drive	Santa Monica Boulevard	N/A	N/A	Remove sidewalk between Bedford Drive and Camden Drive on the north side and contiguous with Santa Monica Boulevard
Camden Drive	Santa Monica Boulevard	N/A	N/A	Remove sidewalk between Bedford Drive and Camden Drive on the north side and contiguous with Santa Monica Boulevard
Rodeo Drive (Figure 3)	Santa Monica Boulevard	N/A	N/A	Add curb extensions to the north leg to reduce crossing distance and vehicle speeds
Beverly Drive (Figure 3)	Santa Monica Boulevard	Both sides	N/A	
Canon Drive (Figure 3)	Santa Monica Boulevard	N/A	N/A	Add "Do Not Cross" signs at the termination of the two midblock paths on either side of Canon Drive
Crescent Drive (Figure 4)	Santa Monica Boulevard	East side only	N/A	
Rexford Drive (Figure 4)	Santa Monica Boulevard	Both sides	Both sides	
Palm Drive	Santa Monica Boulevard	Both sides	Both sides	



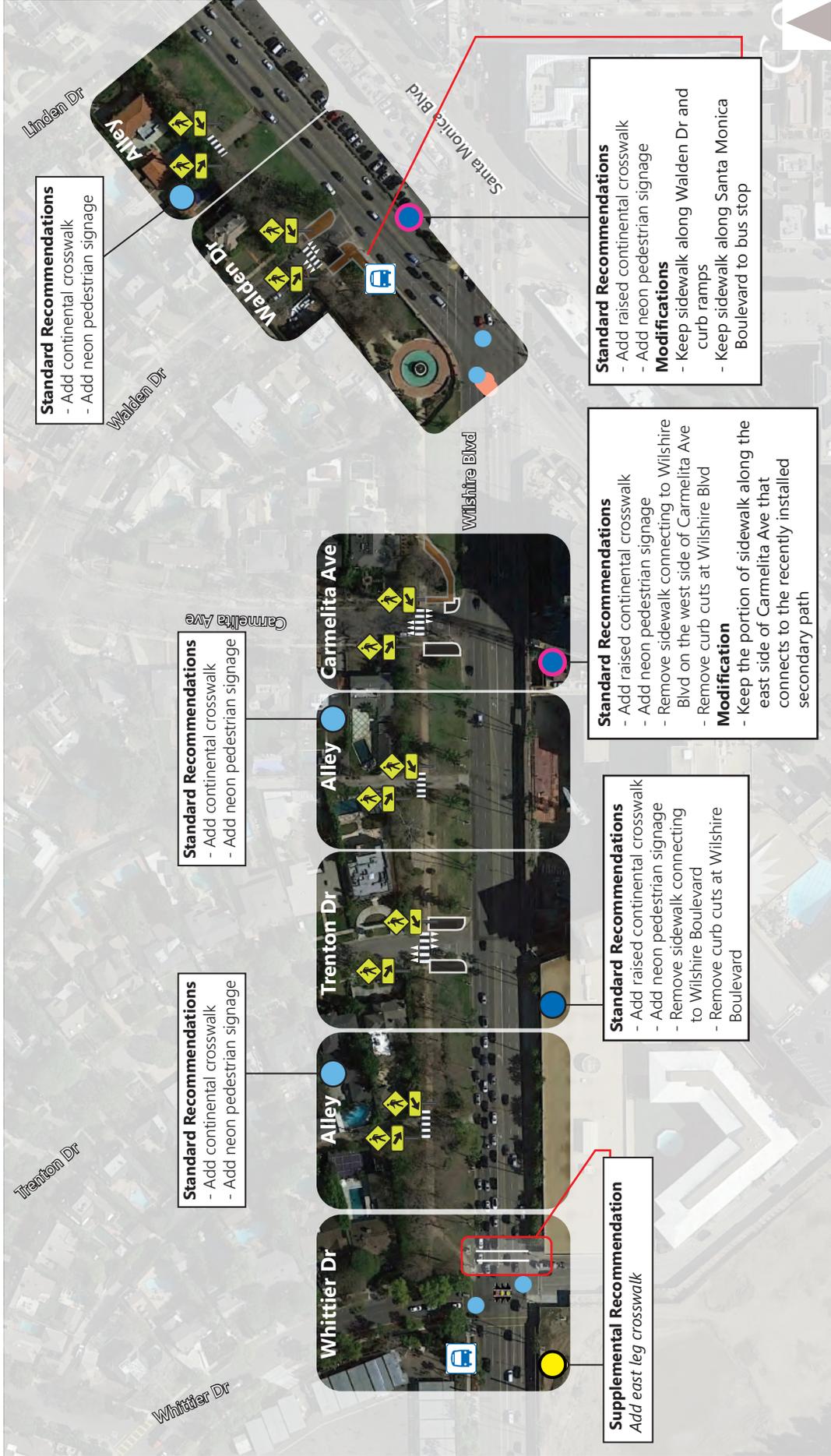
**Path Crossing Location Type**

- Collision
- Alley
- Adjacent to Stop Controlled Intersection
- Adjacent to Signalized Intersection
- Includes Modifications to Standard Treatments Proposed

\* Collision



Figure 1  
Study Area



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Figure 2

# Whittier Drive to Alley East of Walden Drive

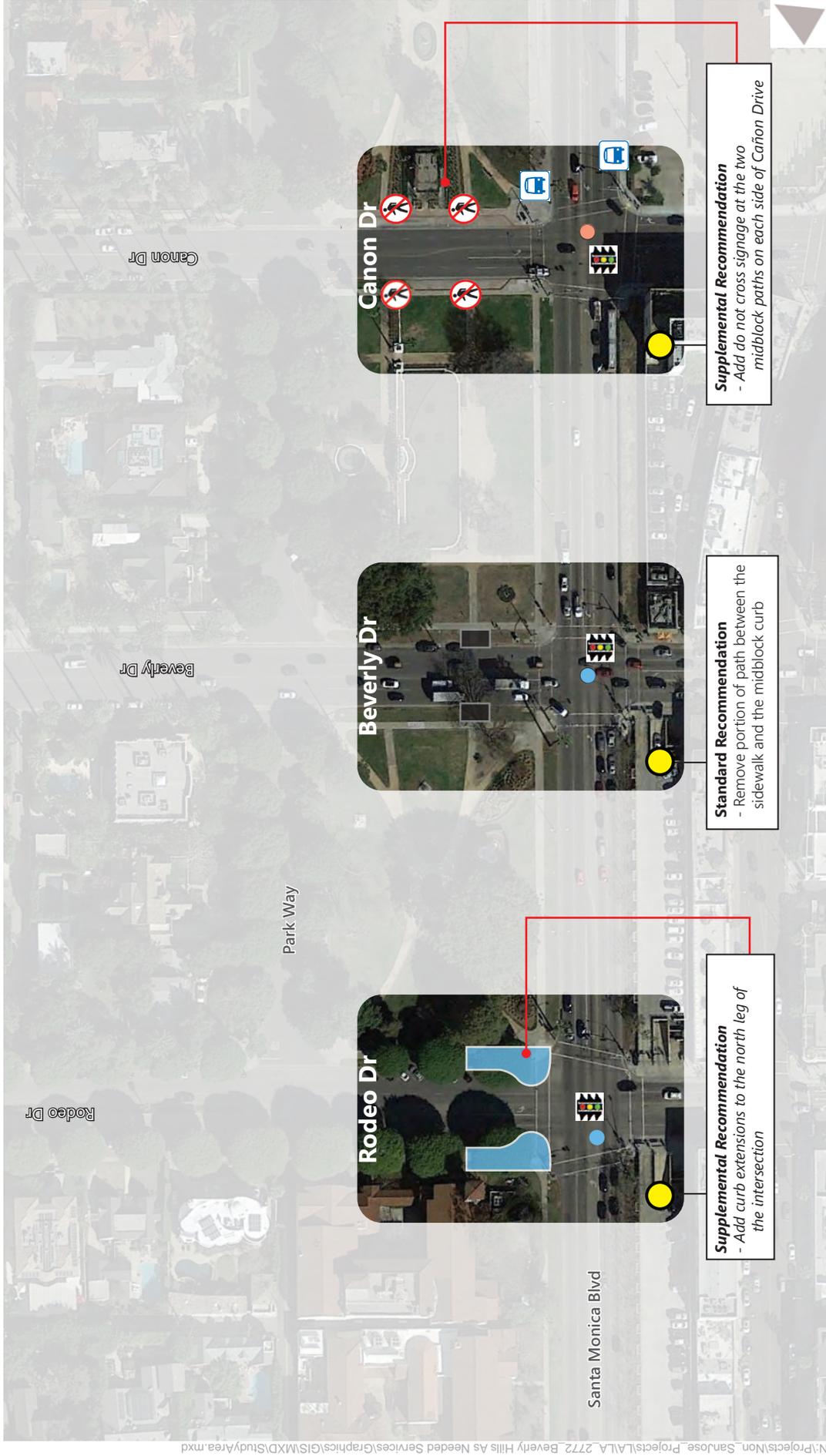


Figure 3

Rodeo Drive to Canon Drive

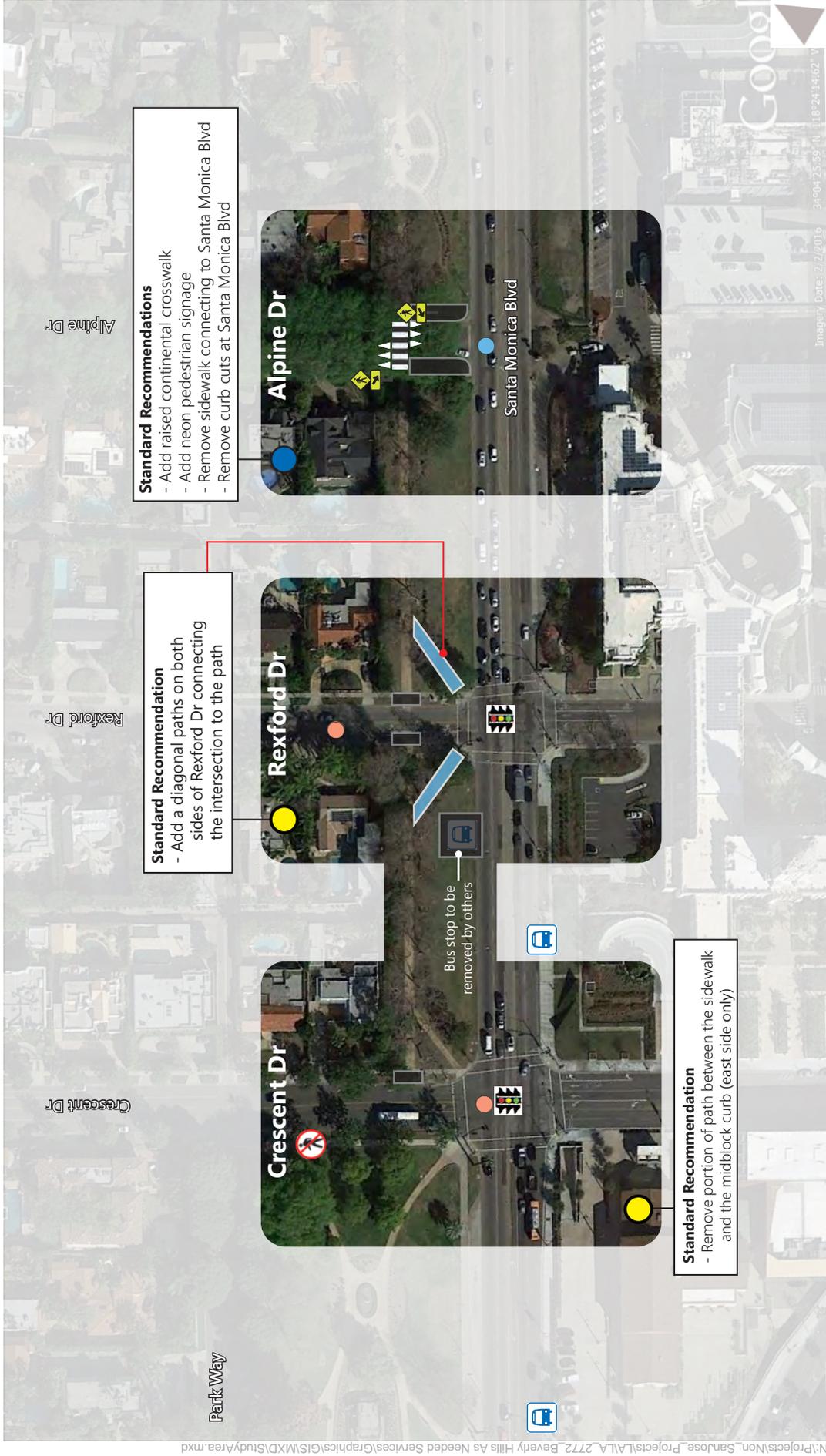
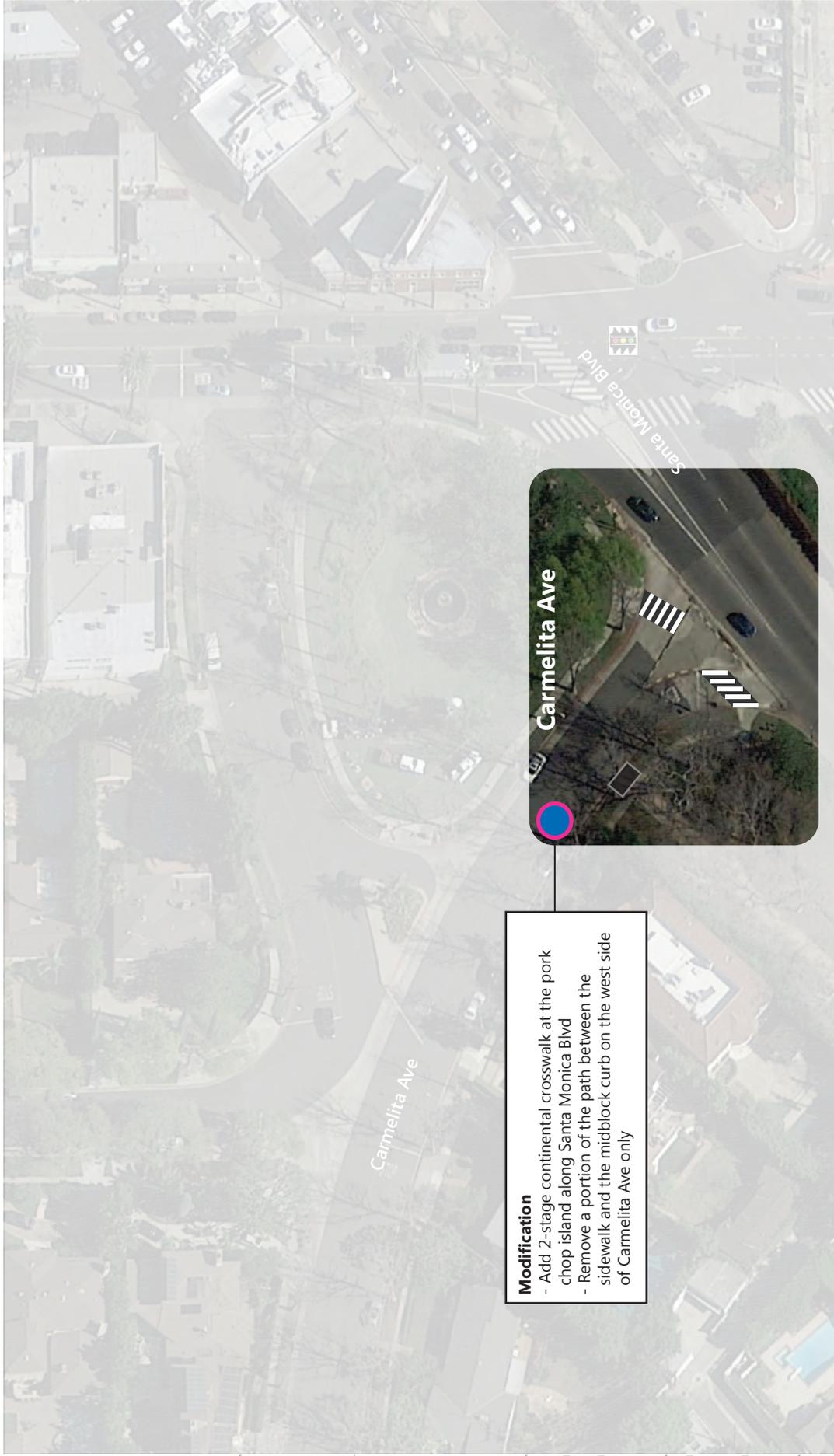


Figure 4  
Crescent Drive to Alpine Drive



Figure 5  
Elm Drive and Maple Drive



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Figure 6  
Carmelita Avenue (Eastern Terminus)